***PROJECT REPORT***

***India’s Transportation System***

|  |  |
| --- | --- |
| **Full Name & Student Number**  **(First Person):** | **Mandeep Kaur & 813435** |
| **Full Name & Student Number**  **(Second Person):** | **Jaswinder Kaur & 811730** |
| **Project Title:** | **India’s Transportation System** |
| **Website Address:** | [**https://github.com/JasMan101/JasMan101**](https://github.com/JasMan101/JasMan101) |

**Description:** The aim of this project is to analyze and provide insights into India’s Transportation System. India’s Transportation System include various modes of transportation services, from affordable prices to highly unaffordable prices. Modes of transportation differ in different provinces of India because of political, geographical, and other factors. India’s Transportation System includes buses, railways, airplanes, and many other small facilities like rickshaw’s etc. As India is a diverse country this project aims to show diversity in India’s transportation. In his project, we made a great deal of our own webpages which had been coded in HTML and JavaScript. We get knowledge of all these codes during the course. While creating these websites, we worked with various HTML elements and characteristics. Additionally, output screenshots are included in it.

**Contribution:**

1. A webpage will be made using HTML, CSS, Hyperlink, JavaScript, and these functions will also be used to make animation, links, and buttons. These things were performed by Jaswinder Kaur (811730).
2. Gathering relevant information and different kinds of videos, transportation services preferred by people in India, people views, expenses and various things will be gathered by Mandeep Kaur (813435).

***Source Codes :***

**Main Webpage :**

<!DOCTYPE html>

<html>

<style>

th, td {

border: 3px solid black;

border-radius: 10px;

}

img {

display: block;

margin-left: auto;

margin-right: auto;

}

</style>

<body>

<h1 style="color:red;text-align:center;">TRANSPORTATIONAL SYSYEM

OF INDIA</h1>

<h3 style="color:green;">TRANSPORATATION</h3>

<p> India's huge population and diversified landscape are served by an effective

and varied transport systems. In India, there are five modes of transportation:

road, air, sea, land and emerging technologies. Each mode plays a crucial role in

connecting people, goods, and regions across the country but the majority of

Indians primarily use roads for transportation, and the country has some of the

busiest road networks in the world.</p>

<img src=" https://i.postimg.cc/MZ3Xndk9/TSI.jpg "

width="350" height="250">

<br>

<h4 style="color:green;">THERE ARE FIVE TYPES OF

TRANSPORTATIONAL SYSYEM :</h4>

<p>

These are Railways, Roadways, Airways, Waterways and Emerging

Technologies.<br><br>

<h4 style="color:green;">RAILWAYS</h4> India's railway transportation

system is a vital component of the nation's infrastructure,renowned as one of the

largest and busiest networks globally. With a history dating back to the 19th

century during British colonial rule, the Indian railways have evolved into a

lifeline for the country, connecting distant regions, cultures, and people.<br>

<h4 style="color:green;">ROADWAYS</h4> India's road transportation

system is a crucial facet of the nation's infrastructure, serving as the primary

mode of travel for both passengers and goods .The road network in India plays a

pivotal role in connecting cities, towns, villages, and remote areas, contributing

significantly to the nation's economic development and societal integration.<br>

<h4 style="color:green;">AIRWAYS</h4> India's air transportation system

stands as a symbol of modern connectivity, playing a crucial role in the

country's economic growth, tourism, and regional integration. Over the years,

the aviation sector has witnessed remarkable advancements, transforming the

way people travel within and beyond the nation's borders. <br>

<h4 style="color:green;">WATERWAYS</h4> India's waterways

transportation system, though historically underutilized, holds immense

potential as an alternative mode of transport. The nation's extensive network of

rivers, canals, and coastal areas offers a promising avenue for economic

development, trade facilitation, and eco-friendly transportation. <br>

<h4 style="color:green;">EMERGING TECHNOLOGIES:</h4> Emerging

technologies are driving a fundamental revolution in India's transport scene.

These developments are transforming the nation's transport system, offering

improved sustainability, convenience, and efficiency for a range of transit

options. <br>

</body>

</html>

***Embedded Webpages:***

**Webpage 1:**

<!DOCTYPE html>

<html>

<body>

<h1 style="color:red;">RAILWAYS</h1>

<img src="https://i.postimg.cc/hvZHrX8d/Railway.png "

width="200" height="200">

<img src="https://i.postimg.cc/xdkyJc8Z/R1.jpg "

width="200" height="200">

<img src="https://i.postimg.cc/XYq9mpfv/R2.jpg "

width="200" height="200">

<img src="https://i.postimg.cc/JnNXZJLp/R3.jpg "

width="300" height="200">

<p>India's railway transportation system is a vital component of the nation's

infrastructure, renowned as one of the largest and busiest networks globally.

With a history dating back to the 19th century during British colonial rule, the

Indian railways have evolved into a lifeline for the country, connecting distant

regions, cultures, and people. This comprehensive system plays a pivotal role in

facilitating travel, commerce, and the movement of goods across the expansive

landscape of India.</p>

<h4 style="color:green;">Infrastructure:</h4>

<p>India's railway network spans over 67,000 kilometers, encompassing a vast

expanse across varied terrains, from bustling metropolitan cities to remote

villages. The system is divided into zones, each managed by the Indian

Railways, which operates as a state-owned enterprise under the Ministry of

Railways. The network incorporates a variety of trains catering to diverse needs.

From the iconic long-distance locomotives like the Rajdhani and Shatabdi

Express connecting major cities to suburban trains facilitating daily commutes

in metropolitan areas, the railways accommodate millions of passengers

daily</p>

<h4 style="color:green;">Technological Advancements:</h4>

<p>In recent years,technological advancements have revolutionized the Indian

railways. The introduction of high-speed trains such as the Gatimaan Express

and the Tejas Express signifies India's leap towards modernization in rail

transportation. Additionally, the implementation of digital ticketing systems and

improved connectivity has enhanced the overall travel experience.</p>

<h4 style="color:green;">Challenges and Future Prospects:</h4>

<p>Despite its vastness and significance, the Indian railway system faces

challenges like congestion, infrastructural maintenance, and safety concerns.

Efforts are underway to modernize and expand the network further, with plans

for dedicated freight corridors and the introduction of bullet trains. The future of

India's railway transportation system looks promising with proposed initiatives

focusing on infrastructure development, enhanced safety measures, and the

integration of sustainable practices. Investments in high-speed rail projects and

technological innovations are anticipated to transform the railway experience,

ensuring efficient, safe, and environmentally friendly travel. </p>

</body>

</html>

**Webpage 2:**

<!DOCTYPE html>

<html>

<body>

<h1 style="color:red;">ROADWAYS</h1>

<img src="https://i.postimg.cc/3rbGpK55/nhai.jpg "

width="200" height="200">

<img src="https://i.postimg.cc/ydDZp5cr/Road.jpg "

width="200" height="200">

<img src="https://i.postimg.cc/50ztCMw1/cars.jpg "

width="200" height="200">

<img src="https://i.postimg.cc/FHqmgBFK/truck.jpg "

width="200" height="200">

<img src="https://i.postimg.cc/MKvFbKny/rickshaw.jpg "

width="200" height="200">

<p>India's road transportation system is a crucial facet of the nation's

infrastructure, serving as the primary mode of travel for both passengers and

goods across the vast and diverse landscape of the country. The road network in

India plays a pivotal role in connecting cities, towns, villages, and remote areas,

contributing significantly to the nation's economic development and societal

integration.</p>

<h4 style="color:green;">National Highways:</h4>

<p>National highways form the backbone of India's road infrastructure,

covering thousands of kilometers and linking major cities and economic centers

across the country. These highways, maintained and developed by the National

Highways Authority of India (NHAI), facilitate the movement of goods and

passengers, fostering trade, commerce, and tourism.</p>

<h4 style="color:green;">SState Highways and Rural Roads:</h4>

<p>State highways complement the national network, connecting important

state capitals, cities, and towns within each state. Additionally, rural roads,

including village roads and other local connections, play a crucial role in

providing accessibility to remote areas, improving connectivity, and supporting

agricultural activities.</p>

<h4 style="color:green;">Modes of Transport:</h4>

<p>The road network caters to various modes of transport, including buses,

trucks, cars, motorcycles, and bicycles. Buses serve as a primary means of

public transportation, connecting urban and rural areas, while trucks are

instrumental in transporting goods across the country. The flexibility and

accessibility of roads allow for diverse transportation options, meeting the needs

of different segments of the population</p>

<h4 style="color:green;">Challenges and Improvements:</h4>

<p>Despite its extensive reach and significance, the road transportation system

faces challenges such as traffic congestion, inadequate infrastructure in certain

regions, road safety concerns, and maintenance issues. Efforts are ongoing to

address these challenges through infrastructure development, the construction of

new roads, widening of existing highways, and the adoption of modern

technologies for better traffic management.</p>

<h4 style="color:green;">Future Developments:</h4>

<p>India's road transportation sector is witnessing advancements and

transformations aimed at improving efficiency, safety, and sustainability.

Initiatives such as the Bharatmala Pariyojana, aimed at developing and

upgrading national highways, and the adoption of electronic toll collection

systems (FASTag) signify the country's commitment to modernizing its road

infrastructure.</p>

</body>

</html>

**Webpage 3:**

<!DOCTYPE html>

<html>

<body>

<h1 style="color:red;">AIRWAYS</h1>

<img src="https://i.postimg.cc/C1jz2fm9/airport.jpg "

width="150" height="150">

<img src="https://i.postimg.cc/MT8G1pq5/air1.jpg "

width="150" height="150">

<img src="https://i.postimg.cc/qM7vsYVP/Air2.jpg "

width="150" height="150">

<p>India's air transportation system stands as a symbol of modern connectivity,

playing a crucial role in the country's economic growth, tourism, and regional

integration. Over the years, the aviation sector has witnessed remarkable

advancements, transforming the way people travel within and beyond the

nation's borders.</p>

<h4 style="color:green;">Airports and Infrastructure:</h4>

<p>The country boasts a network of airports, ranging from major international

hubs like Delhi, Mumbai, and Bengaluru to smaller domestic airports that

enhance regional connectivity. Significant investments have been made in

airport infrastructure and modernization projects, aiming to accommodate the

growing passenger traffic and enhance overall travel experience.</p>

<h4 style="color:green;">Domestic and International Connectivity:</h4>

<p>Domestic air travel has seen significant growth, with airlines offering flights

to numerous destinations across India. This connectivity has not only facilitated

tourism but has also become an efficient mode of travel for business and

personal purposes. Internationally, Indian carriers operate flights to major global

destinations, enhancing India's connectivity with the rest of the world.</p>

<h4 style="color:green;">Technological Advancements:</h4>

<p>Technological advancements have revolutionized the Indian aviation

industry. Modern aircraft equipped with advanced navigation systems,

entertainment facilities, and fuel-efficient engines have enhanced safety,

comfort, and operational efficiency. Additionally, the adoption of digital

platforms for ticketing, check-in processes, and passenger services has

streamlined operations and improved the overall travel experience.</p>

<h4 style="color:green;">Challenges and Future Prospects:</h4>

<p>Despite its growth, the aviation sector faces challenges such as

infrastructural constraints, airspace management, regulatory issues, and

environmental concerns. Efforts are underway to address these challenges by

investing in airport infrastructure, enhancing air traffic management systems,

and adopting sustainable practices to minimize the environmental impact. </p>

<h4 style="color:green;">Future Developments:</h4>

<p>The future of India's aviation sector looks promising, with plans for the

development of new airports, expansion of existing facilities, and the

introduction of advanced technologies. Initiatives such as the Regional

Connectivity Scheme (UDAN) aim to improve connectivity to remote and

underserved areas, further integrating these regions into the national aviation

network.</p>

</body>

</html>

**Webpage 4:**

<!DOCTYPE html>

<html>

<body>

<h1 style="color:red;">WATERWAYS</h1>

<img src="https://i.postimg.cc/wv0crPWC/ww0.png "

width="250" height="150">

<img src="https://i.postimg.cc/PfVQzgvZ/ww1.jpg "

width="250" height="150">

<img src="https://i.postimg.cc/DytQR1gw/ww2.jpg "

width="250" height="150">

<p>India's waterway network spans over 14,500

kilometers, comprising rivers, lakes, canals, and coastal regions. Major rivers

like the Ganges, Brahmaputra, Godavari, and the West Coast Canal provide

natural navigable routes that could significantly contribute to the transportation

of goods and passengers.</p>

<h4 style="color:green;">Inland Waterways:</h4>

<p>Inland waterways in India are categorized into National Waterways (NWs),

designated for development and transportation purposes. The National

Waterway Authority (NWAI) oversees the development and maintenance of

these water routes. NW-1 (Ganga-Bhagirathi-Hooghly River System), NW-2

(Brahmaputra), and NW-3 (West Coast Canal) are among the key identified

waterways for enhancement and commercial use.</p>

<h4 style="color:green;">Cargo Transportation:</h4>

<p>Waterways offer a cost-effective and environmentally sustainable mode for

cargo transportation. Bulk goods like coal, minerals, fertilizers, and construction

materials can be efficiently moved via barges and vessels on rivers, reducing

road and rail congestion while minimizing carbon emissions.</p>

<h4 style="color:green;">Coastal Shipping:</h4>

<p>India's extensive coastline offers opportunities for coastal shipping,

connecting ports across the country. Coastal shipping can significantly reduce

transportation costs for goods moving between major ports, fostering interregional trade and decongesting roads and railways.</p>

<h4 style="color:green;">Challenges and Initiatives:</h4>

<p>Despite its potential, India's waterways face challenges such as inadequate

infrastructure, limited navigational depth, and the need for modernization. To

address these issues, initiatives like the Jal Marg Vikas Project aim to develop

infrastructure, including dredging to increase navigational depth, construction of

terminals, and the implementation of modern navigational aid.</p>

<h4 style="color:green;">Future Developments:</h4>

<p>The Indian government's focus on promoting waterways as a viable

transportation mode is evident through initiatives aimed at modernization,

infrastructure development, and policy reforms. As the infrastructure improves

and logistical bottlenecks are addressed, waterways have the potential to

become a significant contributor to India's overall transportation network.</p>

</body>

</html>

**Webpage 5:**

<!DOCTYPE html>

<html>

<body>

<h1 style="color:red;">EMERGING TECHNOLOGIES</h1>

<img src="https://i.postimg.cc/XN5ZNYpX/EV.jpg "

width="150" height="150">

<img src="https://i.postimg.cc/5tjBsWpv/Bullettrain.webp "

width="150" height="150">

<img src="https://i.postimg.cc/RVDVcr32/smart-trans.png "

width="150" height="150">

<img src="https://i.postimg.cc/j2ymC77s/GT.png "

width="150" height="150">

<p>India's transportation landscape is undergoing a

profound transformation driven by emerging technologies. These innovations

are revolutionizing how people and goods move across the country, promising

enhanced efficiency, sustainability, and convenience across various modes of

transportation.</p>

<h4 style="color:green;">Electric Mobility:</h4>

<p>The shift towards electric vehicles (EVs) is gaining momentum in India.

With a focus on reducing emissions and dependence on fossil fuels, the

government has introduced initiatives like the Faster Adoption and

Manufacturing of Hybrid and Electric Vehicles (FAME) scheme. EVs, including

cars, buses, and two-wheelers, are being promoted through incentives,

subsidies, and charging infrastructure development to encourage their

adoption.</p>

<h4 style="color:green;">Hyperloop and High-Speed Rail:</h4>

<p>India is exploring futuristic transportation systems like the hyperloop, a

high-speed transportation concept that uses pods traveling through low-pressure

tubes at extremely high speeds. Several feasibility studies are underway to

introduce this technology, aiming to significantly reduce travel times between

cities. Additionally, high-speed rail projects, like the Mumbai-Ahmedabad bullet

train, signify India's move towards rapid inter-city transportation.</p>

<h4 style="color:green;">Smart Transportation Systems:</h4>

<p>Smart technologies are being integrated into transportation infrastructure to

optimize traffic management, improve safety, and enhance user experience.

Intelligent Traffic Management Systems (ITMS), real-time tracking systems,

and smart parking solutions are being deployed in cities to alleviate congestion

and streamline traffic flow.</p>

<h4 style="color:green;">Green Initiatives and Sustainability:</h4>

<p>Sustainability is a key focus in India's transportation sector. Besides electric

mobility, initiatives promoting biofuels, hydrogen-powered vehicles, and ecofriendly public transportation are gaining traction. Additionally, infrastructure

development is being planned with a focus on reducing the environmental

impact, such as building eco-friendly metro rail systems and developing green

corridors for freight transportation.</p>

<h4 style="color:green;">Challenges and Future Outlook:</h4>

<p>Despite the promise of emerging technologies, challenges such as

infrastructural readiness, high initial costs, regulatory frameworks, and public

acceptance remain. However, ongoing research, collaborations between the

government and private sector, and increasing investments are paving the way

for a future where these technologies become more accessible and

mainstream. </p>

</body>

</html>

**Webpage 6:**

<!DOCTYPE html>

<html>

<body>

<h1 style="color:red;">FUTURE POSIBILITY</h1>

<img src="https://i.postimg.cc/brkN0Prq/FT.jpg "

width="150" height="150">

<img src="https://i.postimg.cc/zXpYsv99/FT1.jpg "

width="150" height="150">

<img src="https://i.postimg.cc/mrYwnzn9/FT2.jpg "

width="150" height="150">

<img src="https://i.postimg.cc/7hGJpjLR/FT3.jpg "

width="150" height="150">

<img src="https://i.postimg.cc/FHQTNXL3/FT4.jpg "

width="150" height="150">

<img src="https://i.postimg.cc/T3GJBjzc/FT5.jpg "

width="150" height="150">

<h4 style="color:green;">Youtube video </h4>

<button onclick="playVideo()">Video</button>

<script>

function playVideo() {

open("https://youtu.be/x0t2izOuNeA?si=adRLf84xt6c1gn3Z");

}

</script>

<h4 style="color:green;">OVERVIEW </h4>

<p>India's future transport system was envisioned to be more sustainable,

technology-driven, and interconnected, aiming to cater to the growing urban

population while mitigating environmental concerns. However, the specific

progress and developments might have evolved since then.Government policies

were being formulated to encourage the use of clean energy and efficient

transportation systems, including tax benefits for EVs and regulations to limit

emissions.</p>

</body>

</html>

***Results:***

**Main Webpage :**

A screenshot of a website

Description automatically generated

**Webpage 1:**

A screenshot of a computer

Description automatically generated

**Webpage 2:**A screenshot of a computer

Description automatically generated

**Webpage 3:**

A screenshot of a computer

Description automatically generated

**Webpage 4:** A screenshot of a computer

Description automatically generated

**Webpage 5:**

A screenshot of a computer

Description automatically generated

**Webpage 6:**

A screenshot of a website

Description automatically generated

**Conclusion:** This project made us familiar with HTML, CSS, JavaScript and gave us information to make webpage using the language because of which we were able to develop site on India’s Transportation System. By doing this project we will be able to design many web pages.

A close up of a keyboard

Description automatically generated