

EXPERIMENT-03

- **AIM:** To design a responsive Admin Dashboard using CSS Grid Layout with dynamic theme switching functionality (light/dark mode) using JavaScript.
- **THEORY: CSS Grid** is a powerful layout system in CSS that allows developers to create two-dimensional layouts on the web (rows and columns).
 - **Dynamic theme switching** enables a user to toggle between themes (e.g., light and dark) without reloading the page. This is achieved by manipulating CSS classes and variables using JavaScript.
 - **CSS Variables** (--variable-name) are used for maintaining theme-specific values like background, text color, etc.
 - By toggling between two classes (e.g., light-theme and dark-theme) on the <body> element, we can dynamically switch between themes.
- **CODE:**

1. Index.html:

```
<!DOCTYPE html>
```

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

```
<head>
```

```
  <meta charset="UTF-8" />
```

```
  <meta name="viewport" content="width=device-width, initial-scale=1.0" />
```

```
  <title>Admin Dashboard</title>
```

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

```
</head>

<body class="light-theme">
  <div class="dashboard">
    <aside class="sidebar">
      <h2>Admin</h2>

      <nav>
        <a href="#">Dashboard</a>
        <a href="#">Users</a>
        <a href="#">Settings</a>
        <a href="#">Reports</a>
      </nav>
    </aside>

    <header class="header">
      <h1>Dashboard</h1>
      <button id="themeToggle">Switch Theme</button>
    </header>

    <main class="main">
      <div class="card"> 📊 Sales Report</div>
      <div class="card"> 👥 User Statistics</div>
      <div class="card"> ⚙️ System Status</div>
      <div class="card"> 📦 Inventory</div>
    </main>
```

```
<footer class="footer">© 2025 Admin Dashboard</footer>
</div>
```

```
<script src="script.js"></script>
</body>
</html>
```

2. style.css:

```
-- :root {
  --bg-color: #ffffff;
  --text-color: #000000;
  --primary-color: #f0f0f0;
  --accent-color: #007bff;
}
```

```
body.dark-theme {
  --bg-color: #121212;
  --text-color: #ffffff;
  --primary-color: #1e1e1e;
  --accent-color: #66b2ff;
}
```

```
body {
  margin: 0;
  font-family: Arial, sans-serif;
  background-color: var(--bg-color);
  color: var(--text-color);
  transition: all 0.3s ease;
}
```

```
.dashboard {
```

```
display: grid;
grid-template-areas:
  "sidebar header"
  "sidebar main"
  "sidebar footer";
grid-template-columns: 220px 1fr;
grid-template-rows: 60px 1fr 40px;
height: 100vh;
}
```

```
.sidebar {
  grid-area: sidebar;
  background: var(--primary-color);
  padding: 1rem;
}
```

```
.sidebar h2 {
  margin-top: 0;
}
```

```
.sidebar nav a {
  display: block;
  color: var(--text-color);
  padding: 0.5rem 0;
  text-decoration: none;
}
```

```
.sidebar nav a:hover {
  color: var(--accent-color);
}
```

```
.header {
  grid-area: header;
  background: var(--primary-color);
  display: flex;
```

```
    align-items: center;
    justify-content: space-between;
    padding: 0 1rem;
}
```

```
.header button {
    padding: 0.5rem 1rem;
    background: var(--accent-color);
    color: #fff;
    border: none;
    cursor: pointer;
}
```

```
.main {
    grid-area: main;
    padding: 1rem;
    display: grid;
    grid-template-columns: repeat(auto-fit, minmax(220px,
1fr));
    gap: 1rem;
}
```

```
.card {
    background: var(--primary-color);
    padding: 1rem;
    border-radius: 8px;
    box-shadow: 0 0 5px rgba(0,0,0,0.1);
}
```

```
.footer {
    grid-area: footer;
    background: var(--primary-color);
    text-align: center;
    line-height: 40px;
}
```

3.script.js: -

```
const toggleBtn = document.getElementById('themeToggle');
```

```
const body = document.body;
```

```
toggleBtn.addEventListener('click', () => {
```

```
  body.classList.toggle('dark-theme');
```

```
  body.classList.toggle('light-theme');
```

```
});
```

- **OUTPUTS:**


Admin


[Dashboard](#) [Users](#) [Settings](#) [Reports](#)


Dashboard

Switch Theme

 Sales Report

 User Statistics

 System Status

 Inventory

© 2025 Admin Dashboard

Hello World !

Say Hi !

Output:

```
+-----+-----+-----+
| author_id | name   | country |
+-----+-----+-----+
|          1 | Ashish | India   |
|          2 | Smaran | USA     |
|          3 | Vaibhav | UK      |
+-----+-----+-----+

+-----+-----+-----+
| book_id | title                | author_id |
+-----+-----+-----+
|      101 | Data Science Basics |          1 |
|      102 | AI in Education      |          2 |
|      103 | SQL Simplified       |          1 |
+-----+-----+-----+
```

159 ms

Output:

```
+-----+-----+-----+
| title           | name  | country |
+-----+-----+-----+
| Data Science Basics | Ashish | India  |
| AI in Education    | Smaran | USA    |
| SQL Simplified     | Ashish | India  |
+-----+-----+-----+
```

126 ms

- **LEARNING OUTCOMES:**

- Understood the concept of **CSS Grid Layout** for building responsive admin panels.
- Learned how to use **CSS Variables** for theme-based styling.
- Implemented **JavaScript-based theme switching** with DOM manipulation.
- Developed a **modular and scalable dashboard layout**.
- Gained practical experience in front-end development using **HTML, CSS, and JavaScript**.