DEPARTMENT OF CSE
COURSE CODE: 23SDCS12A / 23SDCS12R
FULL STACK APPLICATION DEVELOPMENT

Date of the Session: __/__/_____ **Time of The Session:_____to_____**

LAB – 1 ➔ Implementing grid, flex and block display

Prerequisites:

Knowledge on the HTML elements and styling

Exercise:

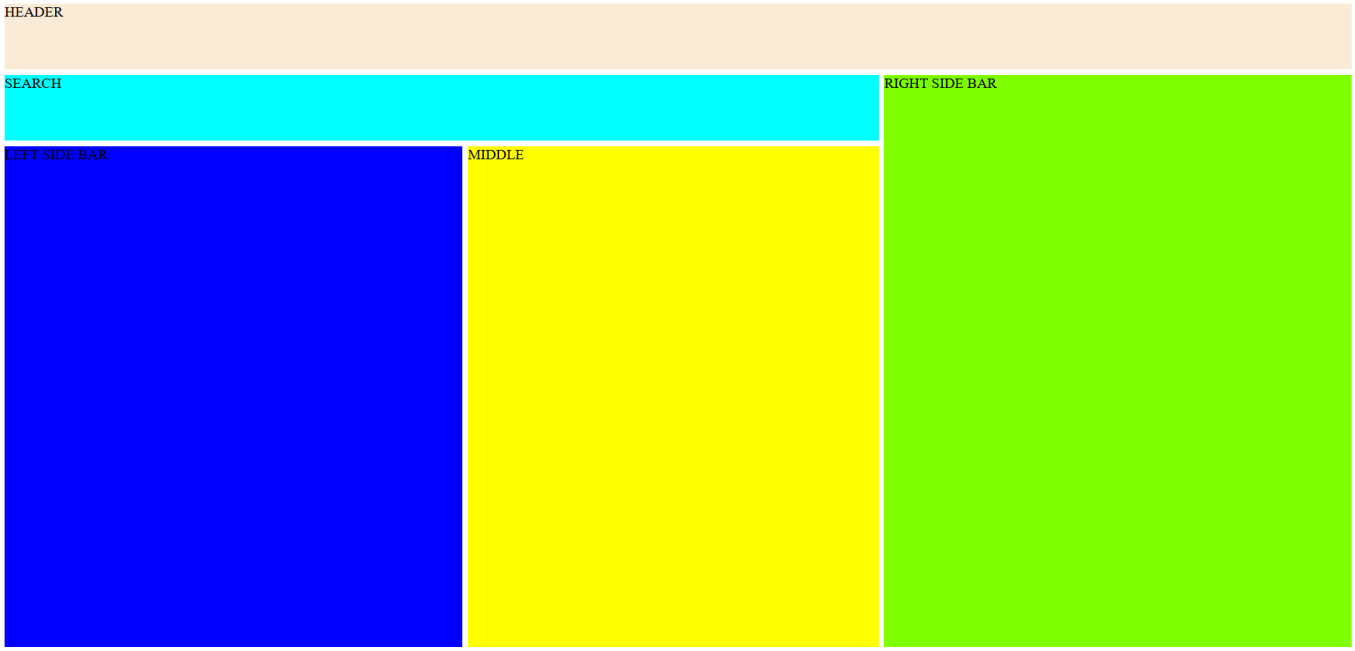
Faculty and students are organizing a "Greeks for Greeks" student chapter focused on teaching practical web development concepts. As part of this event, they plan to demonstrate a project that illustrates how to build a **product grid** using **CSS Grid**, and individual **product cards and sidebar** using **Flex and block display** model in React. Each component will be styled using external CSS to create a cohesive and responsive layout. How can they set up this example to effectively showcase these layout techniques in a React application?

Project structure:

```
product-catalog/
├── src/
│   ├── App.jsx
│   ├── Grid.jsx
│   ├── Sidebar.jsx
│   ├── MainContent.jsx
│   └── Main.jsx
```

Layout should be one of the below,

Sample Layout 1

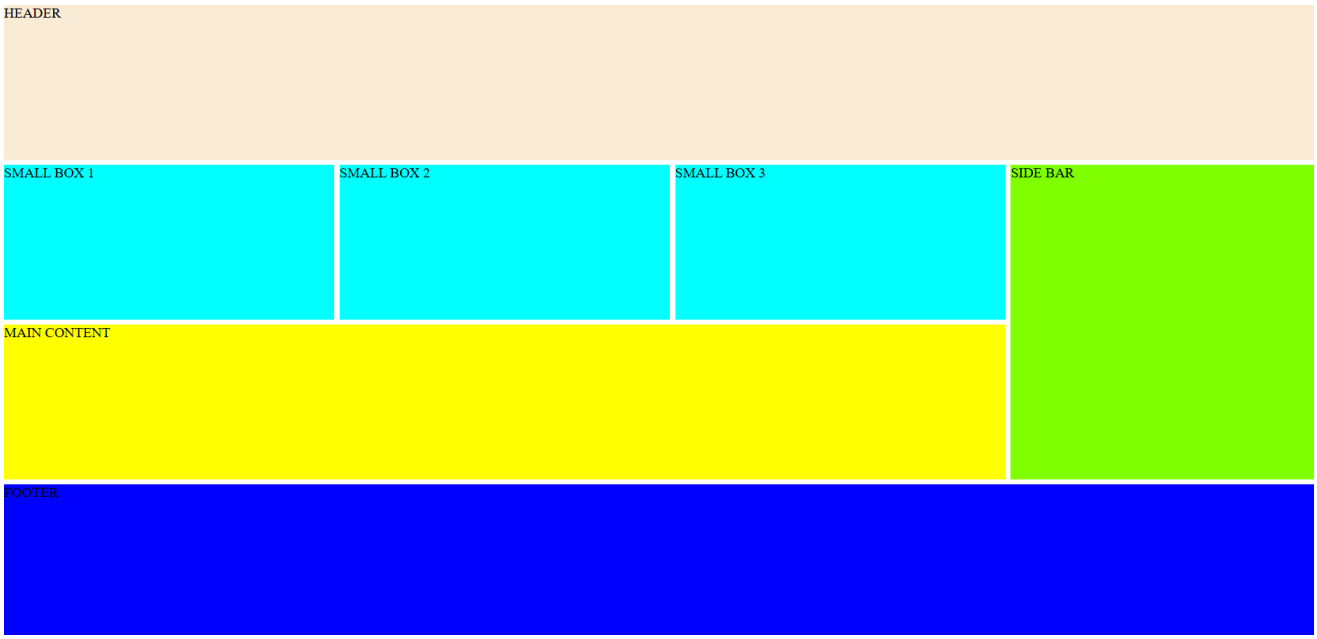


HTML AND CSS :

```
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title> Sample Layout 1</title>
    <style>
        @font-face {
            font-family: 'Fabrizio Superior';
            src: url('fonts/FabrizioSuperior-Regular.ttf') format('truetype');
            font-weight: normal;
            font-style: normal;
        }

        body {
            margin: 0;
            padding-left: 10px;
            font-family: 'Fabrizio Superior', Times, serif;
            display: grid;
            grid-template-rows: 8% 10% 50% 19%;
            grid-template-columns: 22% 0% 21% 25%;
            grid-template-areas:
                "header header header header"
                "search search search right"
                "left middle middle right"
                "left middle middle right";
            height: 80vh;
            gap: 3px;
```

```
        }

        .header {
            grid-area: header;
            background: #faebd6;
            text-align: left;
            line-height: 1.5;
        }

        .search-bar {
            grid-area: search;
            display: flex;
            background: #00ffff;
        }

        .search-bar > div {
            flex: 1;
            text-align: left;
        }

        .left-sidebar {
            grid-area: left;
            background: #0000fe;
            text-align: left;
            color: rgb(0, 0, 0);
        }

        .middle {
            grid-area: middle;
            background: #ffff00;
            text-align: left;
        }

        .right-sidebar {
            grid-area: right;
            background: #80ff00;
            text-align: left;
        }
    </style>
</head>
<body>
    <div class="header">HEADER</div>
    <div class="search-bar">
        <div>SEARCH</div>
    </div>
    <div class="left-sidebar">LEFT SIDE BAR</div>
    <div class="middle">MIDDLE</div>
    <div class="right-sidebar">RIGHT SIDE BAR</div>
</body>
</html>
```

Sample Layout 2



HTML AND CSS :

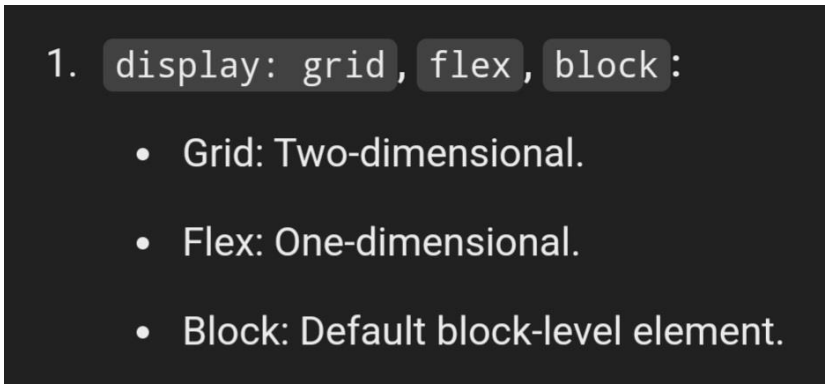
```
<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="UTF-8">
  <meta name="viewport" content="width=device-width, initial-scale=1.0">
  <title>Sample Layout 2 with Gaps</title>
  <style>
    * {
      margin: 0;
      padding: 0;
      box-sizing: border-box;
    }

    @font-face {
      font-family: 'Fabrizio Superior';
      src: url('path_to_your_font/FabrizioSuperior-Regular.ttf') format('truetype');
      font-weight: normal;
      font-style: normal;
    }

    body {
      font-family: 'Fabrizio Superior', Times, serif;
    }

    .container {
      display: grid;
      grid-template-areas:
        "header header header header"
```

```
      "small-box-1 small-box-2 small-box-3 sidebar"
      "main-content main-content main-content sidebar"
      "footer footer footer footer";
    grid-template-rows: 15% 19% 17% 17%;
    grid-template-columns: 20% 20% 20% 19%;
    grid-gap: 3px;
    height: 100vh;
    padding: 10px;
  }

  .header {
    grid-area: header;
    background: #faebd6;
    text-align: left;
    padding: 1px;
    font-size: 1em;
    display: flex;
    justify-content: flex-start;
  }

  .small-box {
    background: #00ffff;
    text-align: left;
    padding: 1px;
    font-size: 1em;
    display: flex;
    justify-content: flex-start;
  }

  .small-box-1 {
    grid-area: small-box-1;
  }

  .small-box-2 {
    grid-area: small-box-2;
  }

  .small-box-3 {
    grid-area: small-box-3;
  }

  .main-content {
    grid-area: main-content;
    background: #ffff00;
    text-align: left;
    padding: 1px;
    font-size: 1em;
    display: flex;
    justify-content: flex-start;
  }

  .sidebar {
    grid-area: sidebar;
```

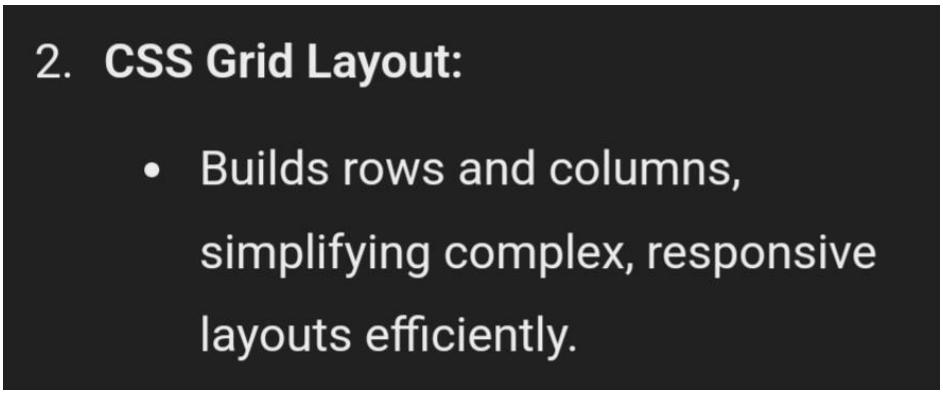
```
      background: #80ff00;
      text-align: left;
      padding: 1px;
      font-size: 1em;
      display: flex;
      justify-content: flex-start;
      width: 100%;
      max-width: 400px;
     }

     .footer {
      grid-area: footer;
      background: #0000fe;
      text-align: left;
      padding: 1px;
      font-size: 1em;
      color: black;
      display: flex;
      justify-content:  flex-start;
     }
   </style>
 </head>
 <body>
   <div class="container">
     <header class="header">HEADER</header>
     <div class="small-box small-box-1">SMALL BOX 1</div>
     <div class="small-box small-box-2">SMALL BOX 2</div>
     <div class="small-box small-box-3">SMALL BOX 3</div>
     <main class="main-content">MAIN CONTENT</main>
     <aside class="sidebar">SIDE BAR</aside>
     <footer class="footer">FOOTER</footer>
   </div>
 </body>
 </html>
```

VIVA QUESTIONS:

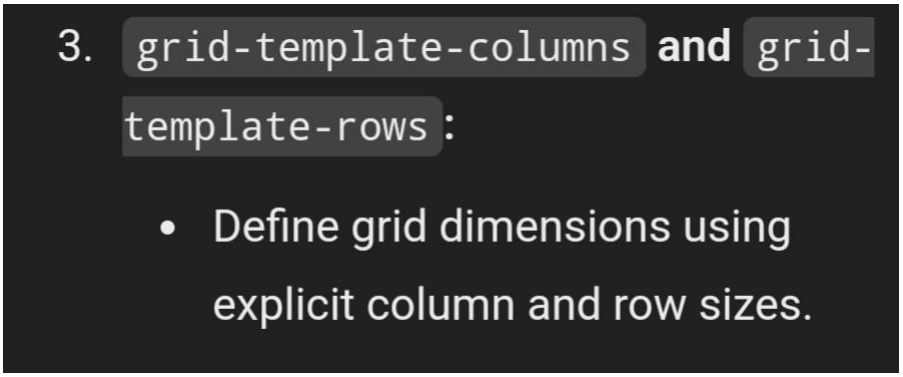
1. What is the difference between display: grid, display: flex, and display: block?



2. Explain the CSS Grid layout. How does it help in building complex layouts?

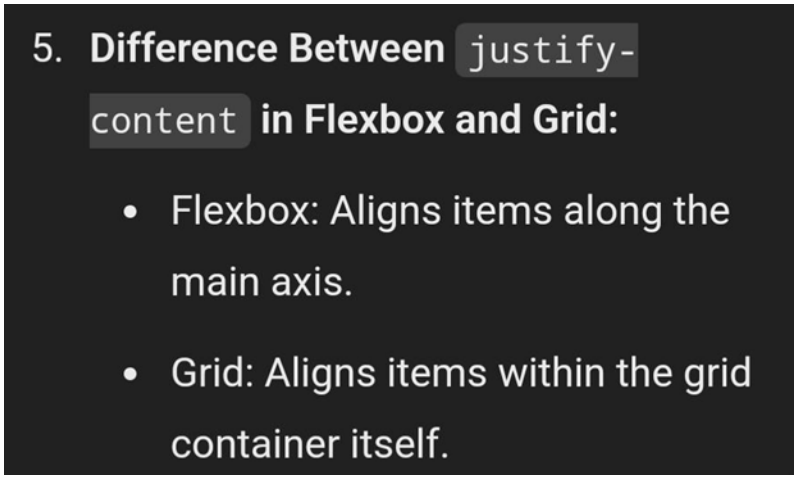


3. What is the grid-template-columns and grid-template-rows property in CSS Grid? How do you use them?



4. How does Flexbox simplify layout management in CSS?

5. What is the difference between justify-content in Flexbox and CSS Grid?
6.



(For Evaluator's use only)

Comment of the Evaluator (if Any)	Evaluator's Observation Marks Secured:_____out of 50 Full Name of the Evaluator: Signature of the Evaluator Date of Evaluation: