Experiment 1

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Subject Name: Full Stack   **Subject Code:** 23CSP-339

1. **Problem Title:** To build an admin dashboard with dynamic theming using CSS Grid and JavaScript.
2. **Problem Description:**
   a. Create grid-based layout
   b. Implement dark/light mode toggle
   c. Design responsive sidebar
   d. Add data visualization placeholders
   e. Persist theme preference using localStorage
3. **Hardware Requirements:**
   a. Processor: Intel i3/ Ryzen 3 or higher.
   b. RAM: 4GB minimum.
   c. Display: 1366x768 resolution.

   Software Requiremnts:
   a. VS Code(Equipped with Live Server Extension)
   b. Any Browser
4. **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>
```

```html
<div class="dashboard">

  <!-- Sidebar -->
  <aside class="sidebar">
    <h2>Admin</h2>
    <nav>
      <a href="#">Dashboard</a>
      <a href="#">Users</a>
      <a href="#">Analytics</a>
      <a href="#">Settings</a>
    </nav>
    <button id="theme-toggle">Toggle Theme</button>
  </aside>

  <!-- Main Content -->
  <main class="main">
    <header class="header">
      <h1>Welcome, Admin</h1>
    </header>

    <section class="cards">
      <div class="card">Metric 1</div>
      <div class="card">Metric 2</div>
      <div class="card">Metric 3</div>
      <div class="card">Metric 4</div>
    </section>

    <section class="charts">
      <div class="chart-placeholder">Chart 1 Placeholder</div>
      <div class="chart-placeholder">Chart 2 Placeholder</div>
    </section>
  </main>

</div>

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

5. **CSS:**

```css
:root {
  --bg-color: #f4f4f4;
  --text-color: #333;
  --card-bg: #fff;
  --sidebar-bg: #2f3542;
  --sidebar-text: #fff;
}

body.dark {
  --bg-color: #1e1e1e;
```

```css
  --text-color: #f4f4f4;
  --card-bg: #2c2c2c;
  --sidebar-bg: #111;
  --sidebar-text: #ccc;
}

* {
  box-sizing: border-box;
  margin: 0;
  padding: 0;
}

body {
  font-family: 'Segoe UI', sans-serif;
  background-color: var(--bg-color);
  color: var(--text-color);
  transition: background-color 0.3s ease;
}

.dashboard {
  display: grid;
  grid-template-columns: 250px 1fr;
  min-height: 100vh;
}

.sidebar {
  background-color: var(--sidebar-bg);
  color: var(--sidebar-text);
  padding: 20px;
}

.sidebar h2 {
  margin-bottom: 20px;
}

.sidebar nav a {
  display: block;
  color: var(--sidebar-text);
  text-decoration: none;
  margin-bottom: 10px;
}

.sidebar button {
```

```css
    margin-top: 20px;
    padding: 10px;
    width: 100%;
    cursor: pointer;
}

.main {
    padding: 20px;
}

.header {
    margin-bottom: 20px;
}

.cards {
    display: grid;
    grid-template-columns: repeat(auto-fit, minmax(150px, 1fr));
    gap: 20px;
    margin-bottom: 30px;
}

.card {
    background-color: var(--card-bg);
    padding: 20px;
    border-radius: 8px;
    box-shadow: 0 2px 6px rgba(0, 0, 0, 0.1);
    transition: background-color 0.3s ease;
}

.charts {
    display: grid;
    grid-template-columns: 1fr 1fr;
    gap: 20px;
}

.chart-placeholder {
    background-color: var(--card-bg);
    height: 200px;
    border-radius: 8px;
    display: flex;
    align-items: center;
    justify-content: center;
    font-weight: bold;
```

```css
    transition: background-color 0.3s ease;
}

@media (max-width: 768px) {
  .dashboard {
    grid-template-columns: 1fr;
  }

  .sidebar {
    display: flex;
    justify-content: space-between;
    align-items: center;
  }

  .charts {
    grid-template-columns: 1fr;
  }
}
```

6. **JavaScript:**

```javascript
const toggleBtn = document.getElementById("theme-toggle");

document.addEventListener("DOMContentLoaded", () => {
  const theme = localStorage.getItem("theme");
  if (theme === "dark") {
    document.body.classList.add("dark");
  }
});

toggleBtn.addEventListener("click", () => {
  document.body.classList.toggle("dark");
  const currentTheme = document.body.classList.contains("dark") ? "dark" :
"light";
  localStorage.setItem("theme", currentTheme);
});
```

7. **Outputs:**

Account Balance: $0

Enter amount

Deposit   Withdraw

Account Balance: $1000

Enter amount

Deposit   Withdraw

Account Balance: $2000

Enter amount

Deposit   Withdraw

8. **Learning Outcome:**

   a. I learnt how to link and connect the script.js and css file with the Html.
   b. I learnt how to work with html file.
   c. I learnt how to write js file and css.