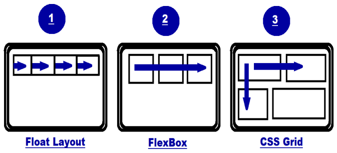
Web Design & Development I

IDD103

CSS Grid Layout



Prepared by Mr. Kinley Tshering

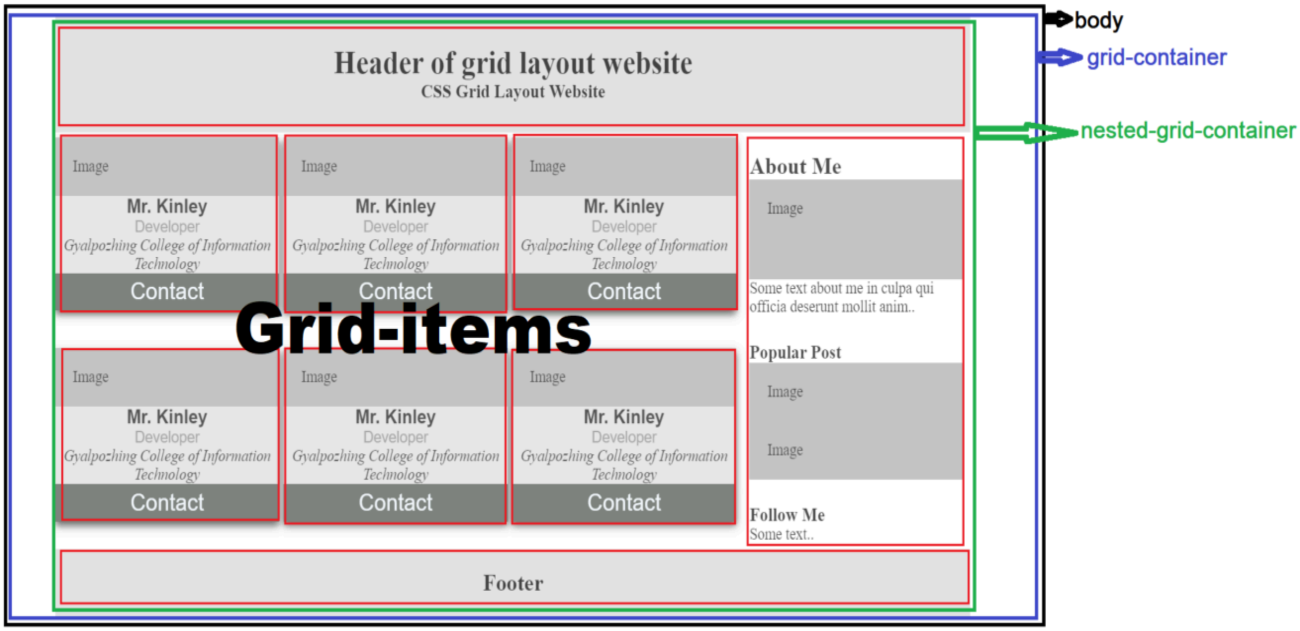
Content

Designing web layout using Grid

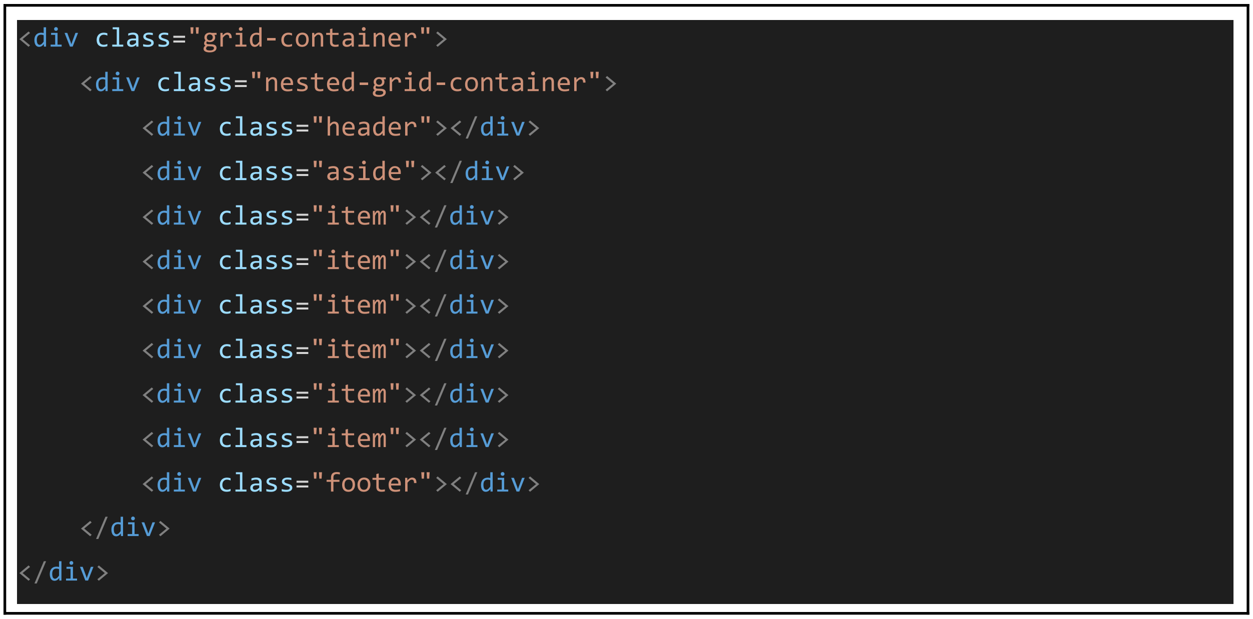
- Definition:
  - CSS Grid layout is a grid-based layout system which allows developers to align elements into column and rows

Detail steps to create grid-based layout

Grid Elements



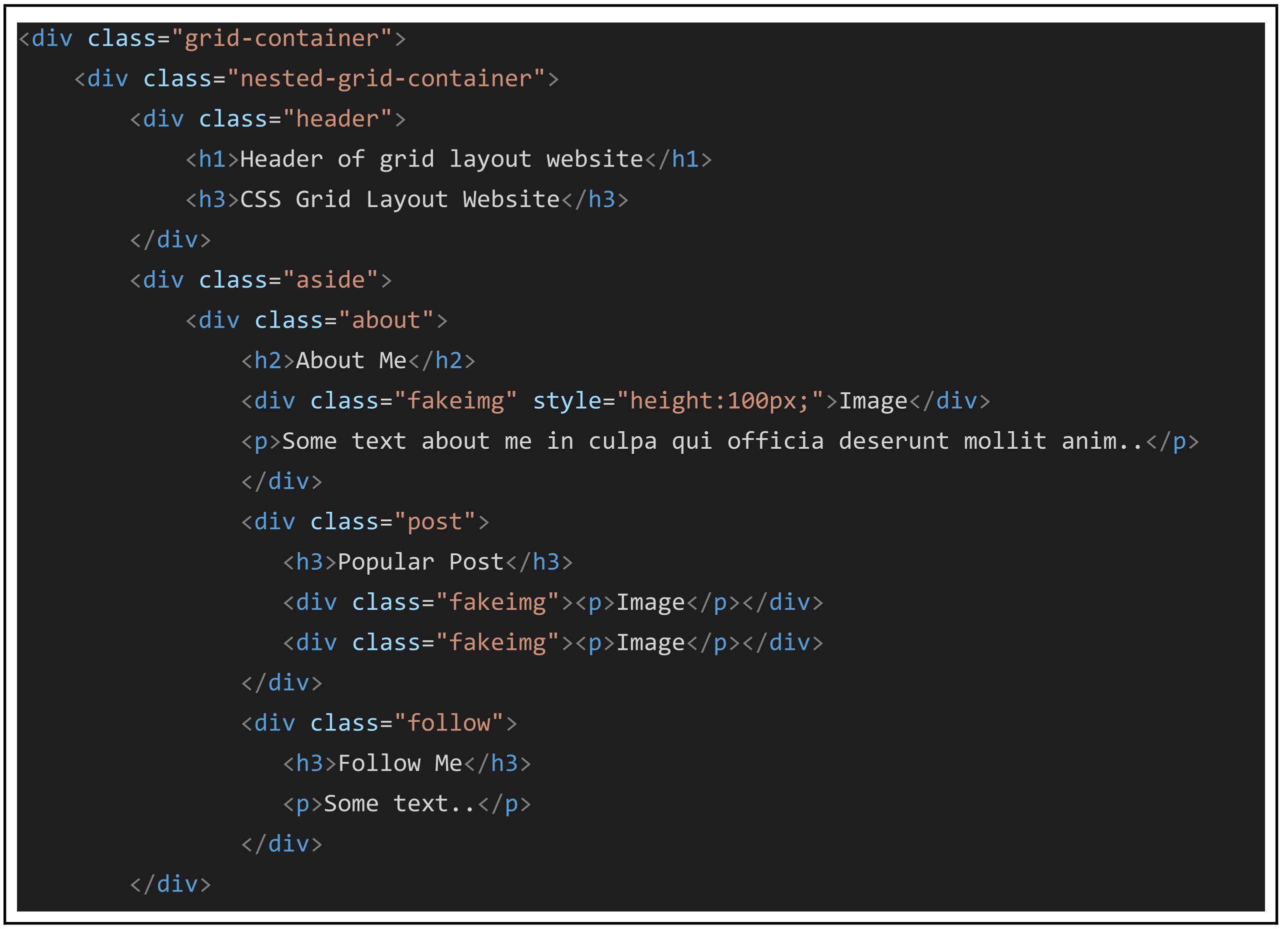
- A grid layout consists of a parent element, with one or more child elements.
- Type the following given code to create the grid elements in index.html.



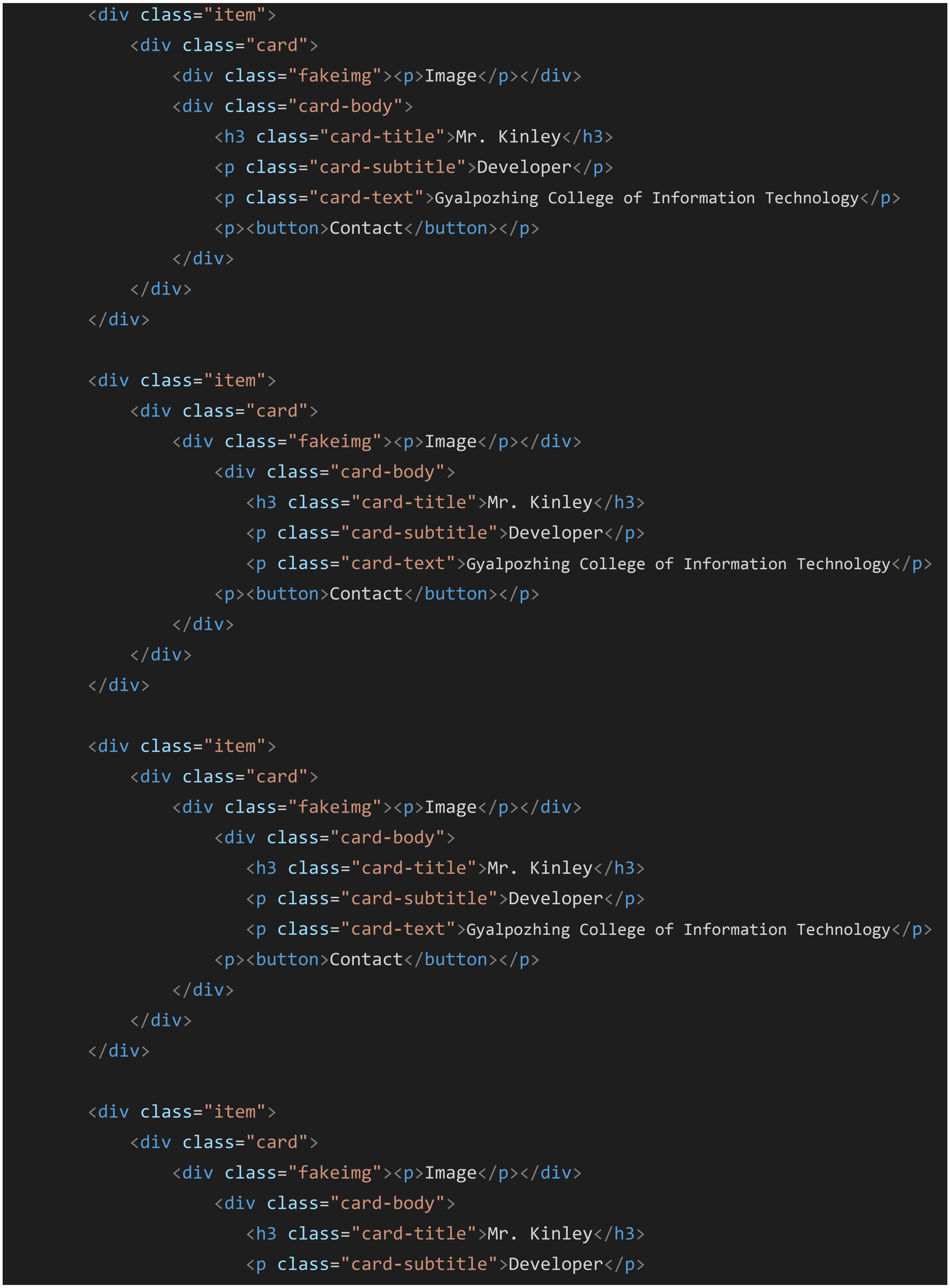
```html
<div class="grid-container">
    <div class="nested-grid-container">
        <div class="header"></div>
        <div class="aside"></div>
        <div class="item"></div>
        <div class="item"></div>
        <div class="item"></div>
        <div class="item"></div>
        <div class="item"></div>
        <div class="item"></div>
        <div class="footer"></div>
    </div>
</div>
```

Filling in the content

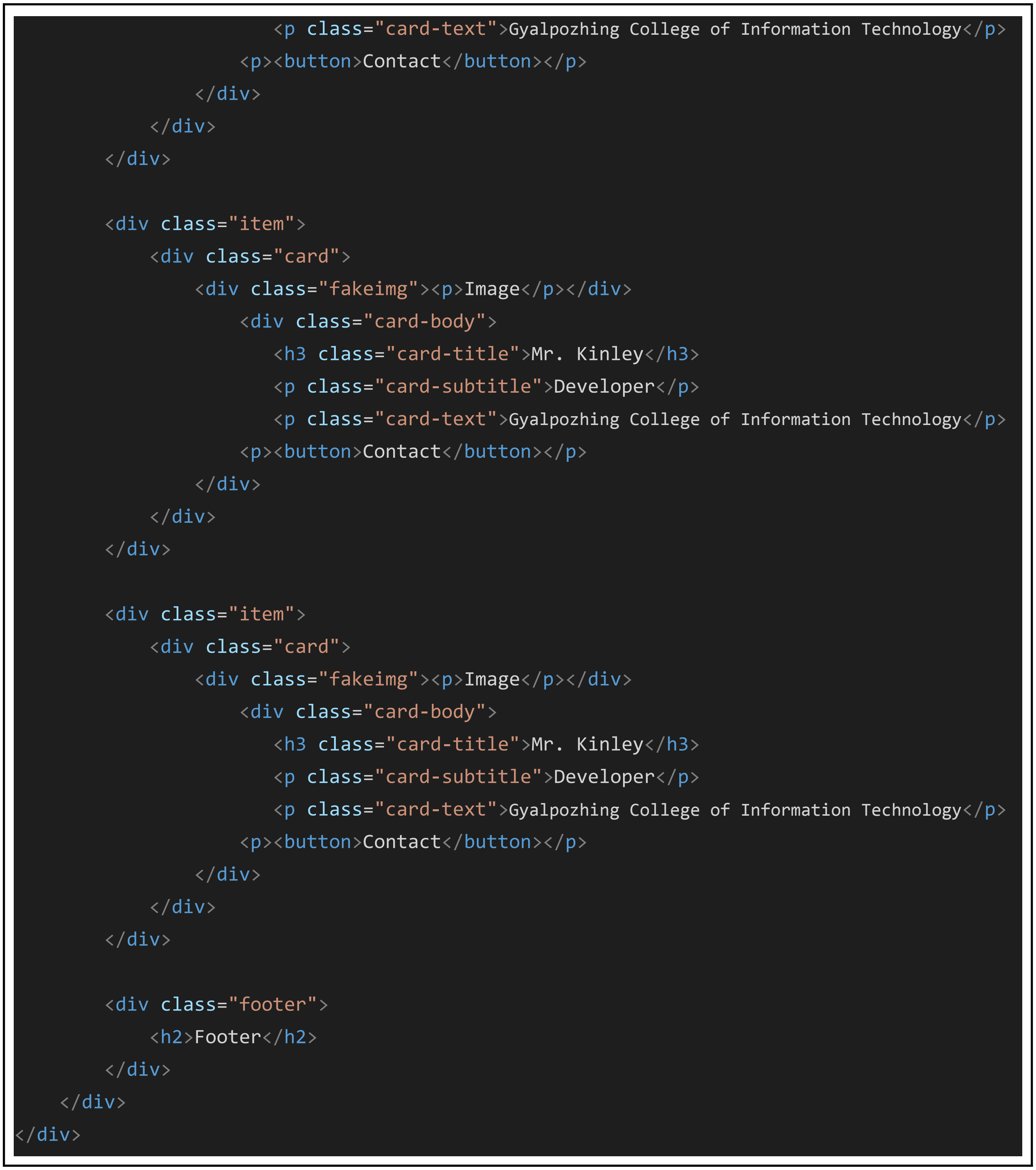
- The finished coding should look like the following:



```html
<div class="grid-container">
    <div class="nested-grid-container">
        <div class="header">
            <h1>Header of grid layout website</h1>
            <h3>CSS Grid Layout Website</h3>
        </div>
        <div class="aside">
            <div class="about">
                <h2>About Me</h2>
                <div class="fakeimg" style="height:100px;">Image</div>
                <p>Some text about me in culpa qui officia deserunt mollit anim..</p>
                </div>
                <div class="post">
                   <h3>Popular Post</h3>
                   <div class="fakeimg"><p>Image</p></div>
                   <div class="fakeimg"><p>Image</p></div>
                </div>
                <div class="follow">
                   <h3>Follow Me</h3>
                   <p>Some text..</p>
                </div>
        </div>
```

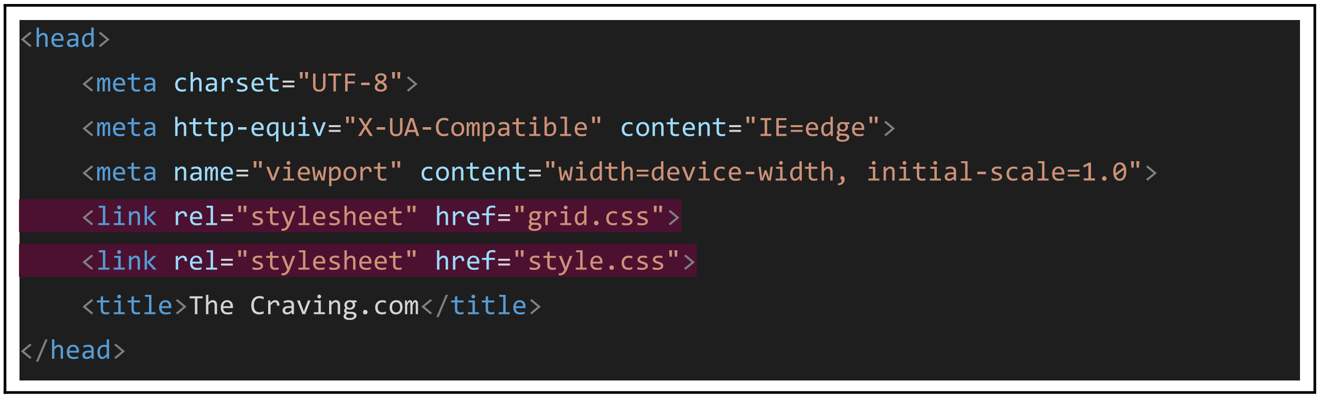


```
        <div class="item">
            <div class="card">
                <div class="fakeimg"><p>Image</p></div>
                <div class="card-body">
                    <h3 class="card-title">Mr. Kinley</h3>
                    <p class="card-subtitle">Developer</p>
                    <p class="card-text">Gyalpozhing College of Information Technology</p>
                    <p><button>Contact</button></p>
                </div>
            </div>
        </div>

        <div class="item">
            <div class="card">
                <div class="fakeimg"><p>Image</p></div>
                    <div class="card-body">
                       <h3 class="card-title">Mr. Kinley</h3>
                       <p class="card-subtitle">Developer</p>
                       <p class="card-text">Gyalpozhing College of Information Technology</p>
                    <p><button>Contact</button></p>
                </div>
            </div>
        </div>

        <div class="item">
            <div class="card">
                <div class="fakeimg"><p>Image</p></div>
                    <div class="card-body">
                       <h3 class="card-title">Mr. Kinley</h3>
                       <p class="card-subtitle">Developer</p>
                       <p class="card-text">Gyalpozhing College of Information Technology</p>
                    <p><button>Contact</button></p>
                </div>
            </div>
        </div>

        <div class="item">
            <div class="card">
                <div class="fakeimg"><p>Image</p></div>
                    <div class="card-body">
                       <h3 class="card-title">Mr. Kinley</h3>
                       <p class="card-subtitle">Developer</p>
```



```
                       <p class="card-text">Gyalpozhing College of Information Technology</p>
                    <p><button>Contact</button></p>
                </div>
            </div>
        </div>

        <div class="item">
            <div class="card">
                <div class="fakeimg"><p>Image</p></div>
                    <div class="card-body">
                       <h3 class="card-title">Mr. Kinley</h3>
                       <p class="card-subtitle">Developer</p>
                       <p class="card-text">Gyalpozhing College of Information Technology</p>
                    <p><button>Contact</button></p>
                </div>
            </div>
        </div>

        <div class="item">
            <div class="card">
                <div class="fakeimg"><p>Image</p></div>
                    <div class="card-body">
                       <h3 class="card-title">Mr. Kinley</h3>
                       <p class="card-subtitle">Developer</p>
                       <p class="card-text">Gyalpozhing College of Information Technology</p>
                    <p><button>Contact</button></p>
                </div>
            </div>
        </div>

        <div class="footer">
            <h2>Footer</h2>
        </div>
    </div>
</div>
```

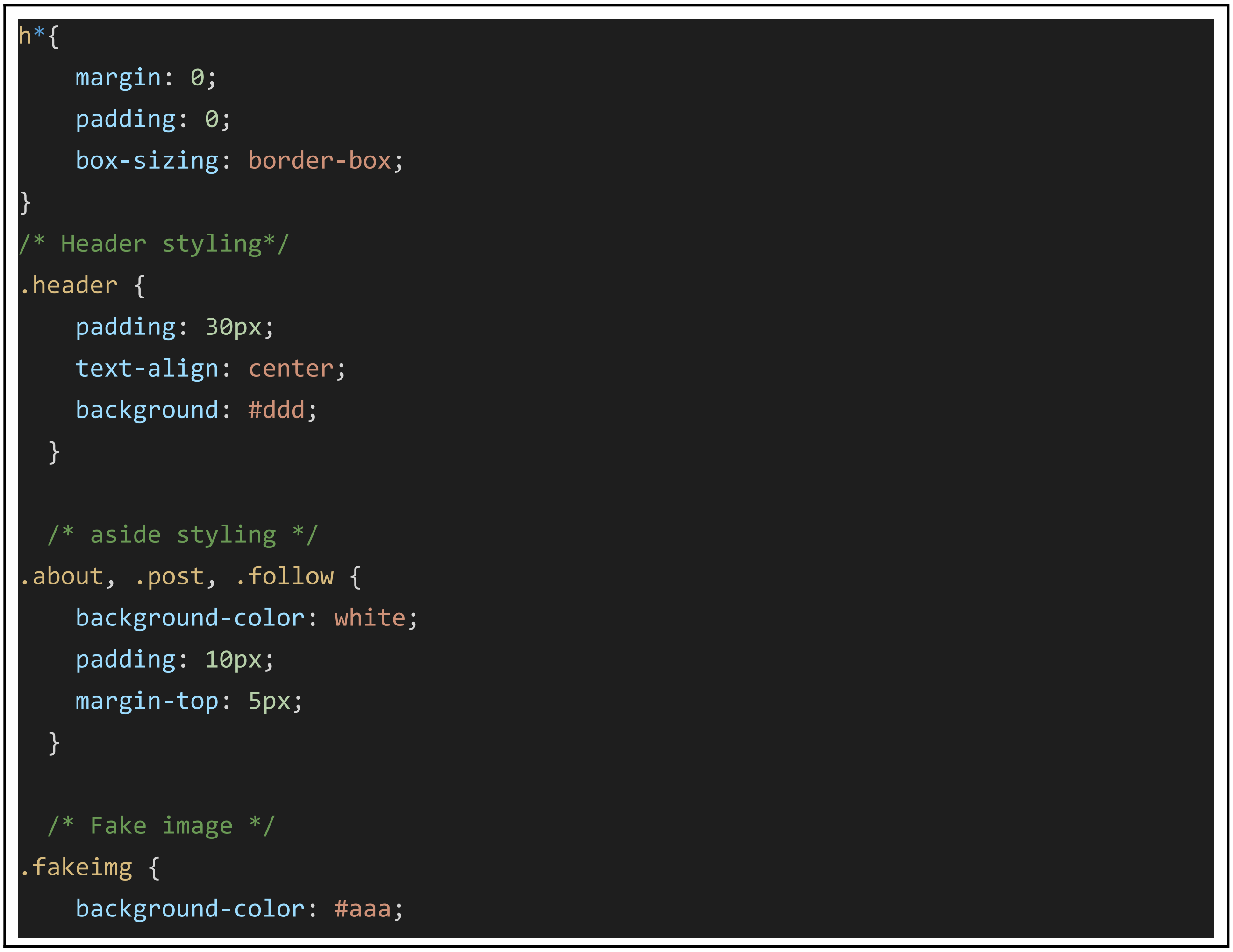
Adding style



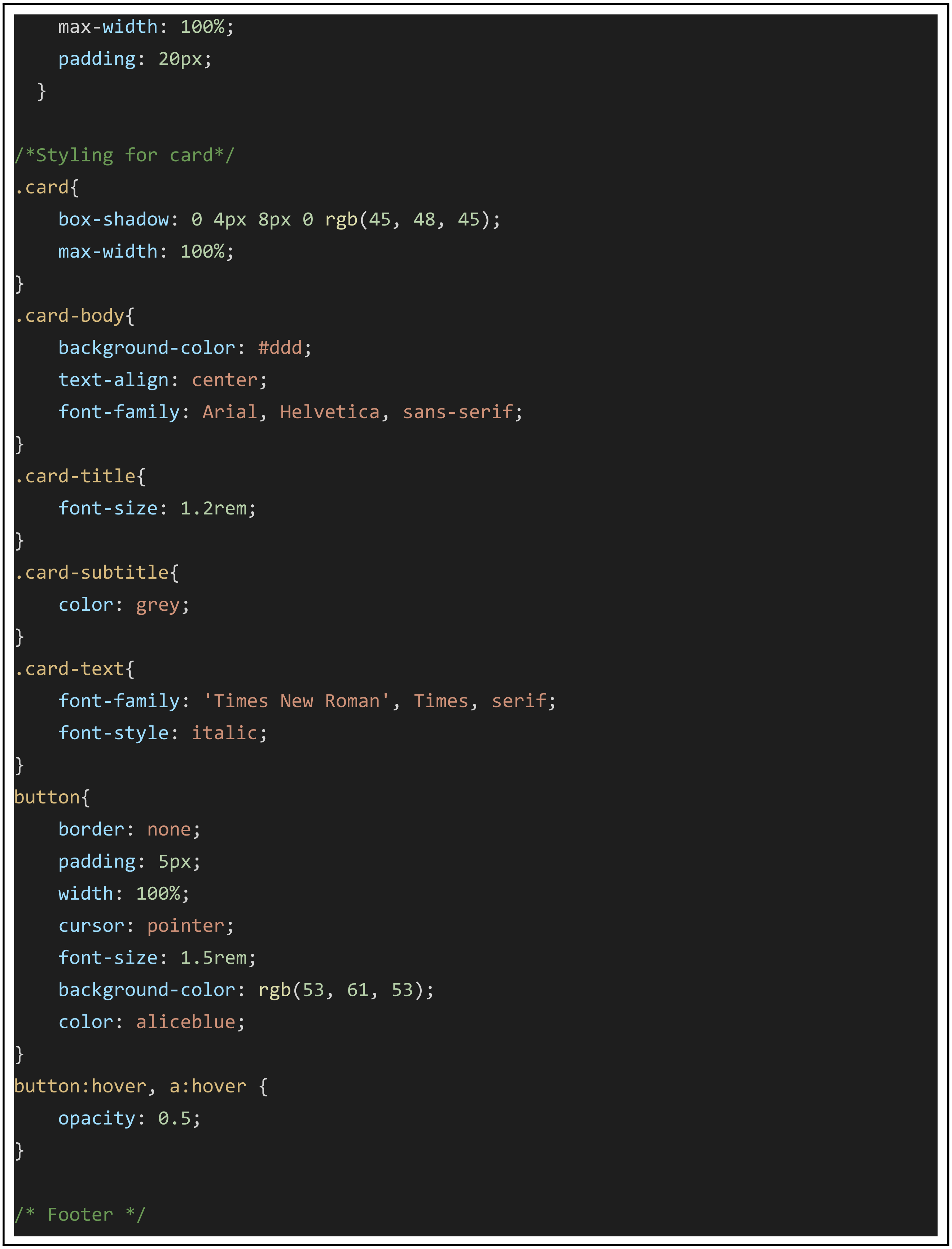
```
<head>
    <meta charset="UTF-8">
    <meta http-equiv="X-UA-Compatible" content="IE=edge">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <link rel="stylesheet" href="grid.css">
    <link rel="stylesheet" href="style.css">
    <title>The Craving.com</title>
</head>
```

Filling in style.css

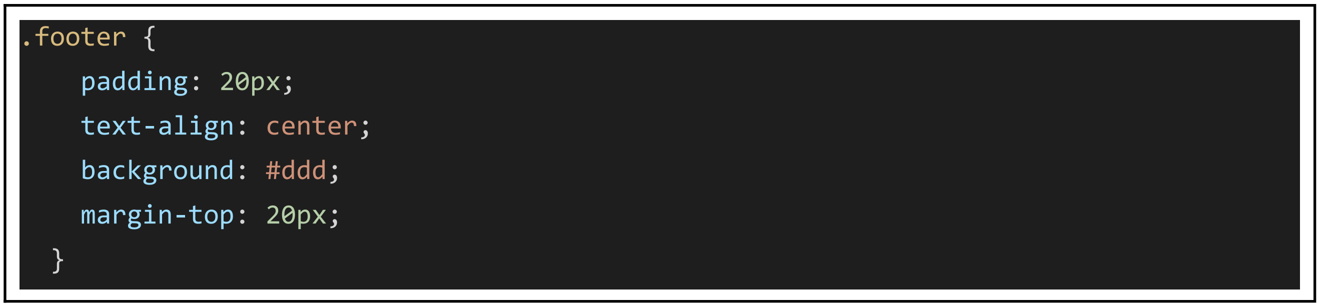
- The finished coding should look like the following:



```
h*{
    margin: 0;
    padding: 0;
    box-sizing: border-box;
}
/* Header styling*/
.header {
    padding: 30px;
    text-align: center;
    background: #ddd;
  }

  /* aside styling */
.about, .post, .follow {
    background-color: white;
    padding: 10px;
    margin-top: 5px;
  }

  /* Fake image */
.fakeimg {
    background-color: #aaa;
```



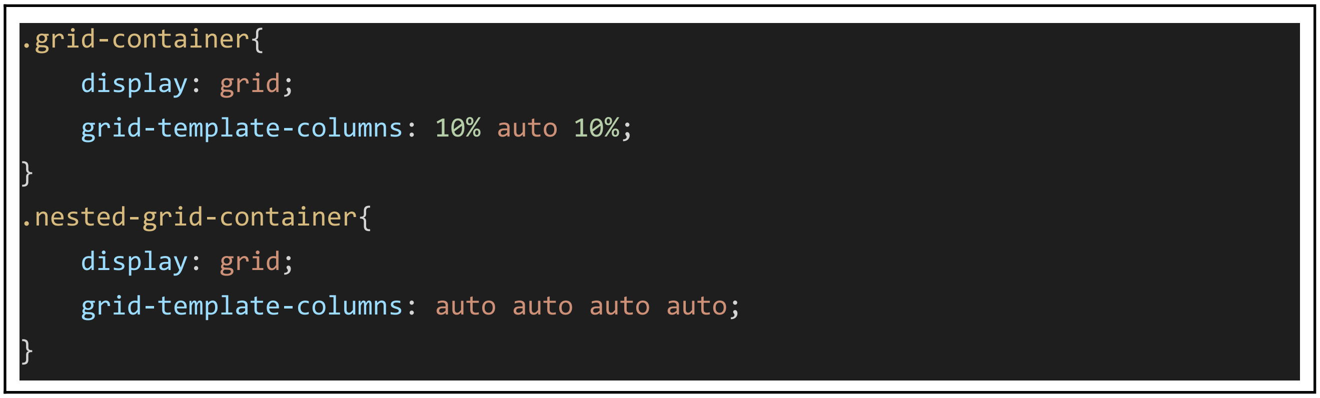
```
    max-width: 100%;
    padding: 20px;
  }

/*Styling for card*/
.card{
    box-shadow: 0 4px 8px 0 rgb(45, 48, 45);
    max-width: 100%;
}
.card-body{
    background-color: #ddd;
    text-align: center;
    font-family: Arial, Helvetica, sans-serif;
}
.card-title{
    font-size: 1.2rem;
}
.card-subtitle{
    color: grey;
}
.card-text{
    font-family: 'Times New Roman', Times, serif;
    font-style: italic;
}
button{
    border: none;
    padding: 5px;
    width: 100%;
    cursor: pointer;
    font-size: 1.5rem;
    background-color: rgb(53, 61, 53);
    color: aliceblue;
}
button:hover, a:hover {
    opacity: 0.5;
}

/* Footer */
```



```
.footer {
    padding: 20px;
    text-align: center;
    background: #ddd;
    margin-top: 20px;
  }
```

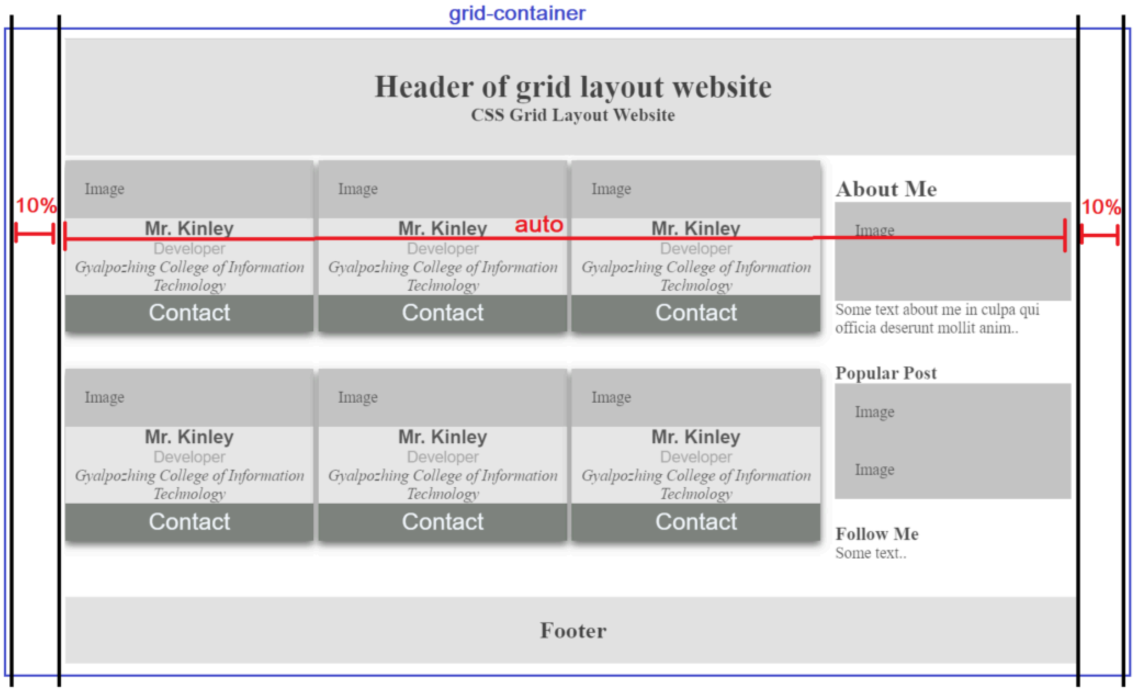
Grid Container

- To make an HTML element behave as a grid container we use display property.
- In grid.css file
- An HTML element becomes a grid container when its **display** property is set to **grid** or **inline-grid**.

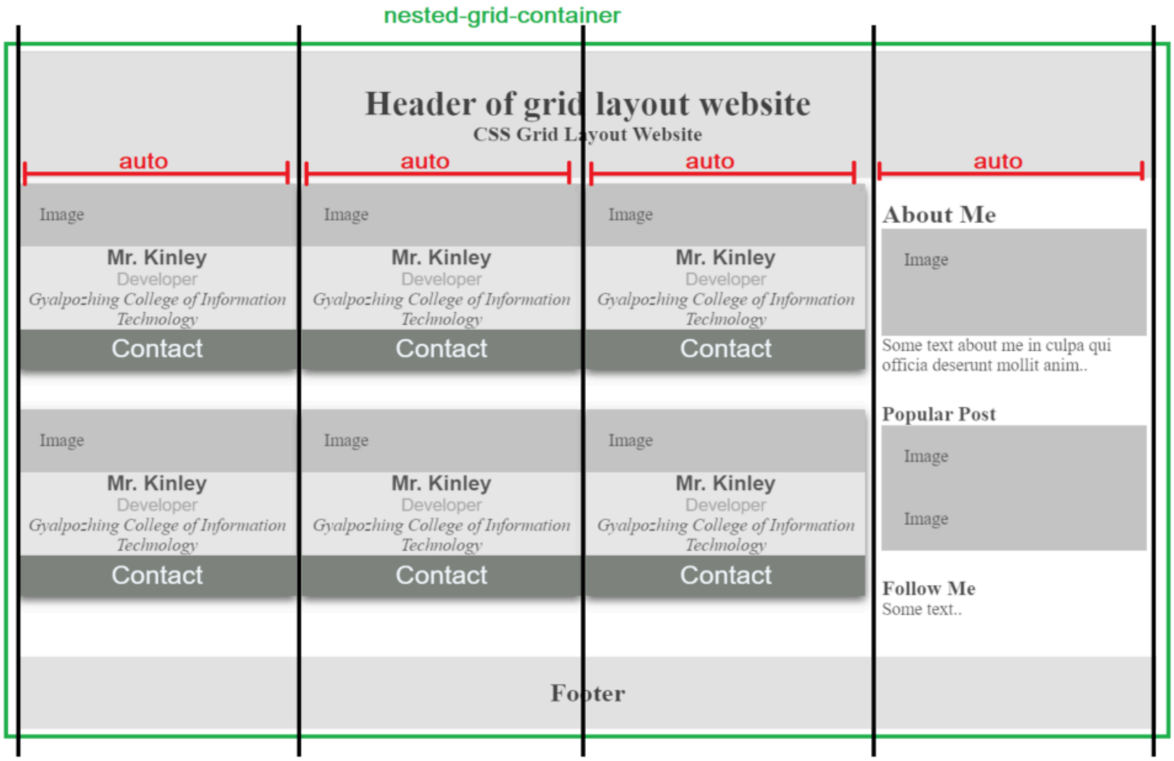


```
.grid-container{
    display: grid;
    grid-template-columns: 10% auto 10%;
}
.nested-grid-container{
    display: grid;
    grid-template-columns: auto auto auto auto;
}
```

- The **grid-template-columns** property specifies the number of columns in a grid layout. The values are a space separated list, where each value specifies the size of the respective column.
- The **grid-template-columns: 10% auto 10%;** makes a 3 columns grid container with the specific size (width) of the columns.

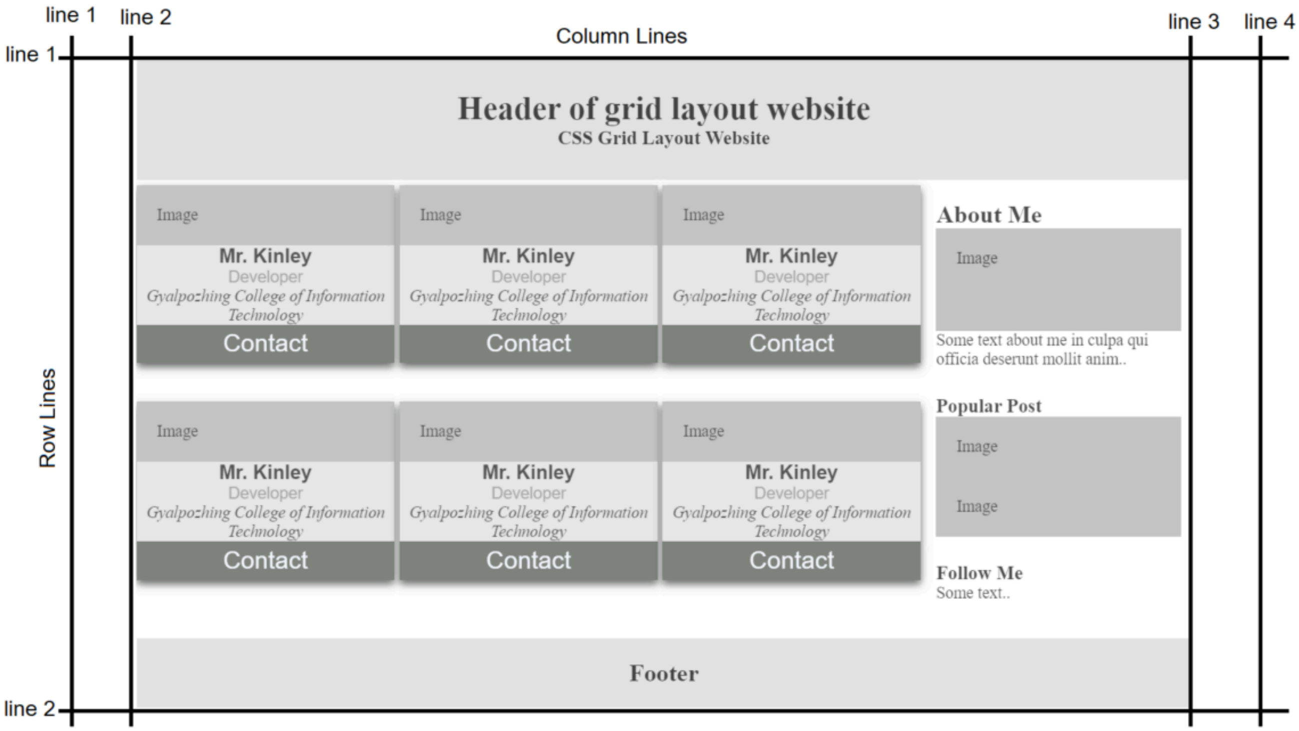


- The **grid-template-columns: auto auto auto auto;** makes a 4 columns nested grid container.

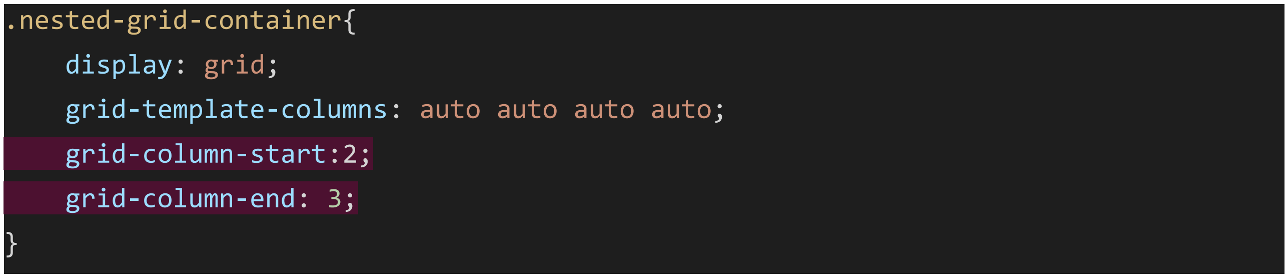


Grid lines

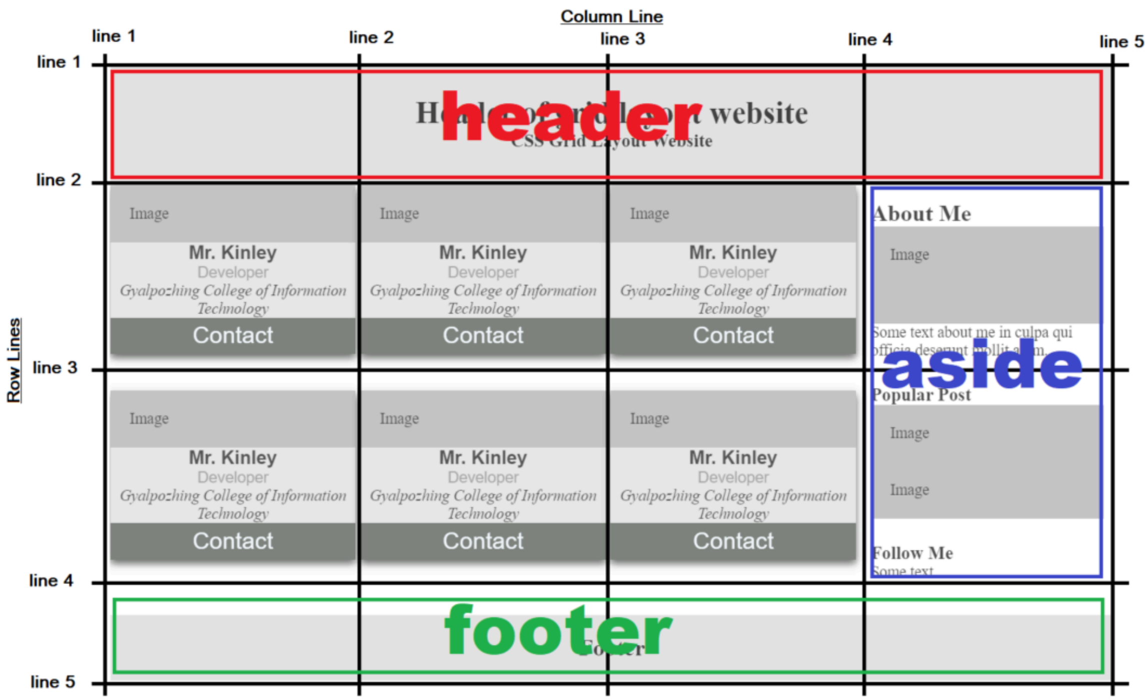
- The lines between columns are column lines and lines between rows are row lines.



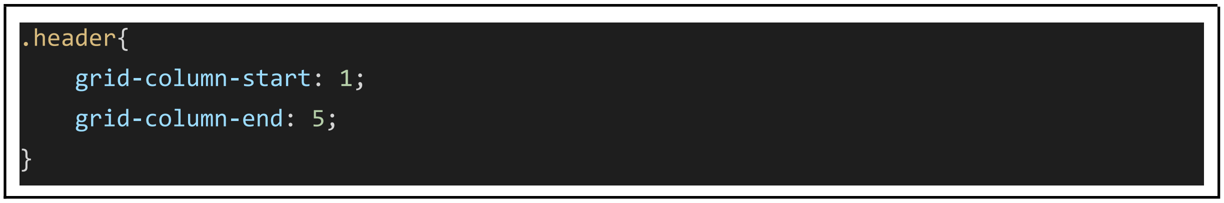
- Referring the line numbers to place the grid item in grid container **grid-column-start: 2;** place a grid item at column line 2, and **grid-column-end: 3;** end on column line 3 for **nested-grid-container**.



```
.nested-grid-container{
    display: grid;
    grid-template-columns: auto auto auto auto;
    grid-column-start:2;
    grid-column-end: 3;
}
```

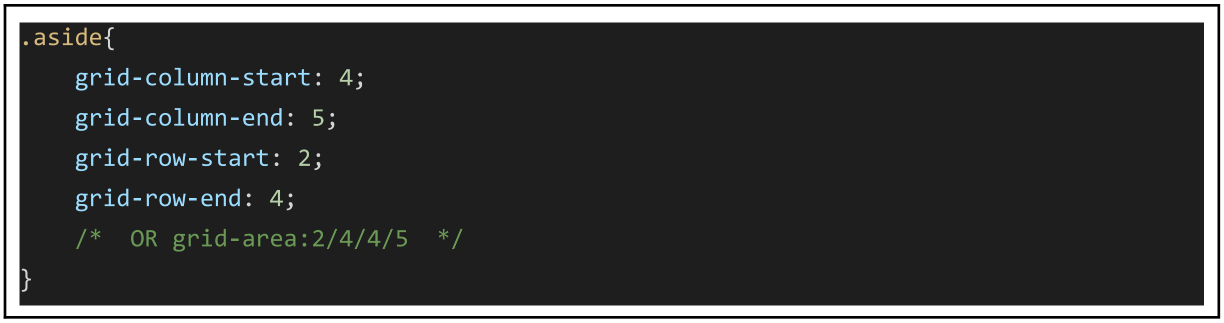


- Referring the line numbers to place the grid item in grid container **grid-column-start: 1;** place a grid item at column line 1, and **grid-column-end: 5;** end on column line 5 for **header.**



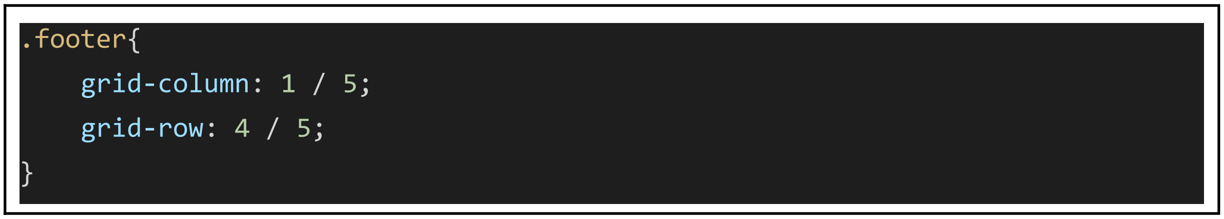
```
.header{
    grid-column-start: 1;
    grid-column-end: 5;
}
```

- Referring the line numbers to place the grid item in grid container **grid-column-start: 4;** place a grid item at column line 1, **grid-column-end: 5;** end on column line 5, **grid-row-start: 2;** place a grid item at row line 1, **grid-column-end: 4;** end on row line 4, for **aside.**
- The **grid-area** property can be used as a shorthand property for **grid-row-start, grid-column-start, grid-row-end** and the **grid-column-end** properties.



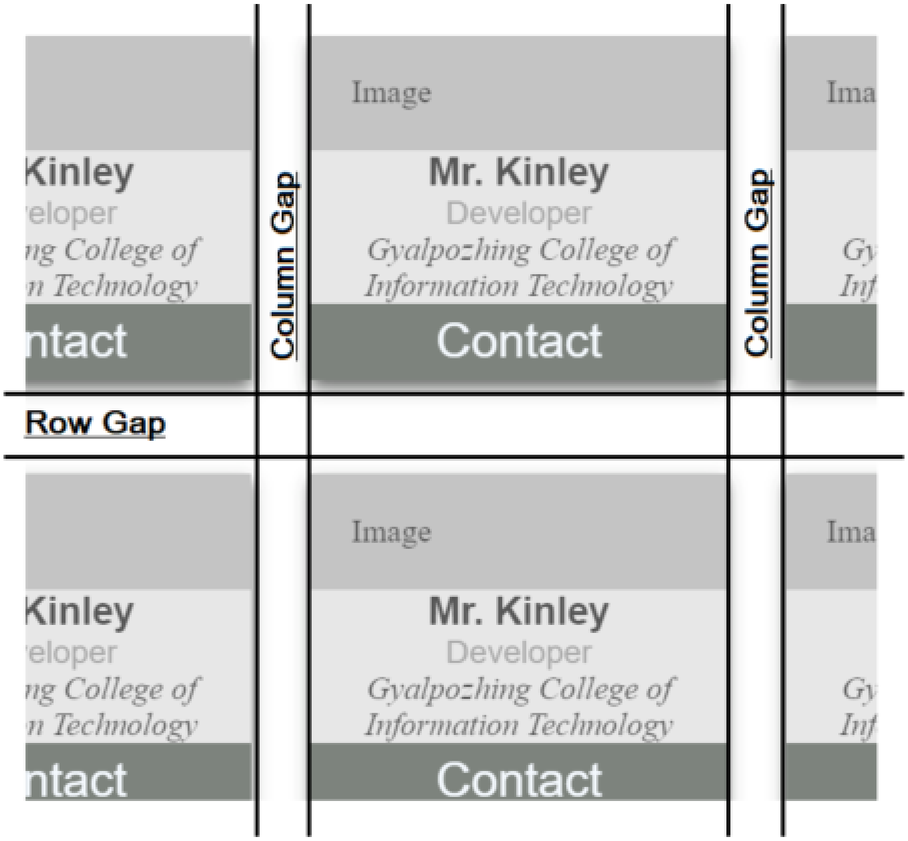
```
.aside{
    grid-column-start: 4;
    grid-column-end: 5;
    grid-row-start: 2;
    grid-row-end: 4;
    /*  OR grid-area:2/4/4/5  */
}
```

- The **grid-column** and **grid-row** property specifice a grid item's size and location in grid layout, and is a shorthand property for (**grid-column-start** and **grid-column-end**) and (**grid-row-start** and **grid-row-end**) respectively.
- Referring the line numbers to place the grid item in grid container **grid-column:1/5;** place a grid item at column line 1, and **grid-column-end: 5;** end on column line 5 **grid-row:4/5;** place a grid item at row line 4, and **grid-row-end: 5;** end on row line 5 for **footer.**



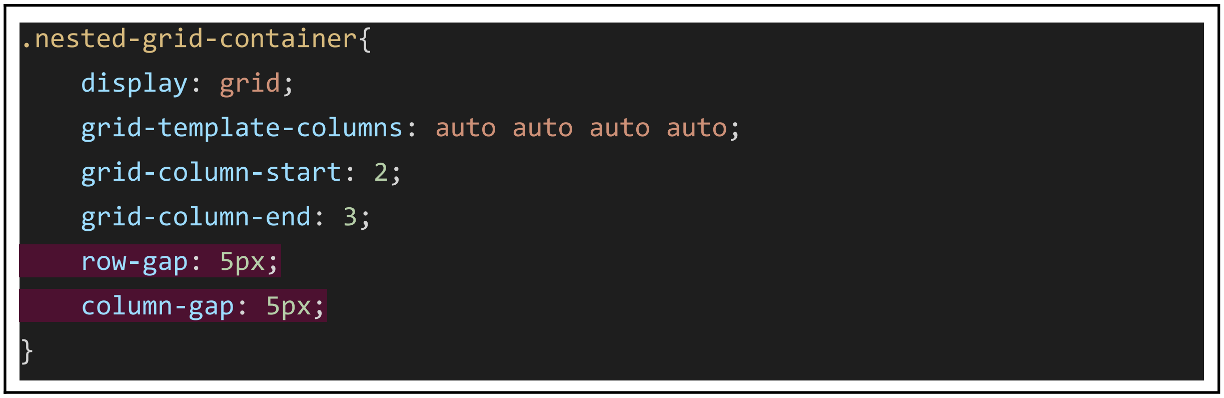
```
.footer{
    grid-column: 1 / 5;
    grid-row: 4 / 5;
}
```

Grid Gaps



- The space between each column/row is called gaps.

- The **grid-gap** property defines the size of the gap between the rows and columns in a grid layout, and is shorthand property for the **row-gap** and **column-gap**.
- The **row-gap: 5px;** sets the gap between the rows and **column-gap: 5px;** sets the gap between the columns.



```css
.nested-grid-container{
    display: grid;
    grid-template-columns: auto auto auto auto;
    grid-column-start: 2;
    grid-column-end: 3;
    row-gap: 5px;
    column-gap: 5px;
}
```

#####Thankyou#####