# Introduction to CSS

**Definition:** CSS is a style-sheet language used to describe the presentation of a document written in HTML. If HTML is the "skeleton," CSS is the skin, hair, clothes, and makeup.

- **Working Procedure:** CSS works on a **Rule-Based** system. We select an HTML element and declare how it should look (e.g., "Make all paragraphs blue").

# Methods of Integrating CSS

There are three ways to connect our styles to our HTML.

| Method | Definition | Best Use Case |
|---|---|---|
| **Inline CSS** | Written directly inside the HTML tag using the style attribute. | Quick, one-time fixes. |
| **Internal CSS** | Written inside a <style> tag in the <head> section. | Single-page projects. |
| **External CSS** | Written in a separate .css file and linked via <link>. | **Professional Standard.** Reusable across many pages. |

# Designing a Login Page using CSS

To design a login page, we move from "default" to "custom."

- **The Box Model:** Every element is a box. We use padding (inner space), margin (outer space), and border to shape them.
- **Alignment:** We use Flexbox to center the login card perfectly in the middle of the screen.

Security Aspect (The "Hacked" Effect):

Bad CSS can lead to UI Redressing or Clickjacking. An attacker could use CSS to make a malicious button invisible but placed directly over a "Login" button. The user thinks they are logging in, but they are actually clicking "Authorize Transfer."

# Classes and IDs

To apply styles, we must "select" elements.

- **ID (#):** Used for a **unique** element. Like a person's ID card, there should only be one per page.
    - *Example:* #main-login-button
- **Class (.):** Used for **multiple** elements. Like a school uniform, many elements can wear the same class.
    - *Example:* .input-field (used for both email and password boxes).

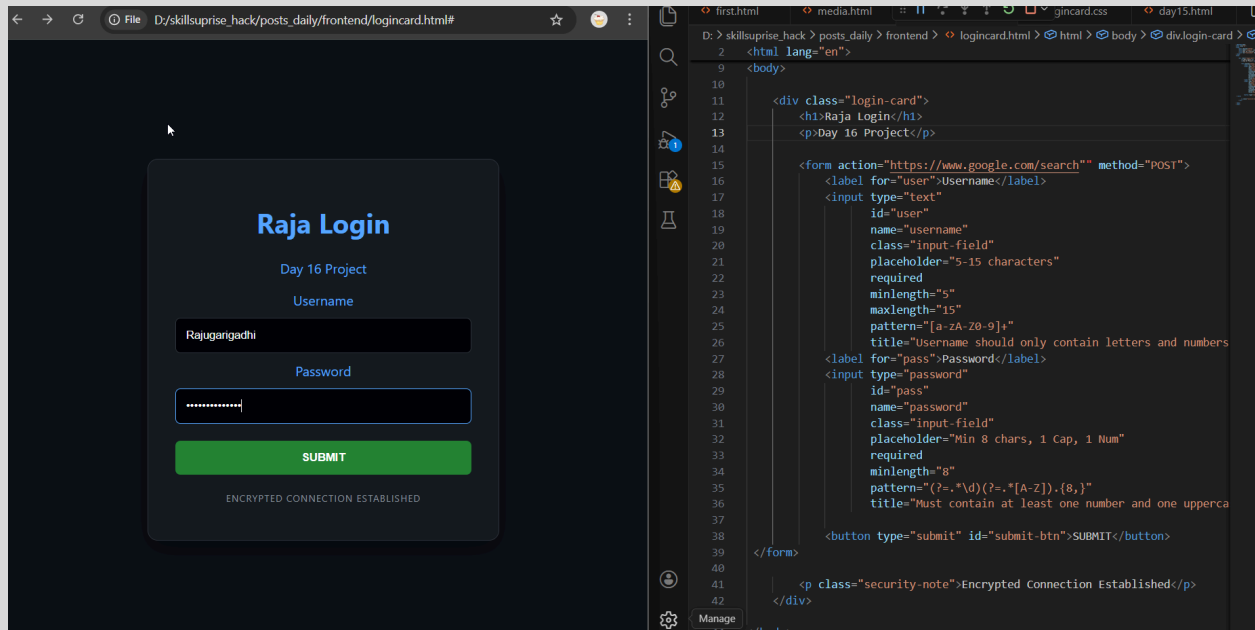# Simplifying Designs using Classes

Instead of writing 10 lines of code for every button, wecreate a "utility class." This follows the **DRY** principle (**D**on't **R**epeat **Y**ourself).
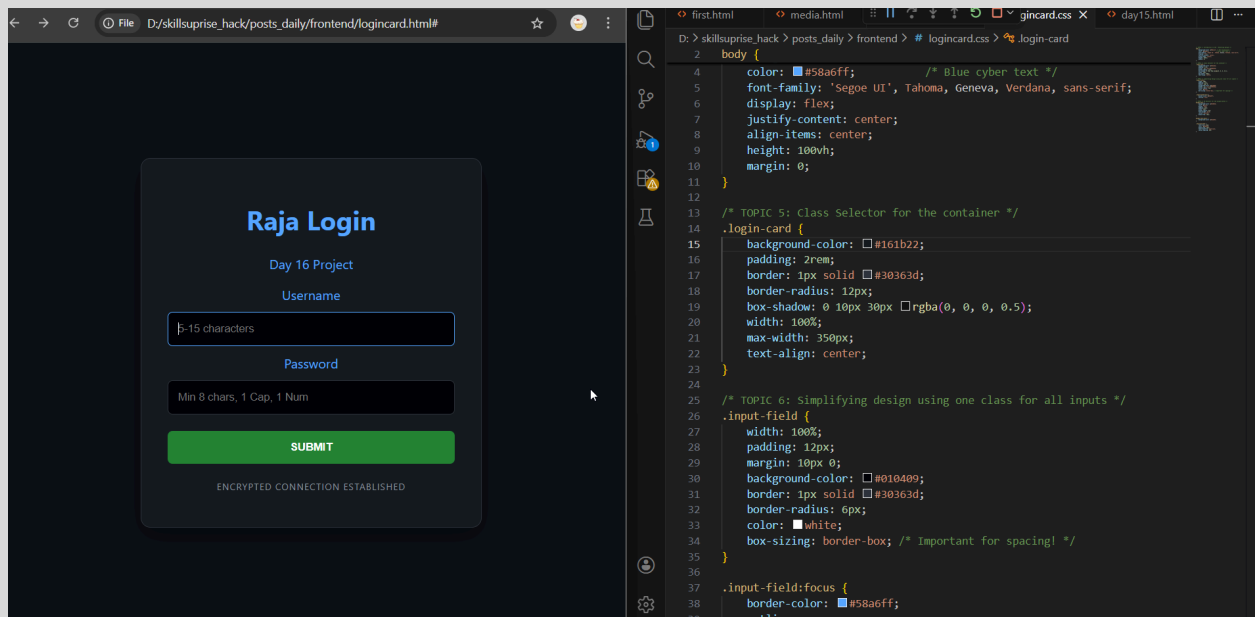
- **Working Procedure:** Create one class called .btn-blue. Apply it to every button we want to be blue. If we ever want to change that blue to purple, we only change **one** line of CSS instead of 50 lines of HTML.
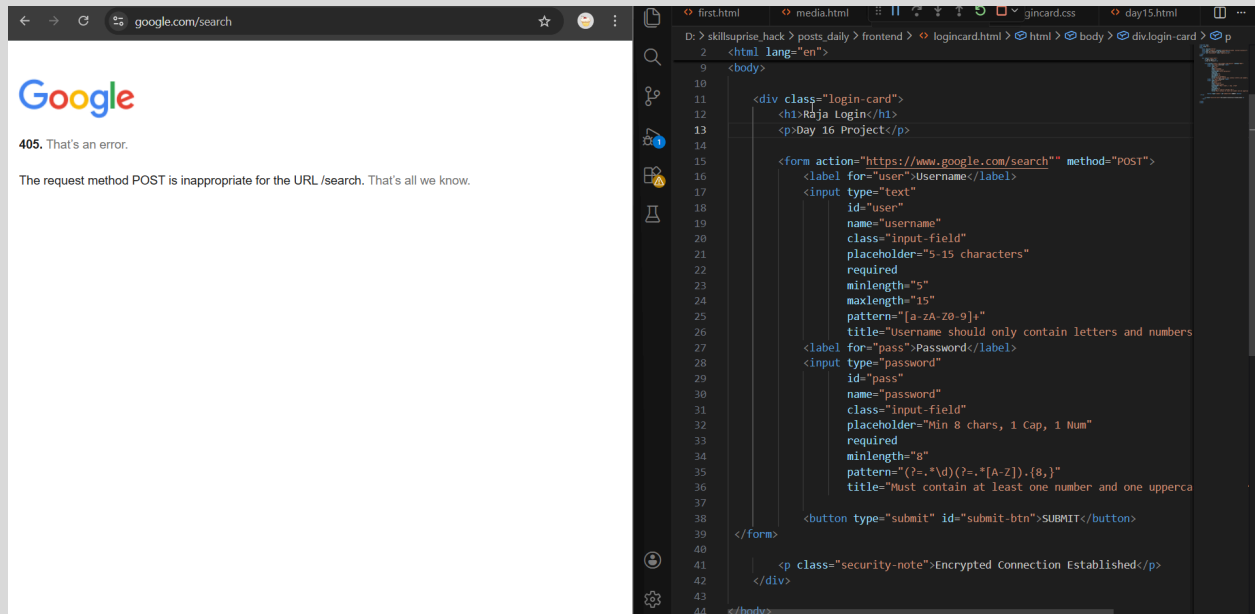
# Project: Login Card

## logincard.html (HTML code)



```html
<html lang="en">
<body>

    <div class="login-card">
        <h1>Raja Login</h1>
        <p>Day 16 Project</p>


        <form action="https://www.google.com/search"" method="POST">
            <label for="user">Username</label>
            <input type="text"
                id="user"
                name="username"
                class="input-field"
                placeholder="5-15 characters"
                required
                minlength="5"
                maxlength="15"
                pattern="[a-zA-Z0-9]+"
                title="Username should only contain letters and numbers"
            <label for="pass">Password</label>
            <input type="password"
                id="pass"
                name="password"
                class="input-field"
                placeholder="Min 8 chars, 1 Cap, 1 Num"
                required
                minlength="8"
                pattern="(?=.*\d)(?=.*[A-Z]).{8,}"
                title="Must contain at least one number and one upperca

            <button type="submit" id="submit-btn">SUBMIT</button>
        </form>

        <p class="security-note">Encrypted Connection Established</p>
    </div>
```

## logincard.css (CSS code)



```css
body {
    color: #58a6ff;              /* Blue cyber text */
    font-family: 'Segoe UI', Tahoma, Geneva, Verdana, sans-serif;
    display: flex;
    justify-content: center;
    align-items: center;
    height: 100vh;
    margin: 0;
}

/* TOPIC 5: Class Selector for the container */
.login-card {
    background-color: #161b22;
    padding: 2rem;
    border: 1px solid #30363d;
    border-radius: 12px;
    box-shadow: 0 10px 30px rgba(0, 0, 0, 0.5);
    width: 100%;
    max-width: 350px;
    text-align: center;
}

/* TOPIC 6: Simplifying design using one class for all inputs */
.input-field {
    width: 100%;
    padding: 12px;
    margin: 10px 0;
    background-color: #010409;
    border: 1px solid #30363d;
    border-radius: 6px;
    color: white;
    box-sizing: border-box; /* Important for spacing! */
}

.input-field:focus {
    border-color: #58a6ff;
    outline: none;
```

**Output: for redirection added for google search page**



- **CSS** is the "skin" of the web.
- **External CSS** is the professional choice for clean code.
- **Classes** are for repeating styles; **IDs** are for unique items.
- Ensure CSS code doesn't allow for overlapping elements that could trick users.