

**A
PROJECT
ON**

“Industrial Revaluation Invention”

Submitted to

**Rashtrasant Tukadoji Maharaj Nagpur University,
NAGPUR
In the Partial Fulfillment of**

B.Com. (Computer Application) Final Year

Submitted by
Mayuri Rachhore
Ashwihi Kuhikar

Under the Guidance of
Pravin J. Yadao



**G. S. College of Commerce & Economics
Nagpur
2019-2020**

CERTIFICATE

(2019 - 2020)

**This is to certify tha Miss . Mayuri Rachhore and Ashwini Kuhikar
has completed their project on the topic of Industrial Revaluation Invention prescribed by the
Rashtrasant Tukadoji Maharaj Nagpur University for B.Com. (Computer Application) - III course
in G. S. College of Commerce & Economics, Nagpur.**

Date:

Place: Nagpur

Pravin J. Yadao

Project Guide

External Examiner

Internal Examiner

ACKNOWLEDGEMENT

We take this opportunity to express our deep gratitude and whole hearted thanks to project guide Prof. Pravin Yadao, Coordinator for his guidance throughout this work. We are very much thankful to him for his constant encouragement, support and kindness.

We are also grateful to our teachers Prof. Rahul Tiwari, Prof. Sushma Gawande, Prof. Preeti Rangari, Prof. Prajkta Deshpande and Prof. Haresh Naringe for their encouragement, help and support from time to time.

We also wish to express our sincere thanks to Principal Dr. N. Y. Khandait for providing us wide range of opportunities, facilities and inspiration to gather professional knowledge and material without which this project could not have been completed.

Mayuri Rachhore

Ashwini Kuhikar

Date:

Place: Nagpur

DECLARATION

We **Mayuri Rachhore and Ashwini Kuhikar** hereby honestly declare that the work entitled **“Industrial Revaluation Invention”** submitted by us at G.S. College of Commerce & Economics, Nagpur in partial fulfillment of requirement for the award of B.Com. (Computer Application) degree by Rashtrasant Tukadoji Maharaj, Nagpur University, Nagpur has not been submitted elsewhere for the award of any degree, during the academic session 2019-2020.

The project has been developed and completed by us independently under the supervision of the subject teacher and project guide.

Date:

Place: Nagpur

**A
PROJECT SYNOPSIS
ON**

“Industrial Revolution Invention”

Submitted To

**Rashtrasant Tukadoji Maharaj Nagpur University,
Nagpur**

**In The Partial Fulfillment Of
B.Com. (Computer Application) Final Year**

**Synopsis Submitted By
Mayuri Rachhore
Ashwini Kuhikar**

Under The Guidance Of

Pravin J. Yadao



**G. S. College Of Commerce & Economics
Nagpur
2019-2020**

1. Introduction: (write 4 to 5 lines)

Industrial Revolution Invention is basically a website which will provide all information about the brilliant invention and great inventors .It contains that how they were invented, when they were invented and who were the inventor .It includes all the information about invention that had been taken place and their benefits.

2. Objectives of the project: (write only 5 points)

- Students will be able to introduce the Industrial invention.
- It helps in quality qualification.
- It improves student knowledge
- It give knowledge about historical invention
- It is a easy way to provide information.

3. Project category: website**4. Tools/ platform/ languages to be used: Front End:- HTML,PHP,CSS**

Back End:- Ms Acces

5. Scope of future application: (write 4 to 5 points)

- It is time saving process to get knowledge.
- Increase qualification of student.
- updates about invention.
- It is for future beneficial.

Submitted By,
Mayuri Rachhore
Ashwini Kuhika

Approved By,
Prof. Pravin Yadao
Project Guide

INTRODUCTION

INTRODUCTION

This project “INDUSTRY REVALUATION INVENTION” is basically a website which is developed for the student as well as others. This website helps to collect the information about invention in industry (since 1775). The industry revaluation was the transition to new manufacturing process in the period from 1760s to now. It was a time when many of modern inventions invented in industry revaluation.

Industry Revaluation Invention is a web application which is designed in php platform. This innovative web project is an effective information website that allows the user to grasp the information about industry revaluation invention.

Now days, this website is mostly used for searching all types of information related to the industry revaluation. Our project is an informational website, which is developed to provide whole information about the industry revaluation introduction, history of industry revaluation, type of industrial revaluation, images, effects etc.

In today's world were all the people are moving toward e-learning process, our project is supporting them while giving people information about industry revaluation invention on web browser. The project has been design by keeping in mind that all the people should get information online.

In this project we are providing different menus like Home, Introduction, History, Generations, Images, Effects, Feedback. In home menu we are providing basic information about the project. In introduction we are providing the introduction of industry revaluation and There we are include why study the industry revaluation, invention and innovations, important events and inventions etc.

In history menu we are providing the history of industry revaluation. Why it's beginning in England? Textile industry, mining and revaluation, metallurgy, transport, communication, industrial development in Belgium, industry development in England, industry developed in France etc.

In generation menus we are providing the types of generation in industry revaluation. In Images menu we are providing different images related to industry

reevaluation. In effects menu we are providing the various effects of industry reevaluation. In feedback menu user can give the comments, suggestion about our project and any improvement.

This project is very convenient because it is create on computer. So it is very easy to port it one place to another. All the work is done through computer. It helps in saving time. It easy to fetch data makes sincerely.

This website will help you to give the information about the Industry reevaluation invention. It gives the knowledge about history of industry reevaluation invention. The objective of creating project in PHP, was to reduce paper work and to create an information website so which can be used by the user easily. In our project we had given history and images. The purpose of our website is to convey specific helpful information to a specific user so that the reader learns something new or understanding a topic better. In this website we try to provide you as much information about the industry reevaluation invention.

OBJECTIVES

OBJECTIVES

1. **Accessing The Information Easily:** -The use of this website user can access the information in a very convenient and easy way.
2. **User Friendly:-** This website is user friendly and easy to accessed by the user. It is easy to handle and get information. There is less chance of any error. The user can easily access this website without facing any difficulty.
3. **Time saving:-** Now day's users want information more faster as they are busy our project fulfill this requirement by providing all information at one place and one click. Therefore the user can save time and get information fastly.
4. **Simplicity:-** This website is very simple and easy to understand for the user.
5. **More Information of Industry Revaluation:** - We provide in this website of different industry revaluation invention such as events, innovation.
6. **Provide information of history:** - We provide the history of industry revaluation.
7. **Provide information of Generation:-** In the industry revaluation invention this website provide information of type of generation such as first industry revaluation, second industry revaluation, third industry revaluation, fourth industry revaluation.
8. **Provide information about effects:** - In this website we also provide information about effects of industry revaluation.

9. **Learning:** - The main objective of this project is to learn about the history and information of industry revaluation invention.

10.**Reliability:** - This website can be used again and again. We can use this website anywhere at any time and there is no time limit applicable for the use.

11.**Easy to Use:** - This website is most effective and Easy to search any information about Industry Revaluation for different invention, images, directly access the information about industries.

12.**User Feedback:-** our website provide the complete information about history of industry revaluation for different and user friendly environment to visitors. They can easily import feedback in their without any interruption.

PRELIMINARY SYSTEM
ANALYSIS

PRELIMINARY SYSTEM ANALYSIS

Preliminary System Analysis: -

Preliminary system analysis basically of things to be done before starting a particular project. In short it starts from analyzing the needs of user. It also includes various steps to create the need of project. It also analyses whether the project is feasible or not, in our daily life we come across various information website such as Google, yahoo etc. each and every website has a need to be developed in such a way that the information which is to be given need to be easily understandable and presentable.

Every system has a common

Things and that are:-

- It is organizes combination of different components.
- They are independent and inter related.
- They work for common objective.

Purpose of preliminary system analyses is to find that whether the project will be successfully or not. The system analysis is the method where the whole system is studied very intimacy and as the basis this analysis a complete product is present in front of the customer.

PRELIMINARY INVESTIGATION

Preliminary Investigation: - The preliminary investigation means the survey or need of the project. This is the stage where the first investigation is being carried out by the developer who actual wants to develop a project any person related with the system initiate the request.

Preliminary investigation means the extraction of need and requirement for the goals of the application. It also helps in fetching the basic information about the process developing the application.

Preliminary investigation is the initial investigation before the commencement of the software development. In our project “Industrial Revolution invention” which is designed to provide each and every information about industrial revaluation.

This is user’s request to change, improve or enhance an existing system. The initial investigation is one way of handling. The objective is to determine where the request is valid and feasible before a recommendation is reached to improve or modify the existing system, or build a new one.

We see various website to find that lack of Industry revaluation invention information some website have not give all generation of industry revaluation. This information has mention in this website.

IDENTIFICATION OF NEED

Identification of need: -

The success of a system depends largely on how accurate a problem is defined and properly carried out through the choice of solution. In today modern world, when everything is becoming more and more titan word watches are one may feel that the task of keeping the record of the data also be done automatically using computer program.

If any reference of particular customer past record has to be seen them, it needs piles of registers to search it. It is all manual work. The system also doesn't have any backup plan, if the data is lost by any cause than there is no option to recover.

We identify that some website contain all information of industry revaluation invention introduction, history, Generation etc.

FEASIBILITY STUDY

Feasibility study:-

Feasibility study of a system whether the system is practically possible to build or not. It also evaluates the benefits of the new system. The feasibility study means to analyze the requirement of the user. Project manager use feasibility studies to determine potential positive and negative outcomes of a project before investing a consideration amount of time and money into it.

In “Industrial Revolution Invention” feasibility study considers three major keys they are:-

- Technical Feasibility
- Economical Feasibility
- Operational Feasibility

1. Technical Feasibility:

Technical feasibility is one of the first studies that must be conducted after a project has been identified. The technical feasibility always focuses on the existing computer system. This is the availability of the required software, hardware and operating system. This project is developed in php and css. Technical feasibility means to solve the problem as related to the hardware and software. It refers to the technical resources needed to develop a new system. The analyst must find out whether current technologies are sufficient to propose system which includes that in “Industrial Revolution Invention”.

2. Economic Feasibility:-

Economic feasibility determines whether the required software is capable of generating financial gains for an organization. It is a way of determining the cost of resources determination compare to project benefits of the proposed system. Economic feasibility could also refer to as cost/benefits analysis. It is the most frequently used method for evaluating the effectiveness of the new system.

3. Operational Feasibility:

Operational feasibility refers to the measure of solving problem with the help of a new proposed system. It helps in taking advantages of the opportunities and fulfills the requirement as identified during the development of the project. It takes care that the management and the users support the project.

Operational feasibility is the measure of how well a proposed system solves the problems it helps in taking advantage of the opportunities identified during scope definition and how it satisfies the requirement identified assessment focuses on the degree to which the proposed development project fits in with the existing business environment and objectives with regard to developed and existing business processes.

NEED OF NEW SYSTEM

System is organized working of all its units and sub-units. The current systems on which we working are semi-automatic i.e. in current system there are more than one platform are required for performing the task and generating the information. In today world of computer where in every aspect of the life is computerized so that the system used should be efficient and accurate.

As per the old system likes books or journals or any other media, it is very difficult to access lot of information. We can access only limited information and if we are search particular topic information it is very difficult to search that content. We can use modern techniques such as reading EBooks or getting information directly from the information website.

The needs of the new system arise from the webpage that exist the present manual system. The new system is required to save resource such a time and manpower.

- This website is user friendly material.
- This Project provides quick performing application.
- Accuracy and efficiency of this project is better.
- Modification will provides some extra ordinary function.
- It is helpful for the application making learners or the application using.

FLOWS OF PRESENT SYSTEM

- **Information of industry revaluation invention:-**

In this website provide the information about industry revaluation invention. It gives the information of Important Events and Inventions of industry revaluation.

- **Information about the history:-**

This website provides the all information about the history related to in industry revaluation.

- **Generation of Industry revaluation:-**

We provide the information of generation in industry revaluation.

- **Effects of industry revaluation:-**In this website provide the effects of industry revaluation just like the factory system, rise of capitalism, urbanization and so on.

- **Proper internet connection:-**

To access this website in hardware the proper internet connection must required accessing this website.

PROJECT CATEGORY

This project “INDUSTY REVALUATION INVENTION” uses in php. The website is informative. Any useful information can be populated using a website. The website is developing in PHP.

PHP

PHP is an HTML-embedded, server- side scripting language designed for web development. It also use to general purpose programming language. PHP code are simply mixed with HTML code and be used in combination with various web framework. PHP codes are processed by a php interpreter.

A PHP file consists of texts, HTML tags and scripts with a file extension of .PHP, you can create a login page design a form, and create forums, dynamic and static websites and many more with PHP.

PHP supports various databases like MySQL, Oracle, Sybase, Solid, Informix etc.

Syntax:-

```
<html>
<head>
<title> </title>
</head>
<body>
<?php
<p> Hello World</p>
?>
</body>
</html>
```

HTML

Hypertext Markup Language is used for designing different web pages and appearance due to html tags different special effects of text, pictures, animation, effected, colors, text size and font style can be define to make more effective web page.

HTML is a set of special codes that can be embedded in text to add formatting and linking information called tags HTML. It is collection of platform-independent style used to create a document for the World Wide Web page (www). HTML is a language is used to describe and format the structure of web pages.

Basic Structure of html:

<HTML>:- This tag indicates to the browser that the file is an HTML file. A basic HTML document consist of opening <HTML> and closing </HTML> tag. All the contained of the web page is contained within these tag.

E.g.

<HTML>

HTML tag and contents

</HTML>

<HEAD>:- A HTML documentation a pair of opening <Head> and closing </Head> tags. The <head>tag contains the option <title> tag.

E.g.

<html>

<head>

Demo of html

</head>

</html>

<TITLE>:- The contains of this tag is display the title bar of web browser window. It should be unique and descriptive it used to search engines as a search crier ion for any information in the absence of this tag.

E.g.

```
<html>
<head>
<title>Demo of html</title>
</head>
</html>
```

<BODY>:- This body tag are basically block level tags that specify what the web browser should display in the web browser window, style and formatting are applied to the content using tags. Such as heading tags, paragraph tags, font tags. Most of the part of the <body> tag.

E.g.

```
<html>
<head>
<title> heading</title>
</head>
<body>
<h1>heading levels</h1>
<hr> horizontal rule
</body>
</html>
```

HARDWARE AND SOFTWARE REQUIREMENT

SPECIFICATION

HARDWARE:-

This website is prepared keeping in mind the requirement of the user. To run this website without any problem we need to fulfill the following minimum hardware required.

Hardware Requirements

- Processor - Intel Core i3
- RAM - 4 GB
- Hard Disk - 500GB or more
- Input - Keyboard and mouse

SOFTWARE:-

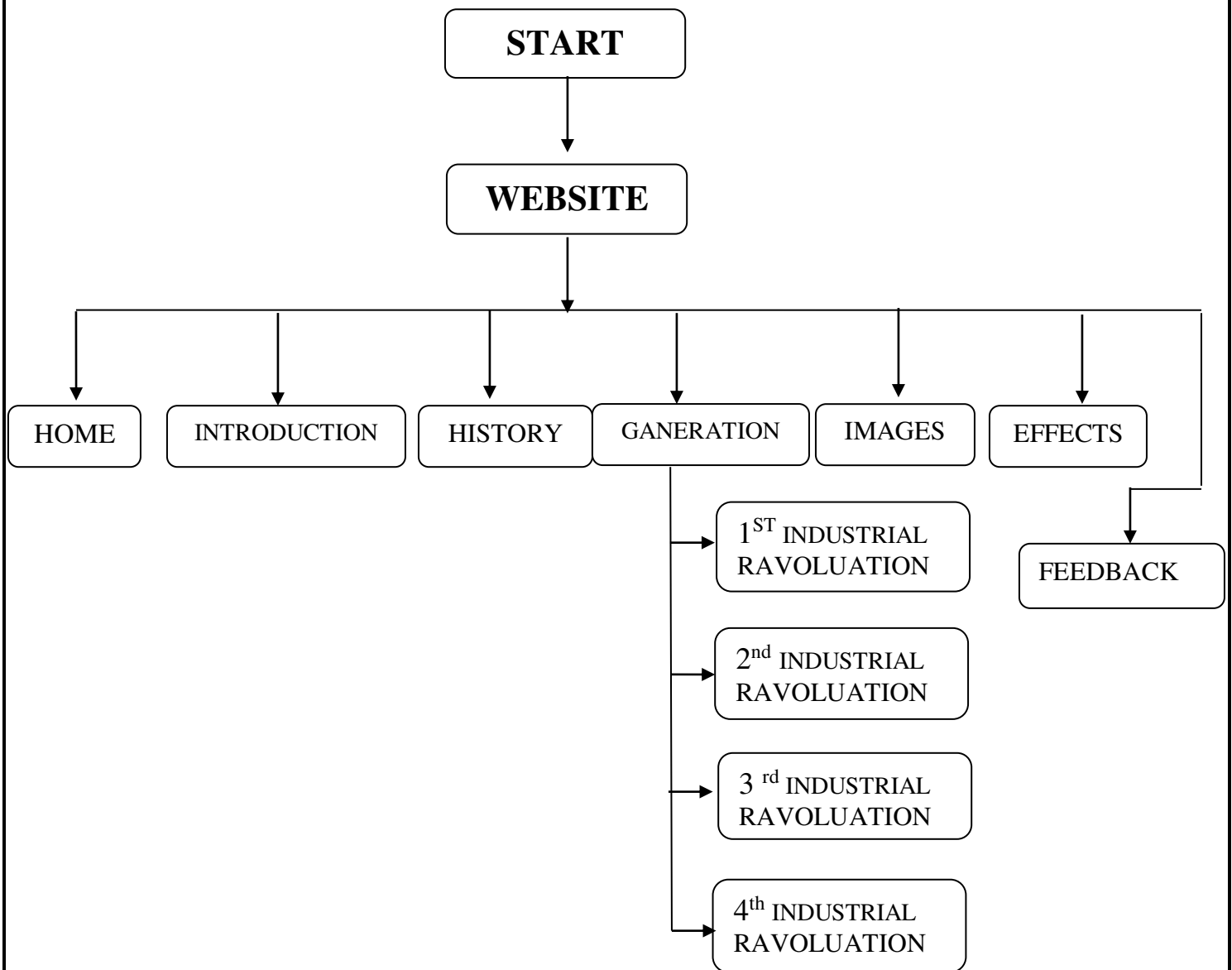
Software can be termed as the group of instruction or command used by the computer to accomplish the given task. In today's world generation of software is every ending. It is an evaluation of dignified technology. There is no requirement for it but the minimum software requirement of any computer is specified below.

Software Requirements

- Google Chrome
- Internet Explorer
- Notepad, notepad++
- Front End – PHP

SYSTEM FLOW DIAGRAM:

DATA FLOW DIAGRAM



SYSTEM DESIGN

SYSTEM DESIGN

SOURCE CODE

HOME:-

```
<!DOCTYPE html>
<html>
<head>
<meta name="viewport" content="width=device-width, initial-scale=1">
<link rel="stylesheet" type="text/css" href="style.css"/>
</head>
<body>
<!--NAVIGATION BAR-->
<div class="navbar">
<Center>INDUSTRIAL REVOLUTION</font></center>
<div class="btn-group">
  <button class="button"><a href="home.php">Home</a></button>
  <button class="button"><a href="Introduction.php">Introduction</a>
</button>
  <button class="button"><a href="history.php">History</a></button>
  <button class="button"><a href="generation.php">Generation</a>
</button>
  <button class="button"><a href="im.php">Image</a></button>
  <button class="button"><a href="Effects.php">Effects</a></button>
<button class="button"><a href="feedback.php">Feedback</a></button>
</div>
</div>
```

<--- MAIN--->

<div class="main">

<h1> Industrial Revolution</h1>

<p>

The Industrial Revolution was the transition to new manufacturing processes in the period from about 1760 to sometime between 1820 and 1840. It was a time When many of the modern inventions we take for granted today were created. See the fact file below for more information on the Industrial Revolution or alternatively, you can download our 20-page Industrial Revolution worksheet pack to utilise within the classroom or home environment.</p>

<h3>Key Facts & Information</h3>

<h5>LEADING TOWARDS THE INDUSTRIAL REVOLUTIO</h5>

Before the Industrial Revolution took place in Britain, most people resided in rural areas and worked as farmers. Commoners often experienced malnourishment and diseases. Local rural shops and homes usually made simple tools and furniture.

By the mid-18th century, a number of European states including Britain, Spain, and France were under competition as rising colonial powers. Britain had engaged in tremendous wars such as the Austrian war of succession (1740-1783), Seven Years' War (1756-1763), American Revolutionary War (1775-1783), and the Napoleonic Wars (1803-1815). Due to massive pressure to produce the supply of goods needed for the war, Britain underwent industrial changes.

With the ideas of intellectuals like Isaac Newton, Galileo Galilei, and Nicolaus Copernicus, Europe became the seat of Scientific Revolution. European societies became more open to new and innovative ideas.

Beginning in the 17th century until the mid-19th century, methods in agriculture evolved in Belgium and Holland. Techniques such as crop rotation, enclosed fields, selective breeding, and manuring increased food production and promoted the idea of capitalism. Moreover, it led to rapid population growth.

By the 18th century, an inflow of immigrants led to the development of small industries. On the other hand, India as a British colony influenced the huge production and trade of cotton. As a result, Britain became known as a woolen industry, despite its inability to grow their own cotton due to cold climate

This established trading relations with India and southern United States.</p>

<p>Due to vast coal and iron reserves, Britain took advantage of these minerals to build industries such as shipbuilding, railroads, and construction. Since the 18th century, Britain already had financial institutions like a central bank, county banks, and the stock exchange which set the stage for entrepreneurship and capitalism. The central bank of the United Kingdom, now known as the Bank of England was established in 1694 to secure Britain's financial money and business flow. With the rising economy of Britain, it put pressure on improving their transport system.</p>

</div>

</body>

</HTML>

CSS:-1)

```
body {  
margin:0px;  
background-color:#F0F0F0;  
}  
.navbar {  
text-align:center;  
background-color:#2F4F4F;  
position: fixed;  
width: 100%;  
height:180px;  
color:#ffffff; font-size:50px;  
}  
.navbar a {  
float:left;  
color:#e76d89;  
text-align: center;  
top:800px;  
padding: 10px 32.2px;  
text-decoration: none;  
font-size: 22px;  
margin-left:30px;  
}  
.navbar a:hover {  
color:#000000;  
}
```

```
.main {  
padding-left:60px;  
margin:8 px;  
height: 1500px;  
padding-right:30;  
text-align:justify;  
padding-right:60px;  
}  
.btn-group .button {  
display: inline-block;  
cursor: pointer;  
float: left;  
}  
.btn-group .button:hover  
{  
background-color:#708090;  
}
```

INTRODUCTION:-

```
<!DOCTYPE html>

<html>

<head>

<style>

si
{
    font-family:Algerian;
    font-size:26;
}

</style>

<meta name="viewport" content="width=device-width, initial-scale=1">

<link rel="stylesheet" type="text/css" href="style.css"/>

</head>

<body>

<div class="navbar">

<center>INDUSTRIAL REVOLUTION</font></center>

<div class="btn-group">

    <button class="button"><a href="home.php">Home</a></button>

    <button class="button"><a href="Introduction.php">Introduction</a>

</button>

    <button class="button"><a href="history.php">History</a></button>

    <button class="button"><a href="generation.php">Generation</a>

</button>

    <button class="button"><a href="im.php">Image</a></button>

    <button class="button"><a href="Effects.php">Effects</a></button>
```

<button class="button">Feedback</button>

</div>

</div>

<div class="main">

<h1>Introduction to the Industrial Revolution</h1>

<p>The Industrial Revolution resulted in the most profound, far-reaching changes in the history of humanity. And its influence continues to sweep through our lives today. The last 250 years of industrialization have altered our lives more than any event or development in the past 12,000 years: in where we live, how we work, what we wear, what we eat, what we do for fun, how we are educated, how long we live and how many children we have.

The Industrial Revolution provided the countries that first adopted it with the technological and economic advantages necessary to eventually rule most of the world. In short, the Industrial Revolution is the “game changer” of modern world history. More than anything else, it’s what makes the modern world, well, “modern.”</p>

<p> Consider a few global consequences of industrialization. When the Industrial Revolution started in the 18th century, the great majority of people lived in the countryside. But, the growth of cities coincided with the growth of industry, and rapid urbanization continues to increase in contemporary times. By 2008, for the first time in human history, more people in the world lived in cities than in rural areas (“World Population”). The same 250-year-old process has also resulted in modern technological innovations that generations of people have grown accustomed to—such as steam engines, railroads, cars, modern appliances, and computers. Average life expectancy has more than doubled in industrialized nations, while average incomes have increased even more. To be sure, industrialization has improved life in many ways for many people.</p>

<p>On the other hand, industrialization has not spread wealth evenly across the globe, and the consequences have often been unjust. For example, in 2010, in developing countries, where 85% of people in the world live, 16,000 children die each day from hunger-related causes—that's one child every five seconds (“Global Hunger”). This tragedy is just one of the far-reaching consequences of the wealth and income inequality in our contemporary world. But how did it come about that, as of 2006, 10% of the world’s wealthiest people controlled 85% of the world’s wealth? (Brown) Because getting a head start matters: the wealthiest countries in the world today are those that industrialized first. </p>

<h2>Why Study The Industrial Revolution?</h2>

<p>So what exactly is the Industrial Revolution? An Industrial Revolution at its core occurs when a society shifts from using tools to make products to using new sources of energy, such as coal, to power machines in factories. It’s a shift from the home to the factory, from the country to the city, from human or animal power to engines powered by fossil fuels (coal and, later, oil). The industrial process occurred radually, but the social and economic changes were so far reaching over eneration that, looking back, it becomes clear that they were nothing short of revolutionary</p>

<p>The revolution started in England, with a series of innovations to make labor more efficient and productive. In the new industrial cities, advances in technology and organization allowed the average worker to produce much more than ever before. For example, one low-skilled worker in a spinning factory in Britain in 1820 could produce, with the help of a steam-powered spinning machine, a hundred times the spun thread of a pre-industrial worker (Stearns 8). Though it started with labor-saving devices in England, the revolution spread incrementally to other regions of the world.</p>

The Industrial Revolution is an era that began in England at the end of the 18th century, but it has yet to end. We can distinguish three phases of the Industrial Revolution in modern world history, based on when various countries and regions went through the process:

INVENTIONS AND INNOVATIONS

The Industrial Revolution occurred in the last part of the 18th century in Great Britain. This revolution was an economic one, and it changed the way the world produced goods. The population went from being agricultural to industrial. This meant people moved off of the farms and out of the country. There were huge numbers of people that moved into cities. Many people were forced to move to the cities to look for work. They ended up living in cities that could not support them. During this time, there were also many new advancements in technology. The assembly line was one of the biggest inventions. Henry Ford is credited with this invention.

Some of the biggest advancements were in steam power. New fuels such as coal and petroleum, were used in these new steam engines. This revolutionized many industries, including textiles and manufacturing.

Another invention was called the telegraph. This made communicating across the ocean easier and much faster. Messages could be sent and received in minutes and delivered the same day. Writing a letter and sending it overseas could take weeks.

In 1764, Englishman James Hargreaves invented the spinning jenny (abbreviation of the word engine) which enabled production of multiple spools of thread continuously. In addition, English inventor Edmund Cartwright invented the power loom in the 1780s which mechanized weaving of cloth. In the iron industry, Englishman Abraham Darby discovered an easier method to cast iron. By the 1850s, British engineer Henry Bessemer initiated a cheaper way to mass produce steel.

Both iron and steel became a vital ingredient in building ships, infrastructure, and appliances. Thomas Newcomen was the one who developed the first practical steam engine which was originally used to pump out water from mines. It was in the 1770s when James Watt, a Scottish inventor who improved on Newcomen's work and used steam engines to power machines, locomotives, and ships. Despite the effort of the British government to contain export of technologies and skilled workers within their country, they failed as industrialization moved out of Britain and spread to other European countries and the United States.

DRAWBACKS OF REVOLUTION



The Industrial Revolution was not a good revolution for the earth. Industry was releasing huge amounts of carbon dioxide into the atmosphere and waste into the waterways and soil. Pollution by nuclear waste, pesticides, and other chemicals were also the result of the Industrial Revolution. Many natural resources were being used up at an alarming rate. Advances in farming resulted in an increased supply of food and raw materials. The changes in industry and new technology resulted in increased production of thousands of goods. Companies were more efficient and earned bigger profits. Due to unstoppable industrialization, urban areas were unable to keep up with the influx of migrant workers. Industrialized areas became overpopulated. People were

living in overcrowded housing and were prone to unsanitary conditions which led to diseases. It was only in the late 19th century when the British government introduced labor reforms which enhanced working conditions.

Industrial Revolution: Important Events and Inventions

- 1712 – Thomas Newcomen invented the steam engine known as the Newcomen Engine. The machine was only used to pump water out of mines and wasn't very

useful yet. But the use of steam to power machines became a vital turn-point in the Industrial Revolution.

1719 – John Lombe started his own silk factory, the first silk throwing mill in England and the first factory ever built.

1733 – John Kay invented and patented the Flying Shuttle, a simple weaving machine which allowed one weaver to weave wider fabrics cutting labor force by half.

1764 – James Hargreaves invented the Spinning Jenny [Jenny being a variant of the word Engine], a machine which made cloth-making faster and easier as one worker could spin eight spindles altogether.

1767 – Richard Arkwright invented and patented the water-powered spinning frame known as the Water Frame which made cotton thread creation easier. The machine was first used in 1768 and manufactured yarns that were sturdier and harder than what the spinning jenny produced. Arkwright's invention played an important role in the development of the factory system.

1769 – James Watt improved the Newcomen Engine and built a more efficient steam engine, considered one of the most vital inventions of the Industrial Revolution.

1775-1779 – Between these years, Samuel Crompton invented the spinning mule, a machine that combined the spinning and weaving processes. It was so named as the mule is the crossbred offspring of a female horse and a male donkey much like the machine which combined the works of the spinning jenny and the water frame. Later on, in 1825, the self-acting or automatic mule was patented by Richard Roberts.

1776 – Adam Smith's Wealth of Nations [whole title read as "An Inquiry into the Nature and Causes of the Wealth of Nations"] was

published. Smith's work is considered fundamental in Classic Economics.

1783 – Henry Cort patented the puddling process used for refining iron ore. It was also around this time that the ironmaster started to refine pig iron to wrought/bar iron using his own-devised production systems.

1785 – Edmund Cartwright's invention, the power loom [a weaving machine], replaced the flying shuttle.

1794 – Eli Whitney patented the cotton gin, a machine that made the separation of cotton seeds from the fiber easier allowing America's southern states to make more money from their cotton crops.

1801 – December 24 of this year, Richard Trevithick introduced his Puffing Devil to the world, so-named because it puffed steam in the air].

The Puffer was the first steam-powered passenger vehicle ever made cementing Trevithick's importance in the Industrial Revolution. Unfortunately, the Puffer was destroyed a few days later when it overheated and combusted.

1804 – Trevithick built the first steam locomotive to run along a track. Eventually, the inventor died penniless as his inventions didn't last after a few measly trips but his legacy in the Industrial Revolution did live on.

1807 – Robert Fulton commercially developed the first passenger steamboat which went into business in that year. In 1800, Napoleon Bonaparte commissioned him to design history's first practical submarine, the Nautilus.

1811- 1813 – The beginning and end of the Luddite Rebellion.

1816 – George Stephenson patented a steam engine locomotive that ran on rails. While he wasn't the first one to do so, the improvements he made on steam-powered locomotives and the railways they ran on were greatly significant that he was named the "Father of Railways". He went on to build the first-ever public inter-city railway

line in the world which was the Liverpool and Manchester Railway. It opened in 1830.

1845 – German philosopher Friedrich Engels published his book The Condition of the Working-Class in England which tackled the negative effects of industrialization.

1846 – On September 10 of this year, Elias Howe was awarded the first US patent for a sewing machine using the lockstitch design. He wasn't the first to invent the sewing machine but he developed it and his developments made him a sewing machine pioneer.

1847 – Samuel Morse received the patent for the telegraph which allowed messages to be sent via wires. When 1860 rolled in, telegraph wires went as far as the United States' East Coast. He also was the co-developer of the Morse Code.

1851 – Elisha Graves Otis, with his sons, designed and developed a safety break for elevators. He wasn't the inventor of the elevator but he made riding it safer. He exhibited the safety break in the 1854 New York World's Fair. it subsequently gained traction and this time that he made a company out of it, the Otis Elevator Company.

1855 – January of this year, Henry Bessemer created a process which turned iron into steel. This process was later on called the Bessemer Method in his honor.

1856 – Isaac Singer made his own improvements on existing sewing machine designs of his time and obtained great success from it. However, his design was greatly contested by Elias Howe who held the patent for the lockstitch. Eventually, Singer and the other sewing machine inventors agreed to pool their patents [they were the first ones to do so] and convince Howe to cooperate. He did so on terms that he be given royalty for every sewing machine sold.

1866 – Alfred Nobel invented the dynamite which was safer to use in blasting holes compared to just using black powder.

1870 – Chemist Louis Pasteur developed vaccines to weaken the effects of diseases like anthrax. This was in connection to his belief that illnesses were mainly caused by germs. His pioneering works helped developed the medical world. He was also the first one to encourage and practice sanitation and sterilization before doing surgical procedures.

1876 – Alexander Graham Bell secured the patent for the telephone, a breakthrough in communication.

1880 – Thomas Edison was granted the patent on the carbon filament electric lamp, the first commercially practical incandescent light. Edison is also credited for inventing the phonograph.

1883 – May of this year, what was then the world’s longest suspension bridge, the Brooklyn Bridge, opened for public use.

1888 – Nikola tesla got the credit for developing the induction electric motor, a significant contribution to the modern electric supply system.

1902 – German inventor Rudolf Diesel invented the Diesel engine which was named in his honor though it went through many hands for its development.

1903 – Orville and Wilbur Wright built and flew the first airplane successfully and credited as aviation pioneers.

1908 – Car maker Henry Ford manufactured the Model T, a car that was cheaper than the others as it was made on an assembly line. The Model T made cars more available to common people.

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HISTORY:-

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<h1>HISTORY</h1>

<p>The term “Industrial Revolution” was coined by Auguste Blanqui, a French economist, in 1837 to denote the economic and social changes arising out of the transition from industries carried in the homes with simple instruments, to industries in factories with power-driven machinery in Britain, but it came into vogue when Arnold Toynbee, the great historian, used it in 1882.</p>

<h2>Meaning of Industrial Revolution:</h2>

<p>However, historians question the appropriateness of the term on the ground that the Industrial Revolution covers a period far too long to justify a single label. The period is from about 1740 to about 1850 in Britain and from 1815 to the end of the nineteenth century in Europe.</p>

<p>Moreover, the term “Revolution” is misleading for describing a complicated series of forces, processes and discoveries which worked very slowly but gradually and created a new economic organization. It is contended that it is better to call it evolution and not revolution.</p>

<p>It is also suggested that instead of calling it the Industrial Revolution, it should be called “The Transition of Industrialism”. In spite of these objections, the term industrial Revolution is preferred and is in common usage.</p>

<p>Up to the middle of eighteenth century, European society was mainly agricultural. Whatever industries there were, were confined to the “domestic” sphere. There was no machinery or water- power or steam to work those industries.</p>

<h2>Why it’s beginning in England?</h2><p>Political and economic conditions in England in the latter half of the eighteenth century were the most suitable for the beginning of the Industrial Revolution in that country. It enriched her and gave her a lead over all other European countries. It spread to the main Continent of Europe and further abroad almost fifty years later. of Napoleon in 1815. Germany was affected still later and the East European countries continue to be mostly agricultural right up to the end of the nineteenth century.</p>

<p>The Industrial Revolution was preceded by Agrarian Revolution in England. Jethro Tull (1674- 1741) invented a drill which deposited the seeds in straight furrows with adequate space in between to help luxuriant growth. Tull is rightly called the father of scientific agriculture. Viscount Townshend (1674-1738) turned his lands into an agricultural laboratory.

<p>He is called the founder of the innovation commonly known as the rotation of crops. In the past, every piece of cultivable land was left fallow for a year after two years of consecutive cultivation to recuperate itself which meant that every year one-third of arable area grew no crops.</p>

<p>Through his experiments, Townshend showed that the existing method was wasteful and suggested that if root crops and artificial grasses were alternately grown on the same piece of land in successive season with grain, depletion in the mineral salts required for healthy growth of plants would be minimal. He recommended a system of four-year rotation which means wheat in the first year followed by turnips in the second, barley in the third and clover in the fourth.</p>

<h2>Textile Industry:</h2>

<p>The Industrial Revolution was mainly confined to developments in the fields of cotton industry, mining and transport. As regards cotton industry, the urge to increase production of cotton cloth led men to apply their knowledge and energy to invent machines and a number of weaving and spinning machines were invented. In 1733, John Kay invented what was known as “The Flying Shuttle”. This doubled the speed of weaving and saved labour considerably.</p>

<p>This invention enabled the weavers to turn out greater output. It made possible the weaving of broad cloth by one man. In 1765, James Hargreaves invented a machine known as “The Spinning Jenny”. The new machine had 8 spindles and consequently one spinner was able to do the work of 8 spinners. The Spinning Jenny was a simple wooden frame on which 8 spindles moved by the turning of a wheel.</p>

<p>In 1769, Richard Arkwright (1732-1792) invented “Water frame”. This machine consisted of a series of rollers and was run by water power or horse power. It helped

the manufacture of hard and firm yarn suitable for weaving. The rollers could not work in small places and consequently the water-frame of Arkwright ushered in the factory system. That is why he has been called the “parent of the factory system.”

In 1779, Samuel Crompton (1763-1827) invented a machine known as “The Mule”. The new machine combined the advantages of the Spinning Jenny of Hargreaves and water-frame of Arkwright. It made the production of fine muslin possible.

In 1785, Edmund Cartwright invented what was called “The Power Loom”. Although the Power Loom was clumsy in shape, it helped the work of weaving to be done with great speed. In 1793, Whitney invented a machine by which seeds could be separated from the cotton fibres. Previously, this was done with the help of hand and that was a slow process.

In 1785, cylinder printing was invented. A roller with a design engraved upon it ran over the paper. In 1800, a speedy method of bleaching with the help of chemicals was found. The result was that it was not necessary to expose cloth to the sun for weeks for drying it. Likewise, the help of industrial chemistry was taken for dyeing purposes.

4. Mining and Metallurgy:

As regards mining and metallurgy, wood was used for smelting iron in old days. That process was long and tedious. There was also the danger of denuding the country of her forests. It was found that coal was a much better substitute for wood. Coal was available in abundance but the problem was how to take it out of the mines which got flooded with water. Inventors began to pay attention to the problem of pumping out water.

Thomas Newcomen (1663-1729) invented a steam engine which helped the miners in pumping out water quickly. There were many defects in the engine. It

wasted a good deal of heat and fuel and sometimes it did not start. Its defects were removed by the invention of James Watt. Abraham Derby used coke successfully for smelting iron but its quality was crude. In 1784, Henry Cort (1740-1800) discovered better processes to improve the quality.</p>

<p>The steam engine revolutionized industry and mining. As motive power, steam had a distinct advantage over water power. It was not necessary now to set up factories near waterfalls. Steam could be produced anywhere and everywhere. James Watt (1736-1819) studied the steam engine of Newcomen and removed its defects and invented a new engine with a separate condenser. The new engine was called Beelzebub. It was first employed in mines. Later on, the invention of the rotary motion brought the steam engine into cotton factories also. Steam replaced horse and water power in the textile industry also.</p>

<p>There was a great demand for steam engines. With the financial assistance of Boulton, James Watt began to produce steam engines for industrial purposes. “The union of machinery with steam force multiplied tremendously the resources of mankind”. On account of the lack of precision tools, James Watt had great difficulty in making the steam engine. Maudslay’s “Slide-Rest” was a great invention which helped considerably in the making of such tools.</p>

<h1>Transport:</h1>

<p>As regards transport, the old roads were in a very bad condition. Navigation by sea and river was very slow. There were yet no railways or aero planes. There was the necessity of improving the means of transport. John Metcalf, Thomas Telford and John Macadam (1756-1836) made tremendous improvements in the art of road construction. Gravel, stone and tar were used in making pucca roads and a network of roads was laid all over the country. Travelling by coach became more comfortable and transport quicker.</p>

<p>According to a distinguished British historian, “Macadamising was not only, in its liberal sense, a practical work of great public utility; it became a symbol of all progress and was metaphorically used in common parlance for any aspect of a new age where improved and uniform scientific methods were in demand.”</p>

<p>As heavy goods could not be carried to distant places by means of roads, it was decided to use water for transport purposes. The Duke of Bridgewater (1736-1803) employed Brindley (1716-1772) to design the Bridgewater Canal from Worsley to Manchester. After that, Mersey and Calder canals were dug.</p>

<p>George Stephenson (1781-1848) is called the father of steam locomotive. He invented the first locomotive for hauling coal over iron rails. It moved at a speed of 3 miles an hour. Gradually, it was improved. By 1823, a locomotive factory was established at Newcastle. At the opening of the Liverpool- Manchester Railway in 1830 the locomotive moved at the speed of 30 miles an hour. The invention of locomotives and introduction of railways were a great boon to mankind. It became possible to transport goods more speedily and cheaply from one part of the country to another.</p>

<p>The motive power of steam was also applied to transport by sea. In 1807, a steamboat constructed by Robert Fulton sailed from New York to Albany, a distance of 150 miles in 32 hours. The first regular steamboat service in Great Britain was inaugurated in 1812 on the Clyde between Glasgow and Greenock by a boat called the Comet.</p>

<p>In 1819, the first steamship, the Savannah, crossed the Atlantic from the United States to England in 29 days with the help of sails. In 1838, two steamers. crossed the Atlantic without sails in 18 and 15 days respectively. Until about 1870, sailing vessels competed successfully with steamships. After 1878, steamships demonstrated their superiority. Early steamships were made of wood. In 1843 the first iron steamship crossed the Atlantic.</p>

<h1>5. Communication:</h1>

<p>A lot of improvement was made in the means of communication. In the middle of the nineteenth century, Charles Wheatstone with the collaboration of two Americans Samuel Morse (1791-1872) and Alfred Vail produced the electric telegraph. It was due to the joint efforts of Sir Charles Bright and Cyrus Field that the first Atlantic telegraphic communication across water was laid in 1866. Telephone owes its origin to Philip Reis, a German inventor.</p>

<p> Faraday (1791-1867) invented electro-magnetic induction in 1831. In 1839, Louis Daguerre (1789-1851) devised a method of photography by mercury vapour development of silver iodide exposed on a copper plate. In 1836, John Ericsson (1803-1889), a naval engineer, built the Monitor, the screw-propeller. In 1844, Charles Goodyear (1800-1860) invented rubber vulcanisation.</p>

<p>In 1856, Sir Henry Bessemer (1813-1898) invented the so-called “Bessemer process” of making steel direct from cast-iron, for rails, ship plates, etc. by forcing a blast of air through the molten metal in order to burn out the impurities. Then came the “open-hearth process” of making use of a shallow hearth of reverberating type for the large-scale manufacture of steel.</p>

<p>As the Industrial Revolution progressed machinery became more and more complicated and expensive. It was beyond the financial resources of single individual to install factories. Hence arose the necessity for co-operative effort. There sprang up Corporations and limited companies in which thousands of people invested their money in the hope of gaining good dividends.</p>

<p>The system of individual industrial proprietorship yielded place to joint stock companies and managing directorships. There also arose the demand for the services of engineers to man the new machines and to invent new ones to keep pace with the demand for greater production. By 1828, the Civil Engineers Society was founded

in London. Specialisation in industry required a variety of engineers such as mechanical, mining, road, marine, electrical engineers.<p>

<p>They built up new industries and improved the old ones. England became the workshop of the world. English industrial capital and English engineers sought new avenues of investment and work in foreign countries and companies with English capital and English technicians were floated in many foreign countries. Thus, the benefits of the English Industrial Revolution were spread far and wide.</p>

<p>More and more complicated industrial machinery could thrive on the inventions and discoveries of scientists. Progress in industrial inventions benefited the development of the Industrial Revolution proportionately.</p>

<p>The Safety Lamp of Davy was a boon to miners. Faraday's invention of electroplating of iron plates with nickel stopped rusting and increased the life of machines. Siemen's dynamo supplemented steam power. Bunsen's electric lighting made life more cheerful. Kelvin enabled submarine cables to be laid between America and England. Clement's planning machine, Nasmyth's steam hammer and machine for cutting grooves in metal, Robert's drilling machine and Bessemer and Siemen processes for large-scale conversion of iron into steel revolutionized and expanded industry.</p>

<p>The cotton and wool industries became more and more mechanised. The expansion of steam navigation was phenomenal. The steamships could now cross the Atlantic and other seas without fear. Steamship companies like the Cunard Lines were inaugurated.</p>

<p>A variety of other industries like building, furniture making, laundering, brewing and shoe-making also made tremendous progress. Food preservation, canning industry, gas-lighting and heating and a number of electrical appliances gave more amenities to the people. The invention of the telegraph made transmission of news

from one place to another quicker and cheaper and that enabled the newspapers to publish news of the world.</p>

<p>Rubber and petroleum industries expanded tremendously. Rubber pipes, tyres and washers were available in large quantities. Petroleum products proved of great value to men and industry. Weapons of warfare were also improved.</p>

<p>The old flint-lock muskets were substituted by breech-loading grooved rifles whose striking power was several times greater. Richard Gatling, an American, invented the first machinegun which could fire 350 shots a minute.</p>

<h1>6. Industrial Development in England:</h1>

<p>The period between 1830 and 1848 was the heroic age of railway building. To begin with, rail-roads were resisted by the existing interests of roads and canals. There were people who had advanced money for making and repairing the turnpike roads and canals. There were people who were making a living as coach-makers, harness-makers, horse-dealers, inn-keepers, etc.</p>

<p>The first attempt to get through Parliament a bill permitting the making of the rail-road between Liverpool and Manchester, failed. It cost £ 70,000 to secure parliamentary permission in 1826 even before starting the capital outlay needed to buy the land and construct the line. British railroad builders were pioneers and they incurred the costs and burdens of all pioneers and paid the price for technical experiments and mistakes.</p>

<p>The opening of the Liverpool and Manchester Railway in 1830 inaugurated the new era. By 1838, there were 490 miles of railroad in England and Wales and 50 in Scotland. Their construction cost more than £ 13 million. By the end of 1850, there were 6,621 miles of rail-road in operation.</p>

<p>The two boom periods of building came in 1836 and in the years 1844-47. In spite of wild speculations and financial disasters in 1847, there was considerable consolidation of lines which had been built piecemeal. George Hudson, the British

“Railway king”, devoted his business and administrative skill to bring about extensive amalgamations and improvements in their general running.</p>

<p>The revolution in transport through railways brought with it new demands for coal and iron and stimulated a revolution in heavy industries, especially mining and metallurgy. Britain’s coal output which was about 16 million tons in 1815 rose to 30 million tons by 1835 and 50 million tons by 1848.</p>

<p>Her output of iron doubled from one million tons in 1835 to two million tons in 1848. By 1850, about half the whole world’s production of pig iron took place in Great Britain. Engineering proper and the industries devoted to making machines were still small-scale in 1848.</p>

<p>The main progress in engineering techniques came after 1848. The railroads encouraged the rise of big contractors. They offered employment to thousands. A great new industry was born in little more than 20 years and the fears of unemployment proved to be unfounded. There was a general stimulus to the whole economic system.</p>

<p>Above all other commodities, cotton was linked with the expansion of British overseas trade. In 1830, three-quarters of the new cotton came from the United States. In 1849, the total import was as high as 346,000 tons, worth about £ 15 million. By the middle of the nineteenth century, more than half a million people were engaged in cotton industry alone. Textiles as a whole employed more than one million.</p>

<p>Textile manufacture was the industry which was most representative of the age of machinery and power. Although mechanization was slow, cotton set the pace in factory production.</p>

<p>Cotton trade boosted shipping. Between 1827 and 1848, the total tonnage of British shipping, both sail and steam, rose from 1 million to 4 million tons. At the middle of the 19th century, 60 per cent of the world’s ocean-going tonnage was British. The

tonnage of all shipping entered and cleared from ports in the United Kingdom rose from 6 million tons in 1834 to more than 14 million tons in 1847. By 1850, the United Kingdom had established herself as not only “the workshop of the world” but also as the shipper, trader and to a great extent the banker of the world.</p>

<h1>7. Industrial Development in Belgium:</h1>

<p>Industrial development in Belgium was facilitated because important coal fields were discovered there. The Government in that country played a notable part when its funds were channelled into shipbuilding and manufactures.</p>

<p>Belgium set the pace in rail-road building. Her rich supplies of coal and the spirit of national enterprise, released particularly after her independence in 1830, made possible an Industrial Revolution comparable in intensity, if not in scale, with that of Great Britain. The line from Brussels to Malines was opened in 1835.</p>

<p>It carried in its first year more than half a million passengers. This was more than the passengers carried by all the British lines in 1835. Belgium was ahead of Britain in having a railway policy and in planning rail-road construction as a national concern to serve national needs. The railway lines were designed to take full advantages of the geographical and economic position of Belgium as a land of passage.</p>

<p>The lines were planned to link up England, France, Germany and Holland and make Belgium the commercial entrepot of Western Europe. The plan began in 1834 and was completed within ten years. Throughout that period, Belgium produced more coal than France. Liege and Southern Hainault were the first developed coal-mining areas of the Continent of Europe.</p>

<p>The Liege district was a well established metallurgical centre. Belgium sent machinery all over Holland, Germany and even Russia. Her spirit of national enterprise and traditions of craftsmanship, her urban society and her network of railways gave her an economic lead in Europe second only to Great Britain.</p>

<p>After her independence in 1830, the Government gave financial help for the construction of railways and by 1850 about 900 kilometres of rail were laid. Private entrepreneurs were also encouraged to invest. During the 1850s and 1860s the Government virtually withdrew from the field and private investors were allowed to develop private lines rapidly which rose from 150 kilometres in 1850 to 2,100 kilometres in 1870.</p>

<p>Thereafter, the state again entered the field competing with private lines. The output of coal, iron and textiles went up steeply. Up to 1870, Belgium was self-sufficient in its entire requirements of food. After that, she was able even to export its agricultural products which between 1840 and 1900 touched high figure of 50 per cent.</p>

<h1>8. Industrial Development in France:</h1>

<p>On the eve of the French Revolution, the textile mills of Abbeville employed 12,000 workers. The Anzin Mining Company employed about 4,000 workers. In Paris, there were about 50 “manufactories” and they employed between 700 and 800 workers. The workers were subjected to quasi-military type of discipline. Napoleon took keen interest in the matter.</p>

<p>Many French industrialists and technicians visited England, purchased English machines and even hired English workers. All this was under the patronage of the Government. Between 1788 and 1812, the number of looms in France increased from 7,000 to 17,000 and workers from 76,000 to 131,000.</p>

<p>There were 452 mines with 43,305 workers, 41 iron works with 1,202 workers, 1,219 forges with 7,120 workers and 98 sugar refineries with 585 workers. It has been estimated that French industry reached by 1815 the level of mechanization of England in 1780.</p>

<p>After the French Revolution, the pace of mechanization did not pick up because the ruling elite in France were not mechanically minded. The landed proprietors were also not interested in mechanization.</p>

<p>In 1832, horse power of French industry was under 1,000. By 1848, it increased seven times. In England, even in 1820s, six times more horse power was used. French coal production in 1790 was about one-twentieth of that of England. During the July Monarchy (1830-1848), the increase was three times which was inadequate to meet her requirements.</p>

<p>The output of iron ore went up only two times. It took long before modern methods of smelting were adopted in France. The use of charcoal in furnaces continued in France till the World War I (1914-18). The development of roads and railways in France was faster but there was the difficulty of adequate funds at the beginning.</p>

<p>However, the Government of Louis Philippe gave sufficient funds for that purpose. A law was passed in 1836 for the construction and upkeep of local roads. From 1830 to 1848, the length of canals was doubled. Railway construction was slow in France on account of a controversy. The governing elite opposed the investment of funds on railway construction. Even a man like Thiers (1797-1877) resisted it.</p>

<p>Private capitalists were not coming forward for the construction of railways. Ultimately, a law was passed in 1842 which provided that capital for railway construction was to be jointly contributed by public authorities and private interests. The authorities were responsible for providing the “infrastructure” such as land, track, bridges and tunnels.</p>

<p>They were also asked to provide much of “super-structure” such as stations, rails, equipment, etc. The state was given representation on the boards of management and also retained the right to nationalise the lines after the expiry of the

prescribed concession period. From 1844 to 1846, France was in the grip of its first railway mania. By 1846, France had railway lines approximately 1,800 kilometres. However, many small local lines went bankrupt in 1847. In 1848, the length of French railways was only 1,921 kilometres.

The boom revived under Napoleon III (1852-1870). Private initiative was encouraged by guaranteeing assured interest on investment. The result was that while railways in 1851 were less than 4,000 kilometres, they went up to 7,000 in 1857 and 17,000 in 1870. The construction of railways boosted the production of coal and iron. The consumption of coal was trebled between 1851 and 1871. In the same period, the use of horse power in industry went up five times.

The average price of steel was almost cut by half. The greatest iron works at Le Creusot which produced 5,000 tons in 1836 was able to produce 18,000 tons in 1847, iron output increased from 35,000 tons in 1855 to 133,000 tons in 1867. During the same period, foreign commerce increased three times.

By 1846, there were hardly more than a million workers employed in large-scale industries in France. They were congested into a few big towns and industrial areas—the cotton textile areas of Alsace, Normandy and the Nord, the metallurgical areas of Lorraine and the basin of the Loire and the silk area around Lyon. This means an abnormal growth of a few towns. In the ten years from 1831 to 1841, Saint Etienne grew from a population of 16,000 to 54,000 and Roubaix from 8,000 to 34,000.

The unregulated employment of women and children for long hours in bad factory conditions exposed the industrial workers not only to insanitary living conditions and hardships but also to widespread tuberculosis and epidemics of cholera which ravaged France in 1831-32 and 1847-48. It was found in 1840 that

out of every 10,000 Youngman drafted for military service in France, 9,000 had to be rejected as medically unfit.</p>

<h1>9. Industrial Development in Germany:</h1>

<p>The mechanization of industry came comparatively late in Germany. In 1815, the German states as a whole were far more rural in character than France. There were a few trading towns of some size like Hamburg and Frankfurt but there was no city comparable to Paris. The largest city was Berlin with a population of about 150,000. Of the 1,016 towns, only 18 had more than 10,000 inhabitants. 73.5 per cent population of Germany was definitely rural.</p>

<p>The unit of production was the small shop. In most industries, guilds still played an important role. It is true that their power had been broken but in many states the guild regulations continued in force. Methods of trade were backward. As a rule, craftsmen sold their goods directly to the consumers at the weekly markets and fairs. Economically, most of the Germans were living in the middle Ages.</p>

<p>There were many reasons for this state of affairs. The political division of Germany was an obstacle to commerce and industry. Each of the 39 states into which Germany was divided was a law unto itself in economic matters. Trade was obstructed by tariff barriers and differences in the systems of coinage, weights and measures. Each state, whether small or big, had its own laws.</p>

<p>So long as the states remained as separate units, no industrial development could be expected. German markets were not sufficiently large to absorb the products of large-scale production. German manufacturers had no outlets for their products. The home market in Germany was limited by the difficulties of transportation. Germany as a whole was ill-provided with roads.</p>

<p>After the Napoleonic Wars, the roads in Germany were so bad that it was difficult and at times impossible, to move even food supplies except in dry seasons. German manufacturers were hampered by the lack of free capital. Germany had not

reaped the advantages of a profitable foreign trade. As a matter of fact, it had suffered from the devastating effects of the Napoleonic Wars.

It was a poor country in every sense of the term. There was no surplus capital which could be used in industrial enterprises. Banking and credit facilities were lacking. The so-called banks of Germany were only places for money changing.

Credit facilities were in an elementary stage. During the first decade and a half after the Napoleonic Wars, there was practically no progress. Sombart writes, "I believe it will not be amiss to assume that the economic condition of the people was worse in 1830 than in 1802."

After 1830, a movement began which gained momentum after 1850. In that development, Prussia took the lead. The Prussian Government had freed the serfs in the first decade of the nineteenth century and thereby created a supply of free labour. During the same period, it abolished the guild restrictions and thereby established industrial freedom which permitted each person to choose his own trade. Power machinery was introduced there slowly.

In 1846, less than four per cent of the cotton looms of Prussia were driven by power. Industrial development along factory lines made headway after the middle of the nineteenth century. Up to 1850, coke smelting furnaces were rare. After that, improved methods were introduced rapidly. The railway era was inaugurated by the Prussian state in 1848 when work began on the railway running from Berlin towards the Russian border.

The state of Prussia took an important step towards the economic unification of Germany by establishing the Zollverein or the Customs Union. When it was started on 1 January, 1834, the Zollverein included 18 states.

During the subsequent period, its membership was extended until it included most of the German states. Within the framework of the Zollverein, traffic among

the states was made free from customs barriers of every kind. The aim of the Union included the establishment of uniform coinage, weights and measures.

The Zollverein proved to be a stimulant to industrial development after 1850. The consumption of raw cotton in Germany arose from about 28,000 tons in 1851 to about 50,000 tons in 1865. The annual consumption of silk increased from 300 tons in 1840 to 950 tons in 1870. A beginning was made in the systematic exploitation of the natural resources of coal and iron. The production of iron ore quadrupled during the two decades from 1850 to 1870. The production of coal increased from three million tons in 1846 to 18½ million tons in 1867 and nearly 30 million tons by 1871. During that period, the modern credit banks appeared. Rail-roads were extended until Germany had 11,501 miles of rail-roads by 1870. By the time of the establishment of the German Empire in 1871, she got rich lands of Alsace and Lorraine from France in 1871. From 1871 to 1914, Germany became the most powerful state in Europe. She already produced more coal than France in 1850. Both countries almost doubled their coal production from 1850 to 1860. Between 1850 and 1880, France multiplied her production by a little more than four and Germany by nearly ten. Coal production in Germany was dependent on the building of railways which in their turn needed greater coal production. The use of the steam engine to accelerate transport on land and sea was important for Germany.

10. Industrial Development in Italy:

Like Germany, Italy was divided into many states. The pace of industrial development in Italy was fitful and varied from state to state. There came into existence many industrial complexes mostly located in Northern Italy. The industrialization of Italy picked up real momentum after the completion of her unification in 1870.

11. The Austrian Empire:

Although Maria Theresa (1717-1780) adopted a policy of selective industrialization, its pace was slow. There were many conflicting ethnic, political and economic issues which stood in the way of her progress.

12. Russia:

In mid-eighteenth century, Russia produced more cast iron than England and France and twice as much as Germany. However, her production of cast iron was surpassed by Britain in 1805, by France in 1828 and Germany and Austria in 1855. It seems curious that while Russian diplomatic prestige and influence was at its highest in Central and Western Europe from 1815 to 1854, her economic life was primitive. Before the Crimean War (1854-1856), the great majority of Russians never handled money but gave services and received payments in kind.

At the village markets, trade was mostly carried on by barter. A money economy developed in Russia after the Crimean War partly because of emancipation of serfs, partly because of the export of wheat abroad and partly because of the building of railways. Until the 1860s, industries remained merely unimportant supplements to agriculture. Industrial workers often worked in factories only in winter and returned to land in summer.

Russia was handicapped by the location of her mineral wealth. The iron ore of the Urals was far from the areas of dense population and from the coal needed for smelting iron ore. To take the products of the Urals to Moscow and St. Petersburg, canals and rivers had to be used. That could be done only when the weather conditions were favorable. The iron ore of the Krivoi Rog region and the coal of the Donetz region were equally remote from Moscow and St. Petersburg and the great rivers flowed in the wrong direction.

13. The Industrial Expansion after 1870:

If the forty years from 1830 to 1870 saw a veritable "Industrial Revolution" in Great Britain and the preparatory stage in Western and Central Europe and in

Eastern North America, the next forty years from 1870 to 1910 were marked by a progressive output of industries already largely mechanized, a rapid evolution of novel industries and a transformation of agricultural into industrial population.</p>

<p>These developments applied equally to Britain, European states and the United States. During this period, the number of engineers and scientists, physicists and chemists multiplied and they allied themselves to machine industry. A large number of polytechnic schools and schools of applied sciences were set up in all countries which aspired to be civilized and progressive. Tools of precision were multiplied.</p>

</div>

</body>

</html>

GENERATION OF INDUSTRY REVALUATION

```
<!DOCTYPE html>
<html>
<head>
<meta name="viewport" content="width=device-width, initial-scale=1">
<link rel="stylesheet" type="text/css" href="style.css"/>
<style>
#it
{
    color:444;
    font-size:18px;
    font-weight:bold;
    font-family:time new roman;
float:center;
}
#fac
{
    font-size:23px;
    font-weight:bold;
    font-family:time new roman;
float:center;
}

.image{
    margin:0px;
    border:15px solid#ccc;
```

```
        float:left;
        height:440px;
    }

    {
        text-decoration:none;
    }
</style>
</head>
<body>
<div class="navbar">
<br>INDUSTRIAL REVOLUTION</font><br><br>
<div class="btn-group">
    <button class="button"><a href="home.php">Home</a></button>
    <button class="button"><a href="Introduction.php">Introduction</a>
</button>
    <button class="button"><a href="history.php">History</a></button>
    <button class="button"><a href="generation.php">Generation</a>
</button>
    <button class="button"><a href="im.php">Image</a></button>
    <button class="button"><a href="Effects.php">Effects</a></button>
<button class="button"><a href="feedback.php">Feedback</a></button>
</div>
</div>
<div class="main">
<div id="it">
```

<CENTER><h1>Generation Of
Industrial Revolution </h1></CENTER>

<div id="fac">

<ul type="square">

First Industrial Revolution (1764)

<ul type="square">

Second Industrial Revolution(1870)

<ul type="square">

Third Industrial Revolution (1969)

<ul type="square">

Fourth Industrial Revolution(Now)

</div>

</div>

</center>

</body>

</html>

IMAGES:

```
<html>
<meta name="viewport" content="width=device-width, initial-scale=1">
<link rel="stylesheet" type="text/css" href="st.css"/>
<style>
body
{
    font-family: Verdana, sans-serif;
    margin: 0;
}

* {
    box-sizing: border-box;
}

.row > .column {
    padding: 15px 10px;
}

.row:after {
    content: "";
    display: table;
    clear: both;
}

.column {
    float: left;
    width: 25%;
```

```
height:60%;  
}  
/* The Modal (background) */  
.modal {  
  display: none;  
  position: fixed;  
  z-index: 1;  
  padding-top: 100px;  
  left: 0;  
  top: 0;  
  width: 100%;  
  height: 100%;  
  overflow: auto;  
  background-color: black;  
}  
/* Modal Content */  
.modal-content {  
  position: relative;  
  background-color: #fefefe;  
  margin: auto;  
  padding: 0;  
  width: 90%;  
  max-width: 1200px;  
}  
/* The Close Button */  
.close {  
  color: white;
```

```
position: absolute;
top: 10px;
right: 25px;
font-size: 35px;
font-weight: bold;
}
.close:hover,
.close:focus {
color: red;
text-decoration: none;
cursor: pointer;
}
.mySlides {
display: none;
}
.cursor {
cursor: pointer;
}
/* Next & previous buttons */
.prev,
.next {
cursor: pointer;
position: absolute;
top: 50%;
width: auto;
padding: 16px;
margin-top: -50px;
```

```
color: white;
font-weight: bold;
font-size: 40px;
transition: 0.6s ease;
border-radius: 0 3px 3px 0;
user-select: none;
-webkit-user-select: none;
}
/* Position the "next button" to the right */
.next {
    right: 0;
    border-radius: 3px 0 0 3px;}
/* On hover, add a black background color with a little bit see-through */
.prev:hover,
.next:hover {
    background-color: rgba(0, 0, 0, 0.8);}
/* Number text (1/3 etc) */
.numbertext {
    color: purple;
    font-size: 20px;
    padding: 20px 12px;
    position: absolute;
    top: 0;
}
img {
    margin-bottom: -4px;
}
```

```
.caption-container {
  text-align: center;
  background-color: red;
  padding: 10px 20px;
  color: blue;
  font-size:20;
}

.demo {
  opacity: 0.6;
}

active,
.demo:hover {
  opacity: 1;
}

img.hover-shadow {
  transition: 0.3s;
}.hover-shadow:hover {
  box-shadow: 0 8px 12px 0 rgba(0, 0, 0, 0.80), 0 10px 26px 0 rgba(0, 0, 0, 0.8080);
  border: 6px solid #777;
}

div.desc {
  padding: 15px;
  text-align: center;
}

.fo
{
font-family:time new romane;
```

```
font-size:24;
color:green;
text-align:center;
}
</style>
<body>
<div class="navbar">
<br><center>INDUSTRIAL REVOLUTION</font></center>
<div class="btn-group">
  <button class="button"><a href="home.php">Home</a></button>
  <button class="button"><a href="Introduction.php">Introduction</a>
</button>
  <button class="button"><a href="history.php">History</a></button>
  <button class="button"><a href="generation.php">Generation</a>
</button>
  <button class="button"><a href="im.php">Image</a></button>
  <button class="button"><a href="Effects.php">Effects</a></button>
<button class="button"><a href="feedback.php">Feedback</a></button>
</div>
</div>
<div class="fo">
<h1>IMAGE</h2>
</div>
<div class="row">
  <div class="column">
    
```

```
<div class="desc">1/4</div>
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</div>
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<div class="column">
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<div class="desc">12</div>
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</div>
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<div class="column">
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<div class="desc">Landauer</div>
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</div>
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<div class="column">
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<div class="desc">Bessemer</div>
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<div class="column">
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<div class="desc">BLW_Tea_and_coffee_service_Staffordshire</div>
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</div>
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<div class="column">
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<div class="desc">FrameBreaking-1812</div>
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</div>
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<div class="column">
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<div class="desc">Ironbridge</div>
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</div>
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<div class="column">
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<div class="desc">Hartmann Maschinenhalle 1868</div>
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</div>
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<div class="column">
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```
<div class="desc">"Hand-loom_weaving.jpg" </div>
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</div>
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<div class="column">
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```
<div class="desc">Maudslay screw-cutting lathes of circa 1797 and 1800</div>
```

</div>

<div class="column">

<div class="desc">URBANIZATION</div>

</div>

<div class="column">

<div class="desc">untitled (2).BMP</div>

</div>

<div class="column">

<div class="desc">TRANSFER OF WEALTH AND POWER TO THE WEST</div>

</div>

<div class="column">

<div class="desc">The_Coal_Exchange_(tone)</div>

</div>

<div class="column">

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```
<div class="desc">TECHNOLOGICAL</div>
```

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</div>
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<div class="column">
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<div class="desc">StRolloxChemical</div>
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</div>
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<div class="column">
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<div class="desc">Spinning_jenny</div>
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</div>
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<div class="column">
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```
<div class="desc">SlaterMill</div>
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</div>
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<div class="column">
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```
<div class="desc">RISE OF MATERIALISM AND CONSUMERISM</div>
```

</div>

<div class="column">

<div class="desc">POLLUTION AND DESTRUCTION OF ENVIRONMENT</div>

</div>

<div class="column">

<div class="desc">OPPORTUNITY</div>

</div>

<div class="column">

<div class="desc">Opening_Liverpool_and_Manchester
</div>

</div>

<div class="column">

<div>class="desc">Newcomens_Dampfmaschine_aus_Meyers_1890.</div>

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<div class="column">

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<div class="desc">fourth-industrial-revolution_resize_md </div>
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</div>
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<div class="column">
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<div class="desc">factories during indesterial revolation</div>
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<div class="desc">A rail rolling mill in Donetsk, 1887.</div>
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<div class="desc">Barrow_Steelworks</div>
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</div>
<div id="myModal" class="modal">
    <span class="close cursor" onclick="closeModal()">&times;</span>
    <div class="modal-content">
<div class="mySlides">
    <div class="numbertext">1 / 24</div>
    

```

</div>

<div class="mySlides">

<div class="numbertext">2 / 24</div>

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<div class="numbertext">8 / 24</div>
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<div class="mySlides">
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<div class="numbertext">9 / 24</div>
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<div class="numbertext">10 / 24</div>
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<div class="mySlides">
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  <div class="numbertext">24 / 24</div>
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</div>
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```
  <a class="prev" onclick="plusSlides(-1)">&#10094;</a>
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<a class="next" onclick="plusSlides(1)">&#10095;</a>
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<div class="caption-container">
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  <p id="caption"></p>
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```
<script>
```

```
function openModal() {
```

```
    document.getElementById("myModal").style.display = "block";
```

```
}
```

```
function closeModal() {  
    document.getElementById("myModal").style.display = "none";  
}  
var slideIndex = 1;  
showSlides(slideIndex);  
function plusSlides(n) {  
    showSlides(slideIndex += n);  
}  
function currentSlide(n) {  
    showSlides(slideIndex = n);  
}  
function showSlides(n) {  
    var i;  
    var slides = document.getElementsByClassName("mySlides");  
    var dots = document.getElementsByClassName("demo");  
    var captionText = document.getElementById("caption");  
    if (n > slides.length) { slideIndex = 1 }  
    if (n < 1) { slideIndex = slides.length }  
    for (i = 0; i < slides.length; i++) {  
        slides[i].style.display = "none";  
    }  
    for (i = 0; i < dots.length; i++) {  
        dots[i].className = dots[i].className.replace(" active", "");  
    }  
    slides[slideIndex-1].style.display = "block";  
    dots[slideIndex-1].className += " active";  
    captionText.innerHTML = dots[slideIndex-1].alt;
```

```
}  
</script>  
</body>  
</html>
```

EFFECTS:-

```
<!DOCTYPE html>  
<html>  
<head>  
<meta name="viewport" content="width=device-width, initial-scale=1">  
<link rel="stylesheet" type="text/css" href="st.css"/>  
<style>  
#int  
{  
    color:purple;  
        font-size:50;  
    }  
    .centered {  
position: absolute;  
top: 50%;  
left: 50%;  
transform: translate(-50%, -50%)  
}  
        .container {  
position: relative;  
text-align: center;  
color: white;
```

```

}
</style>
</head>
<body>
<div class="navbar">
<br><center>INDUSTRIAL REVOLUTION</font></center><br>
<div class="btn-group">
  <button class="button"><a href="home.php">Home</a></button>
  <button class="button"><a href="Introduction.php">Introduction</a>
</button>
  <button class="button"><a href="history.php">History</a></button>
  <button class="button"><a href="generation.php">Generation</a>
</button>
  <button class="button"><a href="im.php">Image</a></button>
  <button class="button"><a href="Effects.php">Effects</a></button>
<button class="button"><a href="feedback.php">Feedback</a></button>
</div>
</div>
<div class="container">

<div class="centered">
<font size="36" color="white">EFFECT OF INDUSTRIAL
REVOLUTION</font></div></div>
<div class="main"><font face="Georgia" size="4.8" >
  <p>The Industrial Revolution was a major turning point in history which was
marked by a shift in the world from an agrarian and handicraft economy to one

```

dominated by industry and machine manufacturing. It brought about a greater volume and variety of factory-produced goods and raised the standard of living for many people, particularly for the middle and upper classes. However, life for the poor and working classes continued to be filled with challenges. Wages for those who laboured in factories were low and working conditions could be dangerous and monotonous. Children were part of the labour force. They often worked long hours and were used for such highly hazardous tasks as cleaning the machinery. Industrialization also meant that some craftspeople were replaced by machines.

Additionally, urban, industrialized areas were unable to keep pace with the flow of arriving workers from the countryside, resulting in inadequate, overcrowded housing and polluted, unsanitary living conditions in which disease was rampant. The conditions for the working-class gradually improved as governments instituted various labour reforms and workers gained the right to form trade unions.

Know about the positive and negative impact of the Industrial Revolution through the 10 major effects of this world changing event.

1. THE FACTORY SYSTEM

The image shows the interior of a large, industrial flax mill. It features high ceilings with exposed wooden beams and a complex system of machinery, including large spindles and gears, used for processing flax. The floor is made of dark wood, and the overall atmosphere is one of a busy, early industrial setting.


The factory system was a child of the Industrial Revolution and developed and advanced during its course in the 18th and 19th century.

It replaced the cottage industry which was more autonomous with individual workers using hand tools and simple machinery to fabricate goods in their own homes. The invention of the water powered frame by Richard Arkwright in the 1760s led to the formation of the first factories along the rivers in Britain.

In 1771, Arkwright built his first factory at Cromford. He built many small cottages close to it to employ labour from far and across, preferring weavers with large families so that women and, especially their children, could work in the factory. By

1779, he had over 800 people with timed jobs, shifts and factory rules. The factory system generated a fortune for its few owners and his template caught like wild fire. Improvements in the steam engine and power loom further incentivised cheaper energy and better machines; and this positive loop fed the Industrial Revolution.

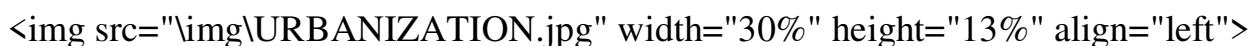
2 RISE OF CAPITALISM

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Capitalism refers to an economic system based upon private ownership of the means of production and their operation for profit. With political control over the colonies and rise in technological innovations, Capitalism was on a rise in Britain.

Factory owners and others who controlled the means of production rapidly became very rich and had more money to invest in technology and more industry. In those times only the wealthy could vote in Britain with about 3 percent allowed to vote. Industrial capitalists gradually replaced agrarian land owners as leaders of the nation's economy and power structure. With economic and political power they were in many ways the new rulers of the nation. Great Britain, in which the Industrial Revolution originated, was followed by other nations including Belgium, France, Germany and the United States. Soon the capitalists became the leaders in numerous countries across the world.

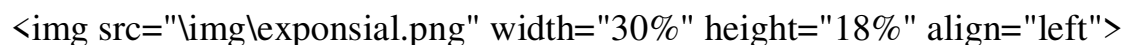
3 URBANIZATION

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The rise of cities was one of the defining and most lasting features of the Industrial Revolution. In pre-industrial societies almost 80% of people lived in rural areas dependent on farming and animal husbandry. The growth in population due to the agriculture revolution and the rise in industry had reduced the opportunities in the rural areas causing large migrations to the industrialized cities. The population of Britain almost doubled in the 18th century. By the end of the century 1 in 10 Britons

lived in London which had a population of 1 million. In 1771, Manchester had a population of only 22,000. Over the next fifty years, its population exploded and reached 180,000. By 1850, more people were living in cities than in villages. The number of cities with populations of more than 20,000 in England and Wales rose from 12 in 1800 to nearly 200 at the close of the century. This trend was seen all around as other parts of the world industrialized.

4 EXPLOITATION OF THE WORKING CLASS



For many skilled workers, the quality of life decreased a great deal in the first 60 years of the Industrial Revolution. Skilled weavers, for example, lived well in pre-industrial society as a kind of middle class. They tended their own gardens, worked on textiles in their homes or small shops, and raised farm animals. They were their own bosses. The Industrial Revolution was the shift of primarily agrarian societies to industrialized societies. The contrast was stark especially for the first few generations of factory workers who knew of life in the country as compared to life in the industrial cities. With almost no laws for the new age and power centered with the wealthy; the new working class in the factories suffered. Their neighborhoods were bleak, crowded, dirty and polluted. The condition of hand skilled workers deteriorated and there was little or no scope to supplement their income with gardening or communal harvesting. During the first 60 years there was little scope for recreation. Many slums were formed, there was extensive child labour and many people were lost to disease and hazardous working conditions. In 1849, 10,000 people died of cholera in three months in London alone. Tuberculosis claimed 60,000 to 70,000 lives in each decade of the 19th century. In the first 60 years, the situation in general was bleak for many as may be seen even today in developing countries.

<h3>5 OPPORTUNITY AND INCREASE IN THE STANDARD OF LIVING</h3>

<p>Historians disagree about the increase in wages of the working class in the first phase of the Industrial Revolution but there is general agreement that, adjusted for inflation, the wages stayed steady from 1790 to 1840. A rise of about 50 percent is observed between 1830 and 1875 in Britain. There was a very gradual rise of the middle class in the cities, mostly towards the end of the 19th century. The society had always been divided in two classes: the aristocrats born into their lives of wealth; and low-income commoners born in the working classes. The new urban industrial towns slowly created a plethora of new jobs such as big shopkeepers, bank clerks, insurance agents, merchants, accountants, managers, doctors, lawyers and teachers. Purchasing power increased and total national income multiplied 10 times in Britain in 100 years by the end of the 19th century. As the wealth shifted in the hands of the businessmen, there was more opportunity for enterprising, shrewd and brilliant ideas. There were also many rags to riches stories which inspired people to work harder.</p>

<h3>6 RISE OF MATERIALISM AND CONSUMERISM</h3>

<p>The rise in materialism and consumerism was one of the primary fallouts of the Industrial Revolution. Money, be it gold, paper or plastic is a mode of exchange and it derives its value from the goods and services someone is willing to offer for it. With the rise of Industry more goods were being produced leading to the development of the nation. At the same time, competitive hand skilled industries were slowly wiped out due to political and economic reasons. As production kept on increasing over decades and centuries, it required a proportional increase in demand.

Feeding on the basic human desire to have more, a cycle of more consumption and more production was fired up which led to rise of materialism and consumerism.

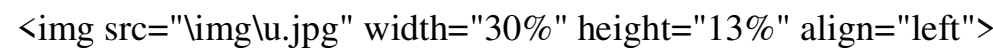
7 TECHNOLOGICAL ADVANCEMENT



The government majorly favored the wealthy in the early part of the Industrial Revolution. Even children were not spared and in the early 1860s, an estimated one-fifth of the workers in Britain's textile industry were younger than 15. With a large population that felt exploited under a few wealthy capitalists, social tensions gradually increased. The condition of the working class became such a cause of concern that it led to the rise of socialism. Socialism is a theory which advocates that all people are equal and should have shared ownership of the country's wealth. The most influential socialist thinker was undoubtedly an economist and philosopher named Karl Marx(1818-1883). Though German in his origins, Marx spent most of his time in England understanding and critiquing the established capitalist system of those times. His ideas challenged the very foundations of the capitalist world, inspiring many uprisings against the model.

Marxism and Communism as economic models are however widely rejected in the world today due to their lack of success wherever implemented.

8 RISE OF SOCIALISM AND MARXISM



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9 TRANSFER OF WEALTH AND POWER TO THE WEST

width="30%" height="11%" align="left">

India and China had been the dominant economies of the world for centuries. In the beginning of the 18th century they accounted for close to 50 percent of the world GDP. By the 18th century the British, Dutch, Portuguese and French were involved in sea trade with India for over a century and were now aware and involved to some extent in the politics of the region. With victory in the battles of Plessey and Buxar in mid-18th century the British gained considerable power in India outplaying its rivals. The drain of wealth from India gained momentum with these victories through laws, taxes and de-industrialization among many other things.

10 POLLUTION AND DESTRUCTION OF ENVIRONMENT

width="30%" height="16%" align="left">

Pollution and environmental damage were the obvious consequences of the industrialized world and the consumerism that followed it.

The rise of the machines required vast amounts of energy to fuel them, and fossil fuels like coal and petroleum were burned to energize the industry resulting in smog

and air pollution. Chemicals were necessary for various processes leading to the fast rise in the development of industrial parks based on the chemical manufacturing of such items as dyes, plastics and pharmaceuticals. Cities were densely populated and forests and farmlands were cleared to make room for railroads and other infrastructure. Waste was dumped in rivers and cities were highly polluted. The Great Stink in London in August 1858 was a noted event during which hot weather exacerbated the smell of untreated human waste and industrial effluent that was present on the banks of River Thames. The continued advancement of technology allowed large corporations to dictate the industrial landscape, and to have a far-reaching adverse effect on the environment.</p>

</div>

</body>

</HTML>

FEEDBACK:-

<html>

<head>

<title>invention</title>

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{

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            font-size:50;
        }
        .centered {
position: absolute;
top: 50%;
left: 50%;
transform: translate(-50%, -50%);
}
</style>
</head>
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<div class="btn-group">
    <button class="button"><a href="home.php">Home</a></button>
    <button class="button"><a href="Introduction.php">Introduction</a>
</button>
    <button class="button"><a href="history.php">History</a></button>
    <button class="button"><a href="generation.php">Generation</a>
</button>
    <button class="button"><a href="im.php">Image</a></button>
    <button class="button"><a href="Effects.php">Effects</a></button>
<button class="button"><a href="feedback.php">Feedback</a></button>
</div>
</div>
</body>
```

```
<style>
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{
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}
</style>
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<div class="centered">
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<body style="text-align:center;padding:0;margin:0;">
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</p>
<P><h1 class="hall">Email:<input type="email" name="email"/>
<P><b>Message</b>:<br>
<textarea name="message" cols="60" rows="6" color="orange"></textarea>
</p>
<input type="Submit" id="dwn_btn Submit"/>
</form>
</div>
</div>
</body>
</html>
```

Database Code:

```
<html>

<head>

<?php

$name=$_POST['name'];

$email=$_POST['Email'];

$message=$_POST['Message'];

$servername="localhost";

$username="root";

$password="";

$dbname="project";

$db=new mysqli('localhost',$username,$password,$name);

$query="INSERT
INTO'feedback3'('name','email','message')VALUE('$name','$email','$message')";

$run=mysqli_query($db,$query);

if($run==TRUE)

    echo"data insert successfully";

else

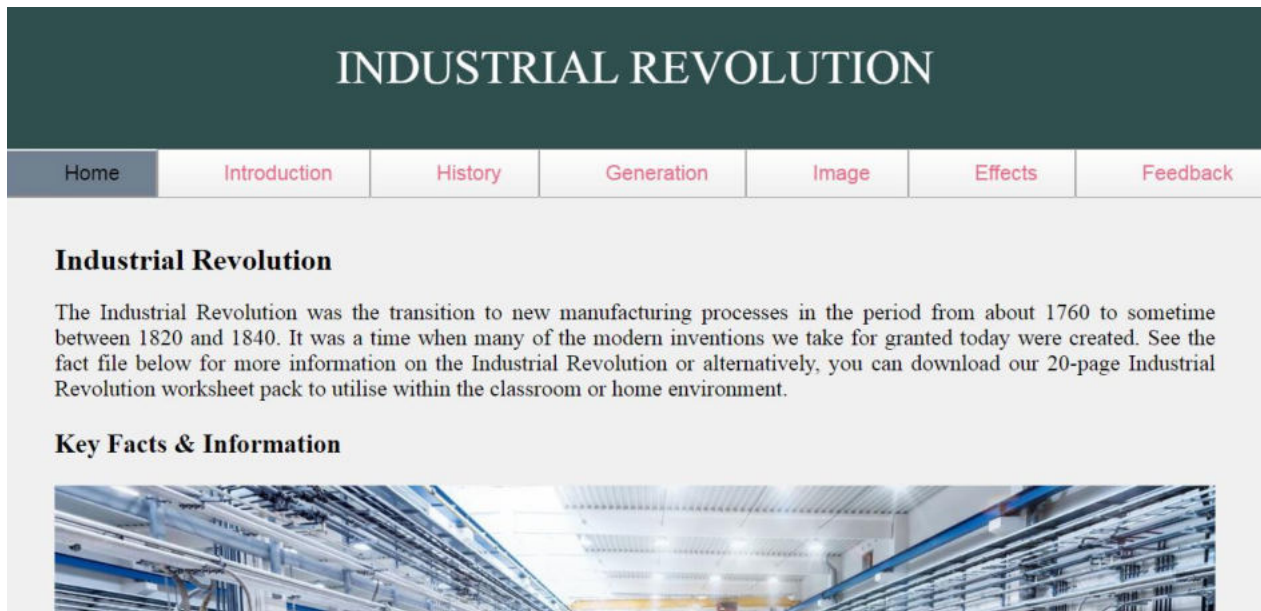
    echo"Error";

?>

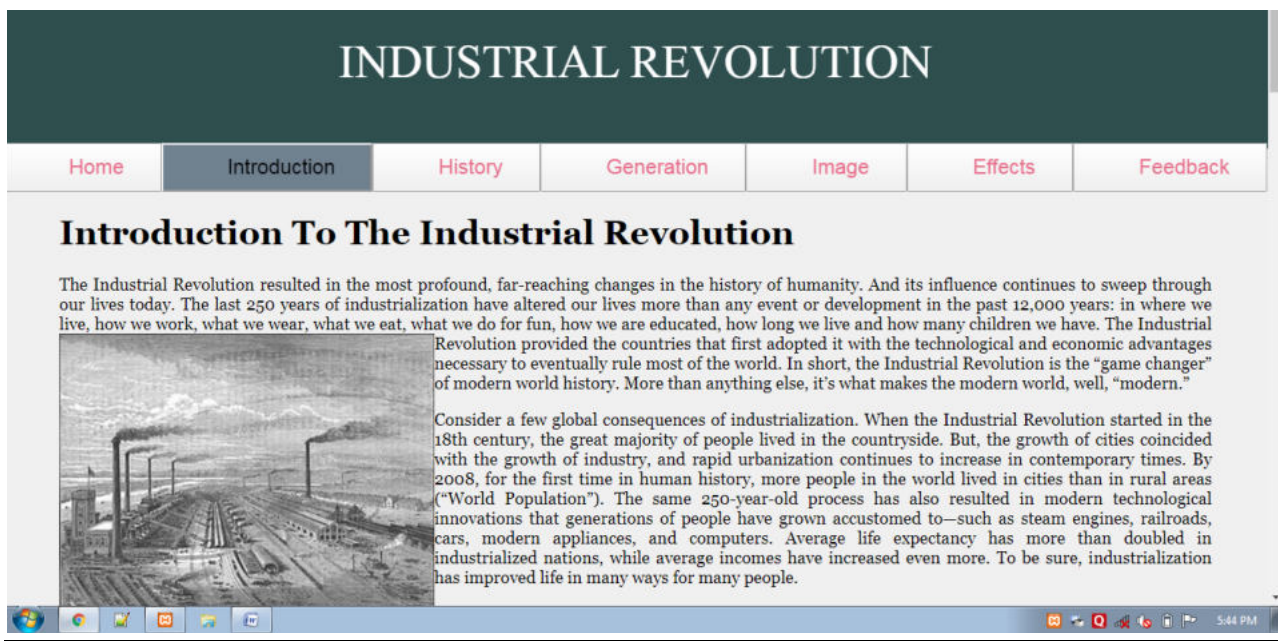
</html>
```

INPUT SCREEN AND OUTPUT SCREEN

HOME:



INTRODUCTION:



HISTORY:

INDUSTRIAL REVOLUTION

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HISTORY

The term "Industrial Revolution" was coined by Auguste Blanqui, a French economist, in 1837 to denote the economic and social changes arising out of the transition from industries carried in the homes with simple instruments, to industries in factories with power-driven machinery in Britain, but it came into vogue when Arnold Toynbee, the great historian, used it in 1882.

Meaning of Industrial Revolution:

However, historians question the appropriateness of the term on the ground that the Industrial Revolution covers a period far too long to justify a single label. The period is from about 1740 to about 1850 in Britain and from 1815 to the end of the nineteenth century in Europe.

Moreover, the term "Revolution" is misleading for describing a complicated series of forces, processes and discoveries which worked very slowly but gradually and created a new economic organisation. It is contended that it is better to call it evolution and not revolution.

It is also suggested that instead of calling it the Industrial Revolution, it should be called "The Transition of

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- 5. Communication:
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- 7. Industrial Development in Belgium:
- 8. Industrial Development in France:
- 9. Industrial Development in

GENERATION :

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Generation Of Industrial Revolution

18th Century

Industry 1.0
Mechanical production equipment powered by steam

19th Century

Industry 2.0
Mass production assembly lines requiring labour and electrical energy

20th Century

Industry 3.0
Automated production using electronics and IT

Today

Industry 4.0
Intelligent production incorporated with IoT, cloud technology & big data

- First Industrial Revolution (1764)
- Second Industrial Revolution (1870)
- Third Industrial Revolution (1969)
- Fourth Industrial Revolution (Now)

2.SECOND INDUSTRIAL REVOLUATION:

Cotton	<h2>First Industrial Revolution</h2> <p>The Industrial Revolution, now also known as the First Industrial Revolution, was the transition to new manufacturing processes in Europe and the United States, in the period from about 1760 to sometime between 1820 and 1840. This transition included going from hand production methods to machines, new chemical manufacturing and iron production processes, the increasing use of steam power and water power, the development of machine tools and the rise of the mechanized factory system. The Industrial Revolution also led to an unprecedented rise in the rate of population growth.</p> <p>Textiles were the dominant industry of the Industrial Revolution in terms of employment, value of output and capital invested. The textile industry was also the first to use modern production methods.</p> <p>The Industrial Revolution began in Great Britain, and many of the technological innovations were of British origin. By the mid-18th century Britain was the world's leading commercial nation, controlling a global trading empire with colonies in North America and the Caribbean, and with major military and political hegemony on the Indian subcontinent, particularly with the proto-industrialised Mughal Bengal, through the activities of the East India Company. The development of trade and the rise of business were among the major causes of the Industrial Revolution.</p> <p>The Industrial Revolution marks a major turning point in history; almost every aspect of daily life was influenced in some way. In particular, average income and population began to exhibit unprecedented sustained growth. Some economists say that the major effect of the Industrial Revolution was that the standard of living for the general population in the western world began to increase consistently for the first time in history, although others have said that it did not begin to meaningfully improve until the late 19th and 20th centuries.</p>
British textile industry	
silk	
Wool	
Iron industry	
Glass making	<ul style="list-style-type: none"> • First Industrial Revolution • Second Industrial Revolution • Third Industrial Revolution • Fourth Industrial Revolution
paper machine	
agriculture	
Mining	

Iron

Steel

Rail

Electrification

Machine tools

Paper making

Petroleum

Chemical

Maritime technology

Rubber

Bicycles

Automobile

Telecommunication

Fertilizer

The Second Industrial Revolution

The Second Industrial Revolution, also known as the Technological Revolution, was a phase of rapid standardization and industrialization from the late 19th century into the early 20th century. The First Industrial Revolution, which ended in the middle of 19th century, was punctuated by a slowdown in important inventions before the Second Industrial Revolution in 1870. Though a number of its events can be traced to earlier innovations in manufacturing, such as the establishment of a machine tool industry, the development of methods for manufacturing interchangeable parts and the invention of the Bessemer Process to produce steel, the Second Industrial Revolution is generally dated between 1870 and 1914 (the beginning of World War I).

Advancements in manufacturing and production technology enabled the widespread adoption of technological systems such as telegraph and railroad networks, gas and water supply, and sewage systems, which had earlier been concentrated to a few select cities. The enormous expansion of rail and telegraph lines after 1870 allowed unprecedented movement of people and ideas, which culminated in a new wave of globalization. In the same time period, new technological systems were introduced, most significantly electrical power and telephones. The Second Industrial Revolution continued into the 20th century with early factory electrification and the production line, and ended at the beginning of World War I.

Industrial Revolution

- [first Industrial Revolution](#)
- [Second Industrial Revolution](#)
- [Third Industrial Revolution](#)
- [Fourth Industrial Revolution](#)

3. THIRD INDUSTRIAL REVOLUTION:

Alcohol
Bicycle
Computer
Construction
Dredging
Electric power
Electronics
Semiconductors
Renewable energy
Engineering
Entertainment
Food
Bushfood
Online

Third Industrial Revolution

Beginning in the 1950s, the third industrial revolution brought semiconductors, mainframe computing, personal computing, and the Internet—the digital revolution. Things that used to be analog moved to digital technologies, like an old television you used to tune in with an antenna (analog) being replaced by an Internet-connected tablet that lets you stream movies (digital).

The move from analog electronic and mechanical devices to pervasive digital technology dramatically disrupted industries, especially global communications and energy. Electronics and information technology began to automate production and take supply chains global.

As our work spaces are changing, so too are what we produce in them, says The Future Laboratory co-founder Chris Sanderson, referring to the swift and stealthy onset of the so-called Third Industrial Revolution, a time when 3D printing becomes mainstream.

The emerging Third Industrial Revolution will transform not just production but society itself. The first industrial revolution was the application of steam power in the eighteenth century; the second was the invention of the modern assembly line at the beginning of the twentieth century. Like its predecessors, the TIR is changing the way things are made, where and when they are produced, and how they are distributed. It is reducing the energy and raw materials consumed and the carbon footprint of manufacturing. It is changing social relations, creating but also destroying jobs, and altering the relationship of people to production. It is moving the world from mass production of standardized items to bespoke products to meet the requirements of individual needs. It is also transforming the global economy, providing new opportunities for the developing as well as developed world, and costs if nations don't adapt.

Industrial Revolution

- first Industrial Revolution
- Second Industrial Revolution

4. FOURTH INDUSTRIAL REVOLUTION

The Phone
The Car
The Plane
The Light Bulb
The Internet of Things
3D Printing
Big Data
Artificial Intelligence
Robotics
Virtual Reality and Augmented Reality

Fourth Industrial Revolution

The Fourth Industrial Revolution represents a fundamental change in the way we live, work and relate to one another. It is a new chapter in human development, enabled by extraordinary technology advances commensurate with those of the first, second and third industrial revolutions. These advances are merging the physical, digital and biological worlds in ways that create both huge promise and potential peril. The speed, breadth and depth of this revolution is forcing us to rethink how countries develop, how organisations create value and even what it means to be human. The Fourth Industrial Revolution is about more than just technology-driven change; it is an opportunity to help everyone, including leaders, policy-makers and people from all income groups and nations, to harness converging technologies in order to create an inclusive, human-centred future. The real opportunity is to look beyond technology, and find ways to give the greatest number of people the ability to positively impact their families, organisations and communities.

The Phone

Alexander Graham Bell was credited with the invention of the telephone in 1876. It was an apparatus that transmitted sounds through a cable via electrical signals. It has been one of the most critical inventions because it revolutionized the world of telecommunications.

The Car

In 1885, Karl Benz developed the first internal combustion car that was shaped like a tricycle. It was equipped with a small four-

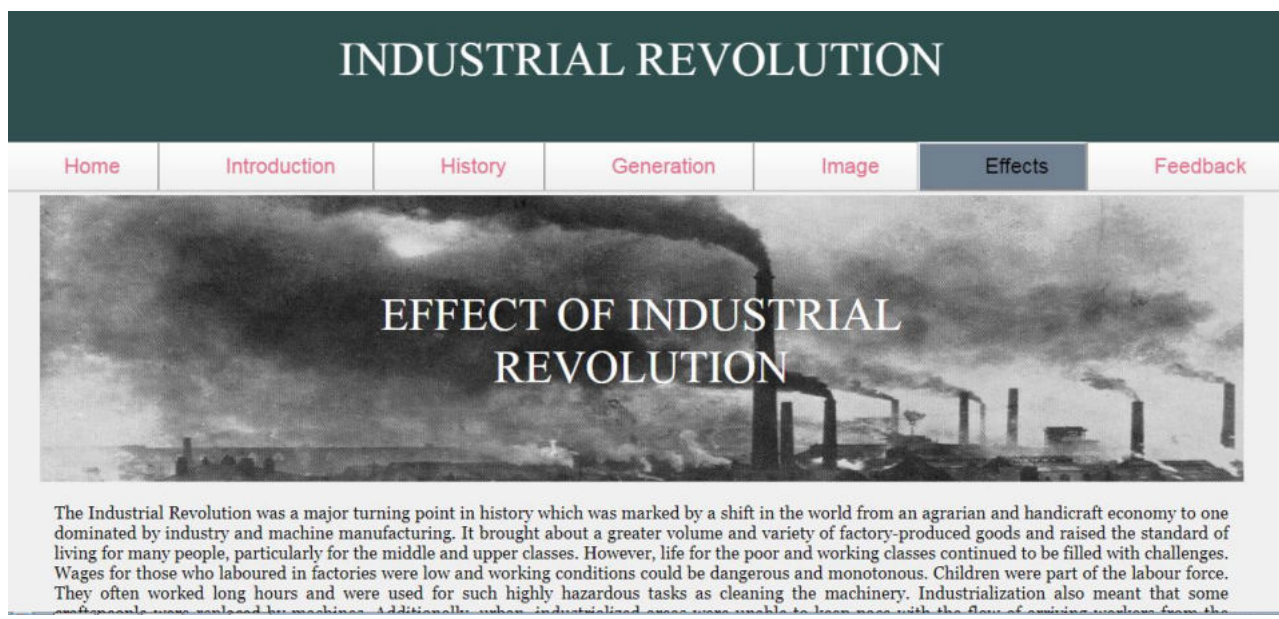
Industrial Revolution

- first Industrial Revolution
- Second Industrial Revolution
- Third Industrial Revolution
- Fourth Industrial Revolution

IMAGE:-



EFFECTS:



FEEDBACK:

INDUSTRIAL REVOLUTION

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FEEDBACK

Name:

Email:

Message:

I love this site

data insert successfully

FUTURE SCOPE OF THE PROJECT

This project “industry revaluation innovation” is basically a website which is developed for the users. This website meets the requirement of the current scenario and overcomes the flaws present in the current system.

1. In a future this website will be helpful for new invention of industrial revaluation.
2. New inventions of industry revaluation may be added.
3. Update the information of current change in industry revaluation.
4. We can add the facility of online query and grievances.
5. We add many oceans or glaciers information in this website.
6. We stand at a critical juncture to put technology to work in a responsible way.
7. The fourth industrial revaluation can help actives the SDGs (Sustainable Development Goals) this decade.
8. AI (Artificial Intelligence) will be added.

CONCLUSION

Our website “industry revaluation invention” contain information about the industrial invention. All the information provided in this website is true. Also we provide the information about history and different type of Generation of industry revaluation. And also provide to effects of industry revaluation. We are providing the various images of industry revaluation invention. Feedback from is also provided to give opinion related to our website and the provided data can be inserted in the database.

This website is useful for all age people. This website is informative website and is useful for learning purpose. We have developed this website just to make people aware about the various type of industrial invention. Our website is helpful of those users who want to grasp information. Through this website, so many information are to be provide to make user a effective learner

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2. <http://en.wikipedia.org/wik/>
3. <http://www.w3school.com/>

BOOKS:

1. HTML black book
2. Php book

PROJECT SYNOPSIS

**A
PROJECT SYNOPSIS
ON**

“Industrial Revolution Invention”

Submitted To

**Rashtrasant Tukadoji Maharaj Nagpur University,
Nagpur**

**In The Partial Fulfillment Of
B.Com. (Computer Application) Final Year**

**Synopsis Submitted By
Mayuri Rachhore
Ashwini Kuhikar**

**Under The Guidance Of
Pravin J. Yadao**



G. S. College Of Commerce & Economics

Nagpur 2019-2020

1. Introduction: (write 4 to 5 lines)

Industrial Revolution Invention is basically a website which will provide all information about the brilliant invention and great inventors .It contains that how they were invented, when they were invented and who were the inventor .It includes all the information about invention that had been taken place and their benefits.

2. Objectives of the project: (write only 5 points)

- Students will be able to introduce the Industrial invention.
- It helps in quality qualification.
- It improves student knowledge
- It give knowledge about historical invention
- It is a easy way to provide information.

3. Project category: website

4. Tools/ platform/ languages to be used: Front End:- HTML,PHP,CSS Back End:- Ms Access

5. Scope of future application: (write 4 to 5 points)

- It is time saving process to get knowledge.
- Increase qualification of student.
- updates about invention.
- It is for future beneficial.

Submitted By,

**Mayuri Rachhore
Ashwini Kuhikar**

Approved By,

**Prof. Pravin Yadao
Project Guide**