2.1 Apply Inline, Internal, and External CSS styles to HTML elements

```html
<!DOCTYPE html>
<html>
<head>
    <title>CSS Types</title>
    <!-- External CSS -->
    <link rel="stylesheet" href="data:text/css,
        .external{
            background: black;
            color: white;
            padding: 10px;
        }">
    <!-- Internal CSS -->
    <style>
        h2 {
            color: green;
        }
        .internal {
            background: yellow;
            padding: 10px;
        }
    </style>
</head>
<body>
    <!-- Inline CSS -->
    <h1 style="color: red;">This is Inline CSS</h1>
    <!-- Internal CSS -->
    <h2>This is Internal CSS</h2>
    <div class="internal">Internal CSS Div</div>
    <!-- External CSS -->
    <p class="external">This is External CSS</p>
</body>
</html>
```

[Code Screenshot]

↓

[Output Screenshot]

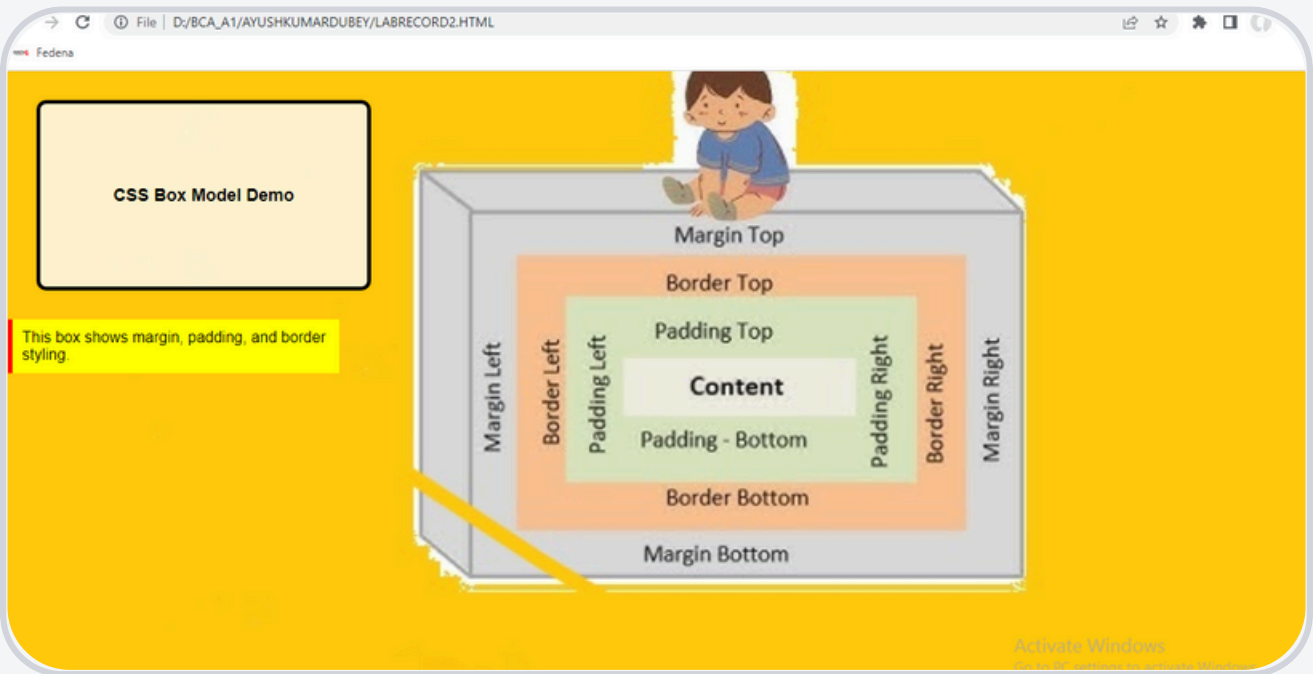
2.2 Style a web page using advanced CSS: Box Model, background images, borders, margins, and padding

```html
<!DOCTYPE html>
<html>
<head>
    <title>Advanced CSS Demo</title>
    <style>
        /* Page background image */
        body {
            background-image: url('hq720.jpg');
            background-size: cover;
            background-position: center;
            font-family: Arial, sans-serif;
        }
        /* Box model example */
        .box {
            width: 300px;
            height: 150px;
            background: rgba(255, 255, 255, 0.8);
            /* Border */
            border: 4px solid black;
            border-radius: 10px;
            /* Box Model Spacing */
            padding: 20px;  /* inside space */
            margin: 30px;   /* outside space */
            /* Center text */
            display: flex;
            justify-content: center;
            align-items: center;
            font-size: 18px;
            font-weight: bold;
        }
        /* Another element to show margin effect */
        .note {
            background: yellow;
            padding: 10px;
            border-left: 5px solid red;
            margin-top: 20px;
            width: 320px;
        }
    </style>
</head>
<body>
    <div class="box">
        CSS Box Model Demo
    </div>
    <div class="note">
        This box shows margin, padding, and border styling.
    </div>
</body>
</html>
```

HTML + CSS

↓

Rendered Web Page



Demonstrates the CSS Box Model (Margin → Border → Padding → Content).

2.3 Demonstrate the use of different CSS selectors (class, id, descendant, group, universal)

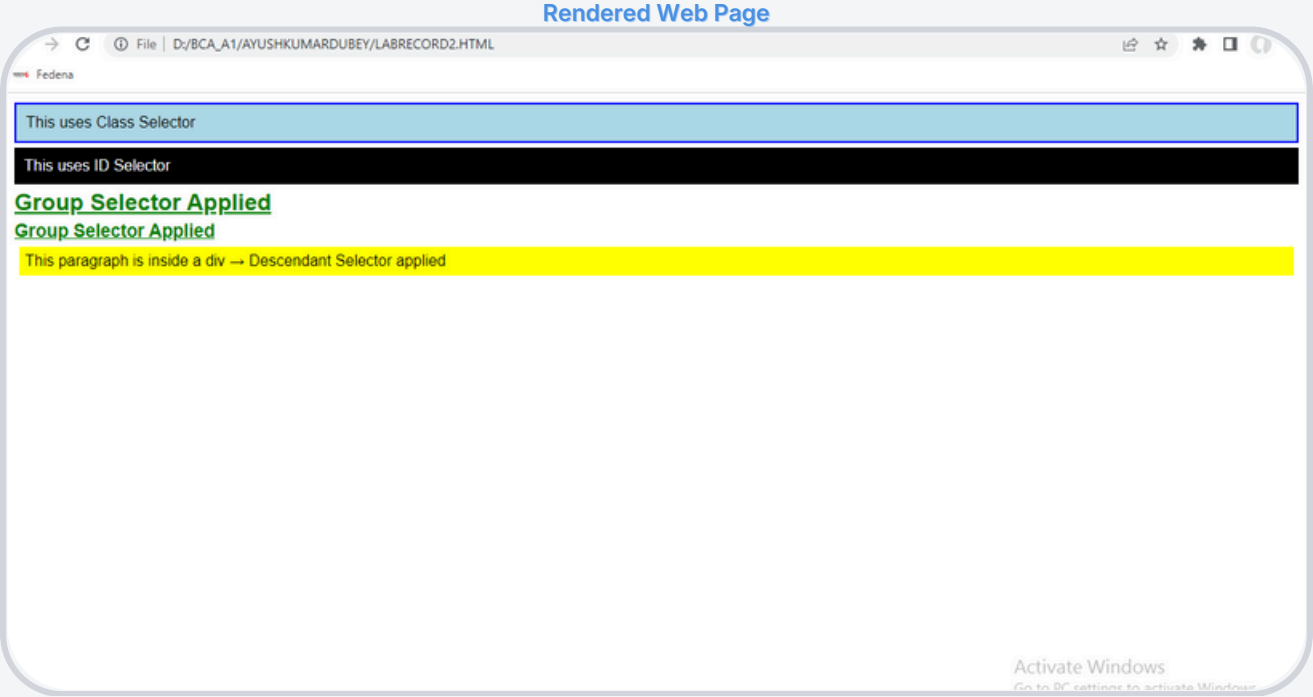
LABRECORD2.HTML

```html
<!DOCTYPE html>
<html>
<head>
    <title>CSS Selectors Demo</title>
    <style>
        /* 1. Universal Selector */
        * {
            font-family: Arial;
            margin: 5px;
        }
        /* 2. Class Selector */
        .box {
            background: lightblue;
            padding: 10px;
            border: 2px solid blue;
        }
        /* 3. ID Selector */
        #unique {
            background: black;
            color: white;
            padding: 10px;
        }
        /* 4. Group Selector */
        h2, h3 {
            color: green;
            text-decoration: underline;
        }
        /* 5. Descendant Selector */
        div p {
            background: yellow;
            padding: 6px;
        }
    </style>
</head>
<body>
    <!-- Class Selector -->
    <div class="box">This uses Class Selector</div>
    <!-- ID Selector -->
    <div id="unique">This uses ID Selector</div>
    <!-- Group Selector -->
    <h2>Group Selector Applied</h2>
    <h3>Group Selector Applied</h3>
    <!-- Descendant Selector -->
    <div>
        <p>This paragraph is inside a div → Descendant Selector applied</p>
    </div>
</body>
</html>
```

HTML + CSS

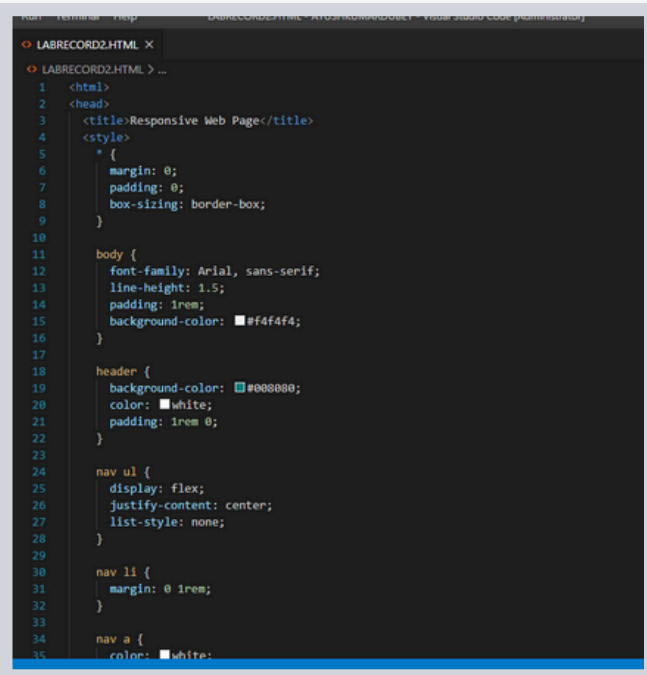
↓

Rendered Web Page

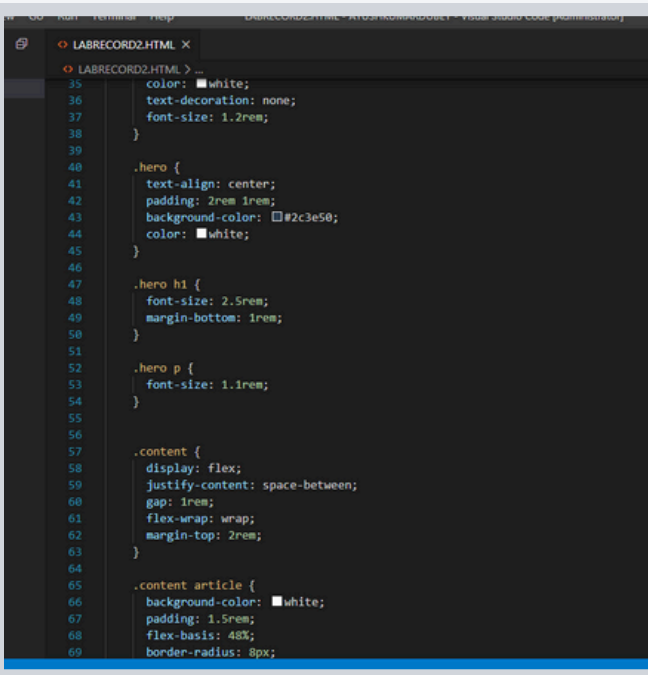


Demonstrates how different CSS Selectors (Class, ID, Group, Universal, and Descendant) target elements and control styling efficiently.

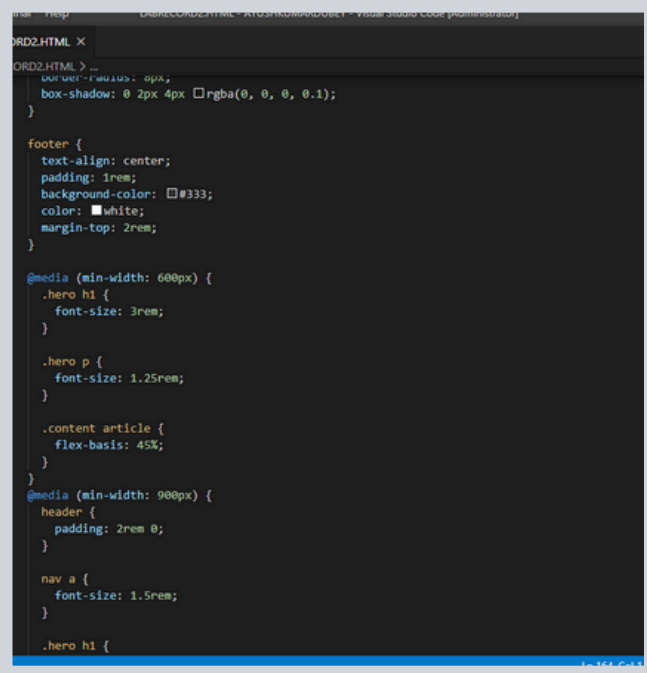
2.4 Create a responsive web page using media queries and mobile-first design with flexible units



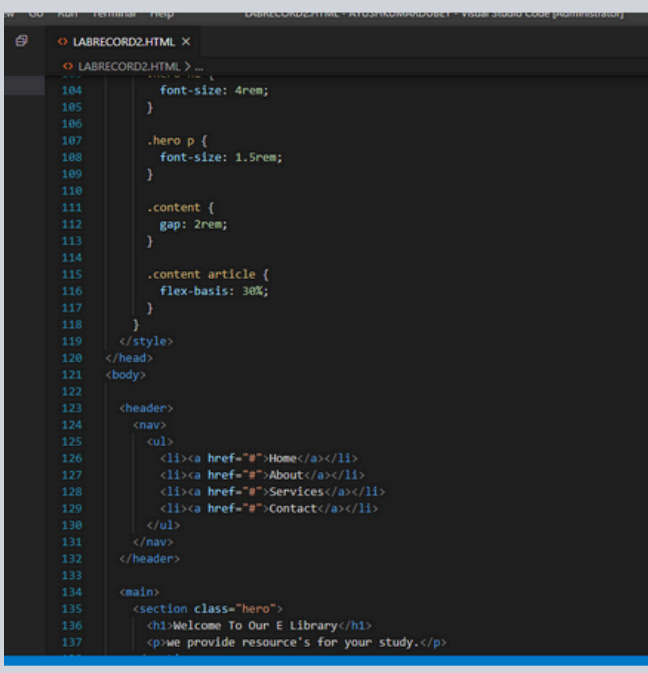
```
<!DOCTYPE html>
<html>
<head>
  <title>Responsive Web Page</title>
  <style>
    * {
      margin: 0;
      padding: 0;
      box-sizing: border-box;
    }

    body {
      font-family: Arial, sans-serif;
      line-height: 1.5;
      padding: 1rem;
      background-color: #f4f4f4;
    }

    header {
      background-color: #008080;
      color: white;
      padding: 1rem 0;
    }

    nav ul {
      display: flex;
      justify-content: center;
      list-style: none;
    }

    nav li {
      margin: 0 1rem;
    }

    nav a {
      color: white;
```



```
      color: white;
      text-decoration: none;
      font-size: 1.2rem;
    }

    .hero {
      text-align: center;
      padding: 2rem 1rem;
      background-color: #2c3e50;
      color: white;
    }

    .hero h1 {
      font-size: 2.5rem;
      margin-bottom: 1rem;
    }

    .hero p {
      font-size: 1.1rem;
    }


    .content {
      display: flex;
      justify-content: space-between;
      gap: 1rem;
      flex-wrap: wrap;
      margin-top: 2rem;
    }

    .content article {
      background-color: white;
      padding: 1.5rem;
      flex-basis: 48%;
      border-radius: 8px;
```



```
    box-shadow: 0 2px 4px rgba(0, 0, 0, 0.1);
  }

  footer {
    text-align: center;
    padding: 1rem;
    background-color: #333;
    color: white;
    margin-top: 2rem;
  }

  @media (min-width: 600px) {
    .hero h1 {
      font-size: 3rem;
    }

    .hero p {
      font-size: 1.25rem;
    }

    .content article {
      flex-basis: 45%;
    }
  }
  @media (min-width: 900px) {
    header {
      padding: 2rem 0;
    }

    nav a {
      font-size: 1.5rem;
    }

    .hero h1 {
```

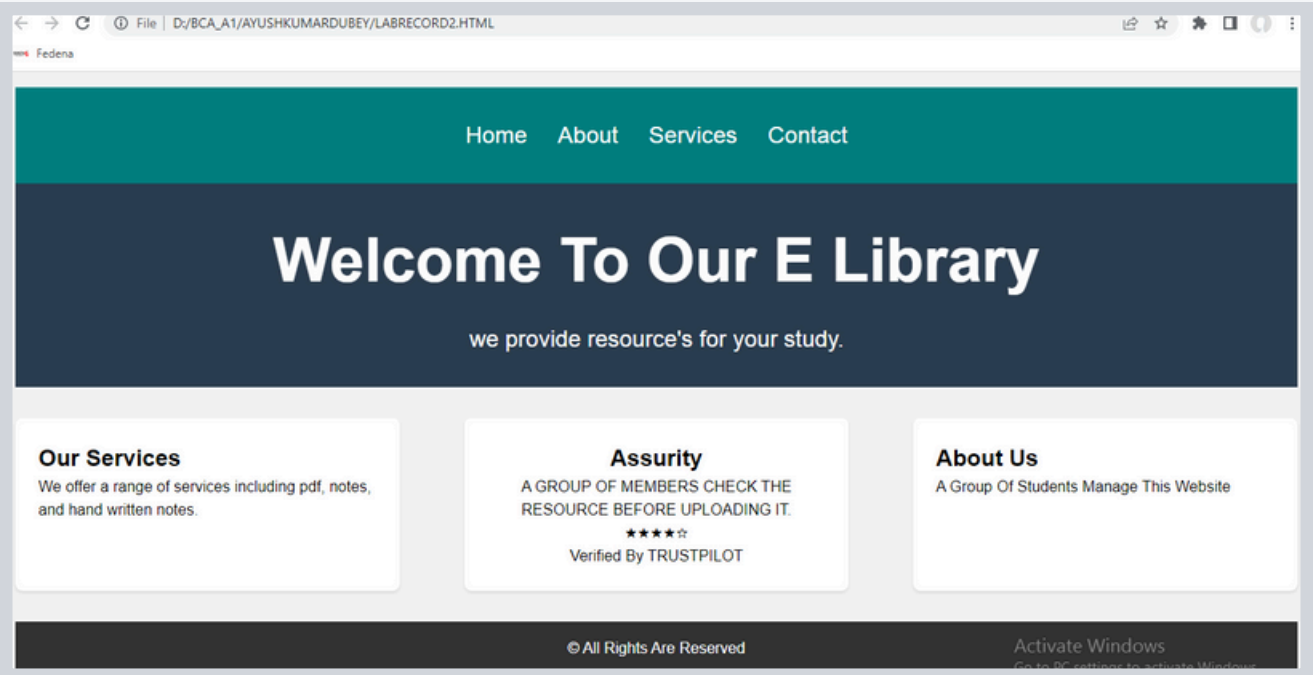


```
      font-size: 4rem;
    }

    .hero p {
      font-size: 1.5rem;
    }

    .content {
      gap: 2rem;
    }

    .content article {
      flex-basis: 30%;
    }
  }
  </style>
</head>
<body>

  <header>
    <nav>
      <ul>
        <li><a href="#">Home</a></li>
        <li><a href="#">About</a></li>
        <li><a href="#">Services</a></li>
        <li><a href="#">Contact</a></li>
      </ul>
    </nav>
  </header>

  <main>
    <section class="hero">
      <h1>Welcome To Our E Library</h1>
      <p>We provide resource's for your study.</p>
```

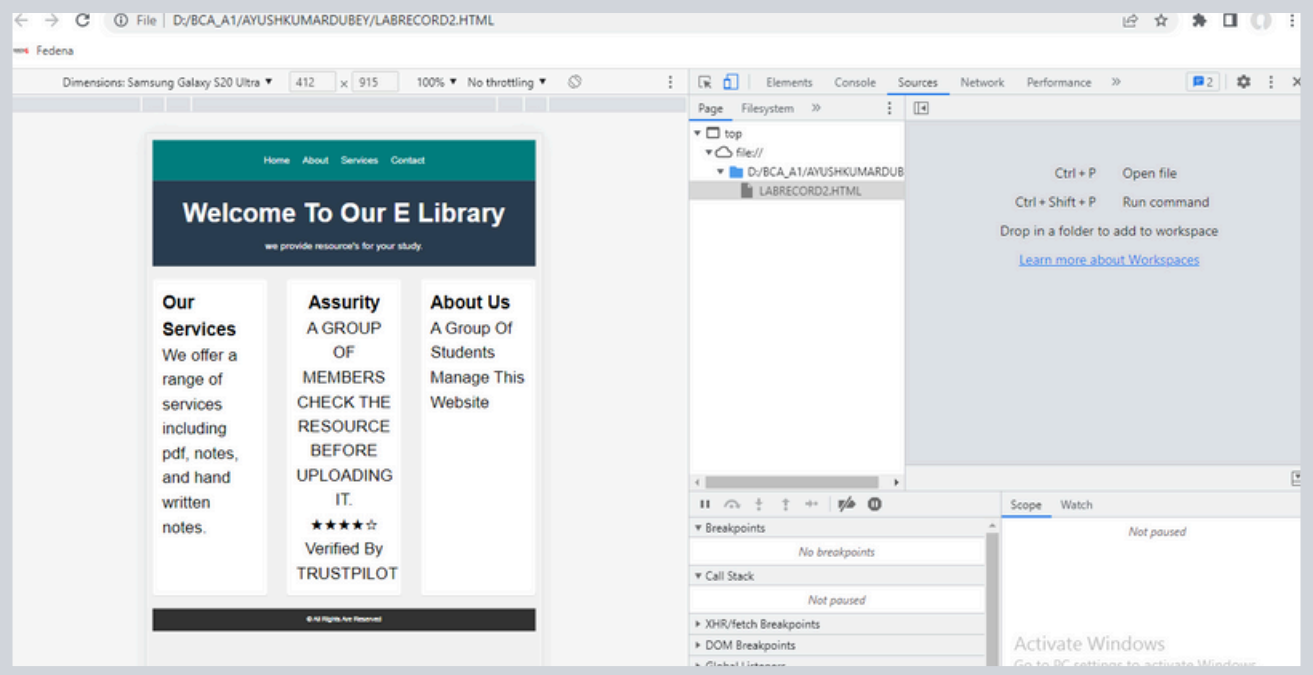
Demonstrates a responsive web page built using media queries and mobile-first design with flexible units.

2.4 Create a responsive web page using media queries and mobile-first design with flexible units

Desktop View (Responsive Layout)

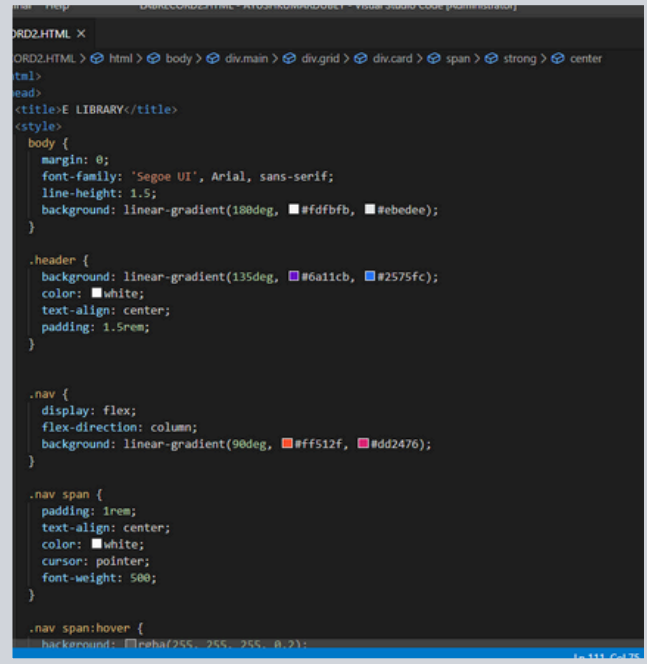


Mobile View (Media Query Applied)

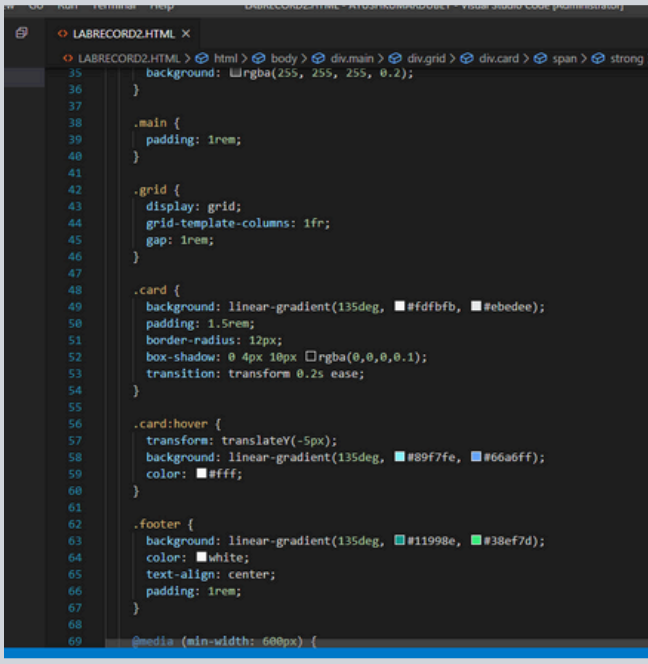


Demonstrates a responsive web page built using media queries and mobile-first design with flexible units.

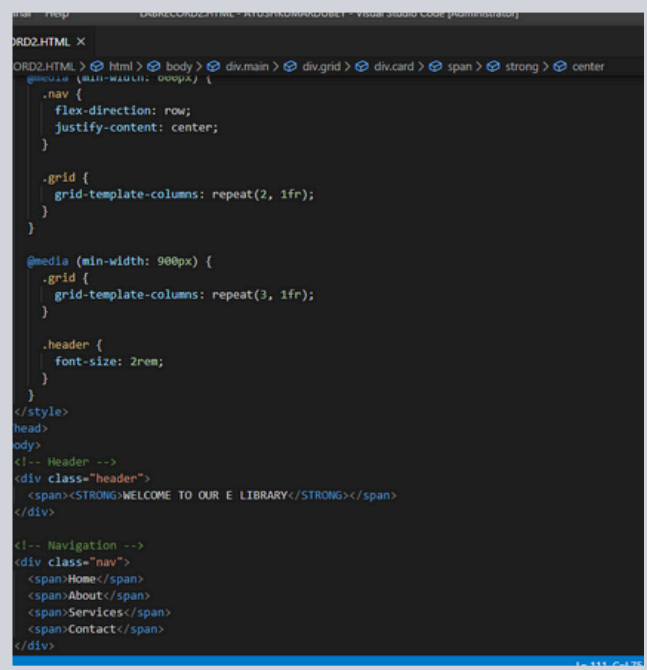
2.5 Use div and span elements for layout and apply styling with CSS



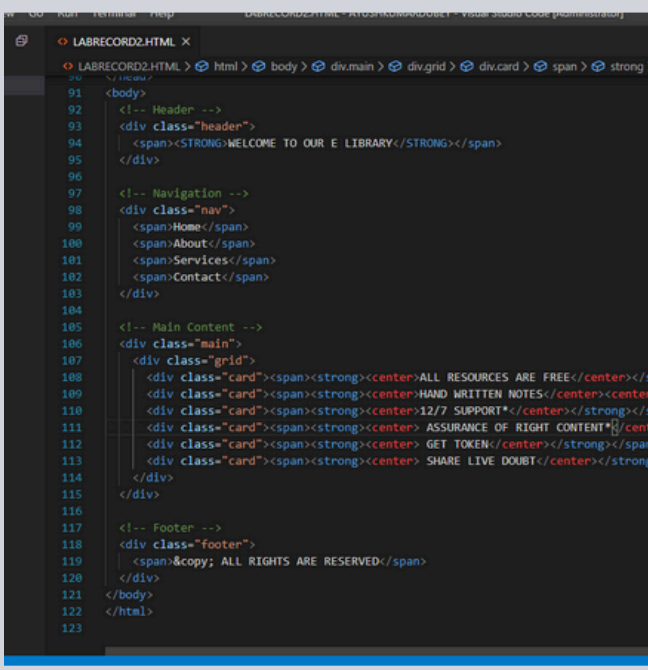
```
<title>E LIBRARY</title>
<style>
  body {
    margin: 0;
    font-family: 'Segoe UI', Arial, sans-serif;
    line-height: 1.5;
    background: linear-gradient(180deg, #fdfbfb, #ebedee);
  }

  .header {
    background: linear-gradient(135deg, #6a11cb, #2575fc);
    color: white;
    text-align: center;
    padding: 1.5rem;
  }


  .nav {
    display: flex;
    flex-direction: column;
    background: linear-gradient(90deg, #ff512f, #dd2476);
  }

  .nav span {
    padding: 1rem;
    text-align: center;
    color: white;
    cursor: pointer;
    font-weight: 500;
  }

  .nav span:hover {
```



```
      background: rgba(255, 255, 255, 0.2);
    }

    .main {
      padding: 1rem;
    }

    .grid {
      display: grid;
      grid-template-columns: 1fr;
      gap: 1rem;
    }

    .card {
      background: linear-gradient(135deg, #fdfbfb, #ebedee);
      padding: 1.5rem;
      border-radius: 12px;
      box-shadow: 0 4px 10px rgba(0,0,0,0.1);
      transition: transform 0.2s ease;
    }

    .card:hover {
      transform: translateY(-5px);
      background: linear-gradient(135deg, #89f7fe, #66a6ff);
      color: #fff;
    }

    .footer {
      background: linear-gradient(135deg, #11998e, #38ef7d);
      color: white;
      text-align: center;
      padding: 1rem;
    }

    @media (min-width: 600px) {
```



```
  .nav {
    flex-direction: row;
    justify-content: center;
  }

  .grid {
    grid-template-columns: repeat(2, 1fr);
  }
}

@media (min-width: 900px) {
  .grid {
    grid-template-columns: repeat(3, 1fr);
  }

  .header {
    font-size: 2rem;
  }
}
</style>
<body>
<!-- Header -->
<div class="header">
  <span><STRONG>WELCOME TO OUR E LIBRARY</STRONG></span>
</div>

<!-- Navigation -->
<div class="nav">
  <span>Home</span>
  <span>About</span>
  <span>Services</span>
  <span>Contact</span>
</div>
```

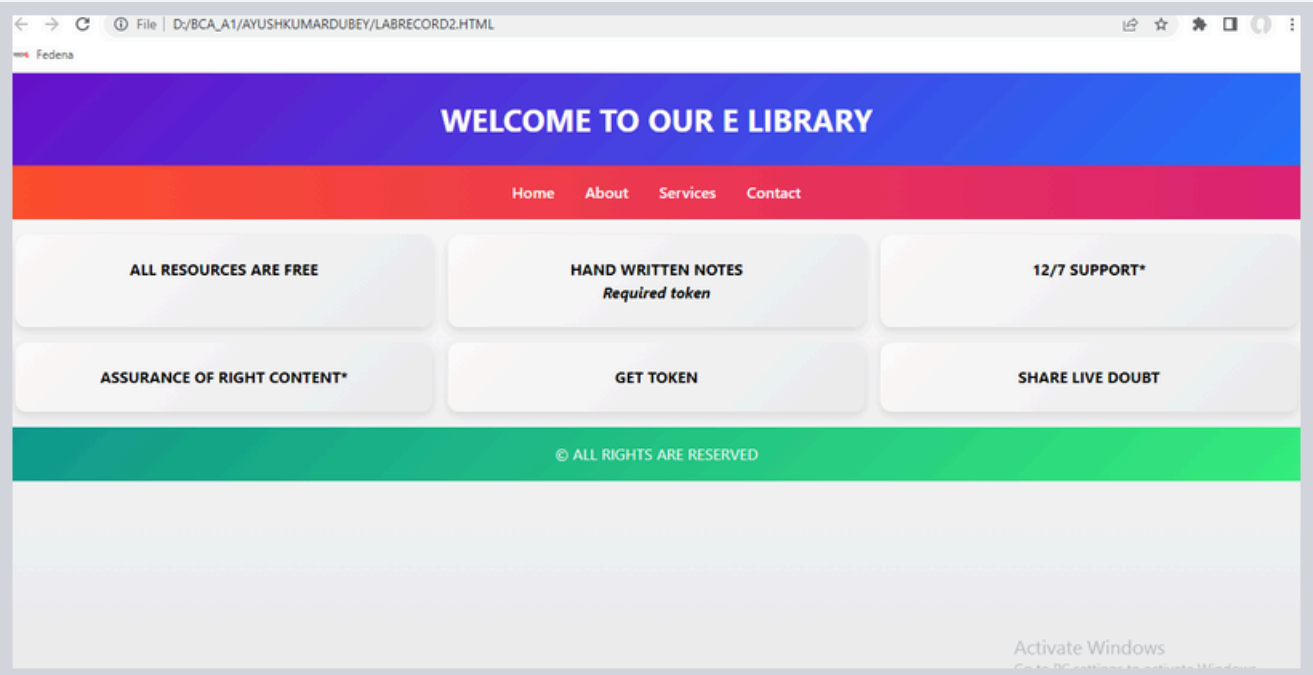


```
<body>
  <!-- Header -->
  <div class="header">
    <span><STRONG>WELCOME TO OUR E LIBRARY</STRONG></span>
  </div>

  <!-- Navigation -->
  <div class="nav">
    <span>Home</span>
    <span>About</span>
    <span>Services</span>
    <span>Contact</span>
  </div>

  <!-- Main Content -->
  <div class="main">
    <div class="grid">
      <div class="card"><span><strong><center>ALL RESOURCES ARE FREE</center></
      <div class="card"><span><strong><center>HAND WRITTEN NOTES</center><cente
      <div class="card"><span><strong><center>12/7 SUPPORT*</center></strong></
      <div class="card"><span><strong><center> ASSURANCE OF RIGHT CONTENT*</cen
      <div class="card"><span><strong><center> GET TOKEN</center></strong></spa
      <div class="card"><span><strong><center> SHARE LIVE DOUBT</center></strong
    </div>
  </div>

  <!-- Footer -->
  <div class="footer">
    <span>&copy; ALL RIGHTS ARE RESERVED</span>
  </div>
</body>
</html>
```

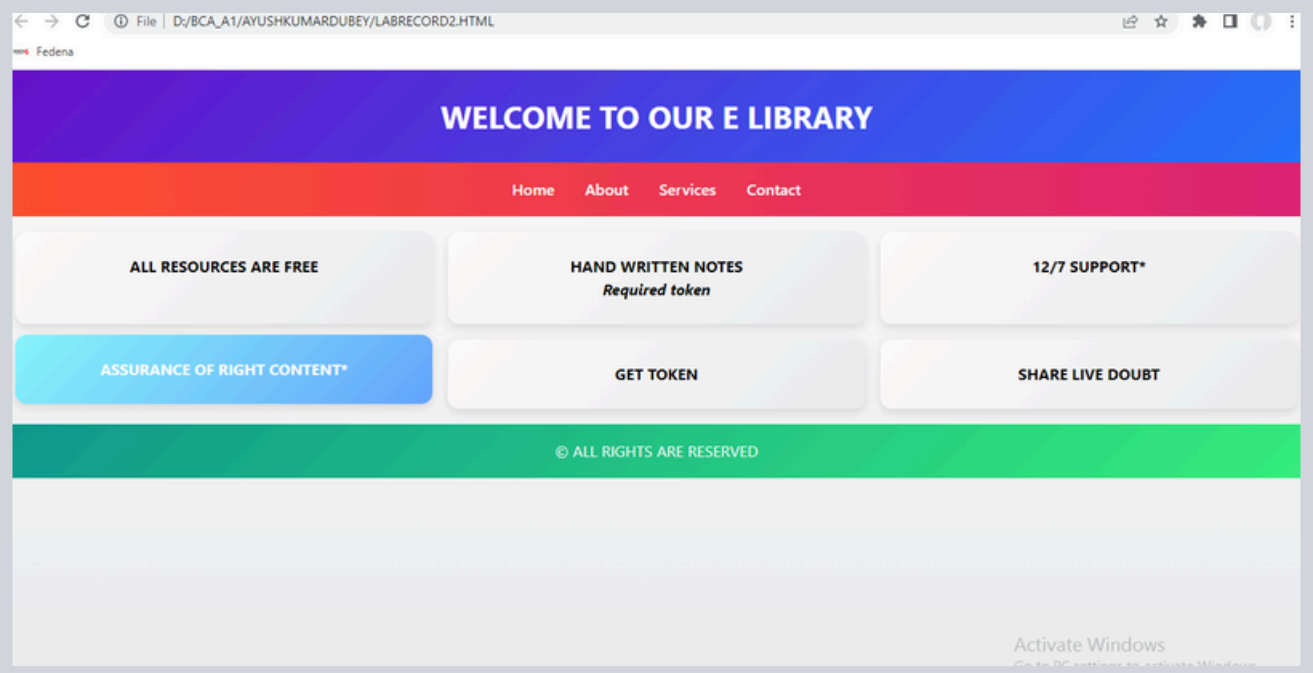
Demonstrates layout structuring using div and span elements with applied CSS styling, including hover-based color transitions."

2.5 Use div and span elements for layout and apply styling with CSS

Desktop View



Hover Effect (Color Change Applied)



Demonstrates layout structuring using div and span elements with applied CSS styling, including hover-based color transitions.”