



## **Mini Project Report - 05**

**Master of Computer Application – General  
Semester – III**

**Sub: Web Technologies**

**Topic: Indian Flag**

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<b>Sno.</b>	<b>INDEX</b>	<b>Page No.</b>
1.	Introduction	2
2.	Objective	2
3.	Tools and Technologies Used	3
4.	Code Explanation	3
5.	Output	5
6.	Learning Outcomes	5
7.	Conclusion	6

## Project Report on Indian Flag

### 1. Introduction

The **Indian National Flag** is not just a symbol of freedom but also a representation of the values, culture, and unity of our country. It consists of three horizontal stripes: **Saffron (top)** symbolizing courage and sacrifice, **White (middle)** representing truth and peace, and **Green (bottom)** standing for prosperity. At the center of the white stripe lies the **Ashoka Chakra**, a navy-blue wheel with 24 spokes, symbolizing righteousness, progress, and continuous motion.

In this project, we have attempted to design the **Indian Flag** using **HTML (Hypertext Markup Language)** and **CSS (Cascading Style Sheets)**. HTML is used to provide the structure of the flag by dividing it into different sections, while CSS is used to add styling, colors, alignment, and effects to make the flag look visually accurate.

Additionally, we have created a **gradient version of the Indian flag** where the tricolor smoothly blends using CSS `linear-gradient()`. The **Ashoka Chakra** is placed in the center of the flag using **Flexbox**, which ensures proper alignment across different screen sizes.

This project is not only an exercise in web design but also a way to combine **technical learning with patriotism**. By building this project, students can understand how HTML and CSS can be used for creative designs, while also learning about layout structuring, color application, text effects, image embedding, and modern CSS positioning techniques.

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### 2. Objectives

The primary objective of this project is to design and represent the **Indian National Flag** using **HTML and CSS**. Beyond its patriotic significance, this project also serves as a practical exercise in applying front-end web development concepts. The specific objectives are:

#### 1. To understand HTML structure:

- Learn how to divide a webpage into different sections (div tags) to represent parts of the flag (saffron, white, and green).

#### 2. To apply CSS for styling:

- Use **CSS colors and gradients** to replicate the tricolor effect of the flag.
- Experiment with background properties like `background-color` and `linear-gradient`.

### 3. To learn image embedding and alignment:

- Insert and properly align the **Ashoka Chakra** at the center of the white stripe.
- Use **Flexbox techniques** (display: flex; justify-content: center; align-items: center;) for proper positioning.

### 4. To explore creative design with gradients:

- Create an alternative design of the flag using **CSS gradient backgrounds** for smoother visual effects.

### 5. To develop patriotic-themed web projects:

- Connect technical learning with cultural importance by designing a project inspired by the **Indian National Flag**.

### 6. To practice responsive alignment:

- Ensure the Ashoka Chakra stays at the center regardless of screen size or resolution.

### 7. To enhance web development skills:

- Gain hands-on practice with HTML tags, CSS properties, text effects (text-shadow, marquee), and image handling.

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## 3. Tools and Technologies Used

- **HTML5:** For structuring the webpage and creating divisions for flag sections.
- **CSS3:** For styling the flag with tricolor, gradients, text shadow, and centering images.
- **Browser (Chrome/Edge/Firefox):** To run and view the output.
- **Image File:** Ashoka Chakra image (pngwing.com.png).

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## 4. Code Explanation

### a) Title & Heading

```
<h1><marquee>Jai Hindh</marquee></h1>
```

- Displays "Jai Hindh" with a moving marquee effect.
  - Heading styled with **text shadow** and **blue color**.
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## b) Flag Sections

```
<div class="d1"></div> <!-- Saffron -->
<div class="d2">
  
</div> <!-- White with Chakra -->
<div class="d3"></div> <!-- Green -->
```

- .d1: Saffron color (Top stripe).
  - .d2: White color with centered Ashoka Chakra (middle stripe).
  - .d3: Green color (bottom stripe).
- 

## c) Gradient Flag Section

```
<div class="d4">
  
</div>
```

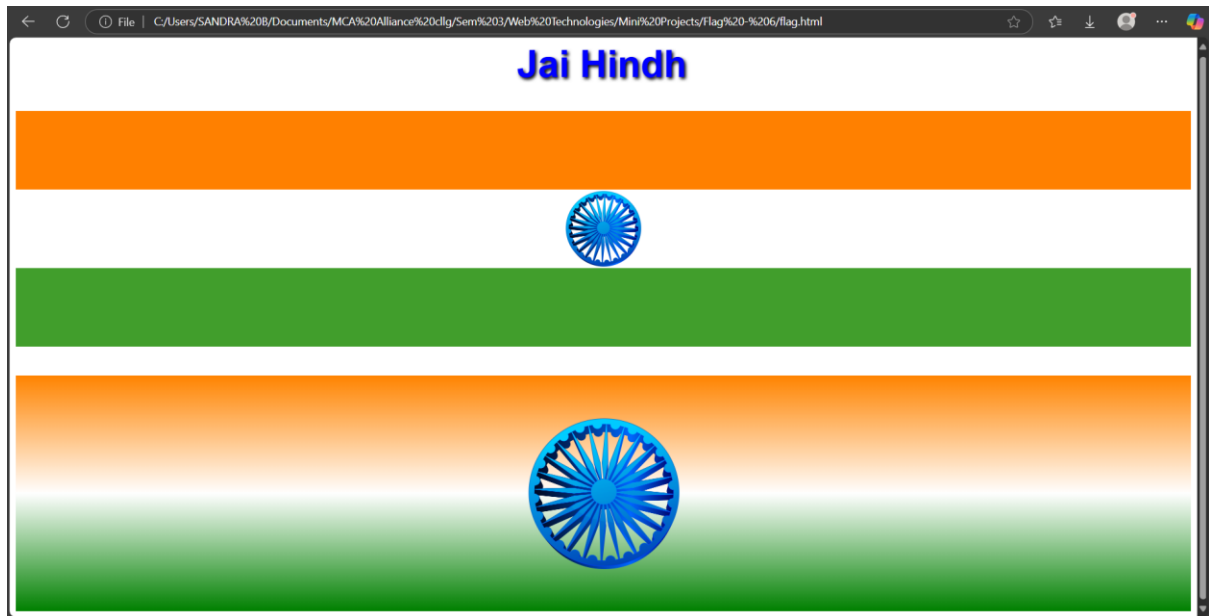
- .d4: Background with **linear gradient** (saffron → white → green).
  - .i2: Chakra placed in the **center** using **Flexbox (justify-content: center; align-items: center;)**.
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## d) CSS Styling

- Used background-color for solid tricolor.
  - Used linear-gradient() for smooth gradient effect.
  - flexbox properties were applied to center Ashoka Chakra.
  - text-shadow added for heading aesthetics.
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## 5. Output

- The first flag shows the **standard tricolor** with the Ashoka Chakra in the middle stripe.
- The second flag shows the **gradient tricolor** with the Ashoka Chakra aligned at the **center**.



## 6. Learning Outcomes

By completing this project, the following learning outcomes were achieved:

### 1. Practical Understanding of HTML Structure

- Learned how to create and organize different parts of a webpage using `<div>` tags for modular design.
- Understood the importance of semantic HTML for clear project structure.

### 2. Hands-on Experience with CSS Styling

- Practiced using CSS **background-color** and **linear-gradient** properties to design real-world visuals.
- Applied CSS **Flexbox** (`display: flex; justify-content: center; align-items: center;`) to align elements perfectly in the center.

### 3. Image Embedding and Alignment Skills

- Gained confidence in inserting images into web pages using the `<img>` tag.
- Learned how to control image size and positioning with height, width, and margin/padding adjustments.

#### 4. Text Styling and Animation Knowledge

- Applied creative **text effects** using text-shadow for better visual appeal.
- Used <marquee> to add animated scrolling text, enhancing the interactive aspect of the project.

#### 5. Application of Web Design Creativity

- Explored the use of CSS gradients to simulate realistic and smooth transitions of flag colors.
- Experimented with both **static and gradient-based tricolor designs**.

#### 6. Understanding Responsive Design Concepts

- Understood the importance of ensuring that the **Ashoka Chakra** stays centered across different screen sizes.
- Learned the role of CSS Flexbox in making layouts more adaptable.

#### 7. Cultural and Technical Integration

- Combined technical learning with **patriotic values**, showing how web technologies can be used for creative cultural representation.

#### 8. Boost in Problem-Solving Skills

- Faced and resolved alignment issues of the Ashoka Chakra.
- Understood common mistakes (like fixed margins) and how to correct them using modern CSS properties.

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### 7. Conclusion

This project successfully demonstrates how **HTML and CSS** can be used to design the **Indian Flag**. It shows both the **traditional tricolor** and a **gradient variation** with the Ashoka Chakra centered.

The project not only enhances **web design skills** but also promotes **patriotism through technology**.

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