

1. Describe the main difference between the CSS Flexbox layout Model and the CSS Grid layout model. When would you choose to use one over the other?

Answer:-

Grid: CSS Grid Layout, is a two-dimensional grid-based layout system with rows and columns, making it easier to design web pages without having to use floats and positioning. Like tables, grid layout allow us to align elements into columns and rows.

To get started you have to define a container element as a grid with `display: grid`, set the column and row sizes with `grid-template-columns` and `grid-template-rows`, and then place its child elements into the grid with `grid-column` and `grid-row`.

Flexbox: The CSS Flexbox offers a one-dimensional layout. It is helpful in allocating and aligning the space among items in a container (made of grids). It works with all kinds of display devices and screen sizes.

To get started you have to define a container element as a grid with `display: flex`;

- CSS Grids helps you create the outer layout of the webpage. You can build complex as well responsive design with this. This is why it is called 'layout first'.
- Flexbox mostly helps align content & move blocks.
- CSS grids are for 2D layouts. It works with both rows and columns.
- Flexbox works better in one dimension only (either rows OR columns).
- It will be more time-saving and helpful if you use both at the same time.

2. Explain the role of the following key properties in the Flexbox layout models.

Answer:-

1. Justify Content:- The CSS `justify-content` property defines how the browser distributes space between and around content items along the main-axis of a flex container, and the inline axis of a grid container.
1. Align item:- The CSS `align-items` property sets the `align-self` value on all direct children as a group. In flexbox, it controls the alignment of items on the cross axis. In grid layout, it controls the alignment of items on the block axis within their grid areas.
1. Gap:- The `gap` property defines the size of the gap between the rows and between the columns in flexbox, grid or multi-column layout. It is a shorthand for the following properties:
1. Flex-direction:- The `flex-direction` CSS property sets how flex items are placed in the flex container defining the main axis and the direction (normal or reversed).

1. Flex-wrap:- The flex-wrap CSS property sets whether flex items are forced onto one line or can wrap onto multiple lines. If wrapping is allowed, it sets the direction that lines are stacked.
3. Write the code to center a div using CSS Flexbox.

```
Answer:- <!DOCTYPE html>
<html lang="en">
<head>
<meta charset="UTF-8">
<meta name="viewport" content="width=device-width, initial-scale=1.0">
<title>Document</title>
<Style>
*{
margin: 0;
padding: 0;
}
body{
height: 100vh;
width: 100vw;
display: flex;
justify-content: center;
align-items: center;
}
.green{
background-color: lightgreen;
width: 300px;
height: 300px;
}
</Style>
</head>
<body>
<Div class="green"></Div>
</body>
</html>
```

4. A client of yours wants to add a pricing section on their website to showcase their newly introduced premium plans. You have to build the pricing section for their business. They have provided you with the figma design for the same. Link.

```
Answer:- <!DOCTYPE html>
<html lang="en">
<head>
<meta charset="UTF-8">
<meta name="viewport" content="width=device-width, initial-scale=1.0">
<title>Pricing Page</title>
<link rel="stylesheet" href="/Pricing.css">
</head>
<body>
<!-- pricing section -->
<section class="pricing-section">
<!-- free plan card -->
<div class="card">
```

```

<h2 class="plan-name">Free Plan</h2>
<p class="plan-for">For personal</p>
<h2 class="pricing">$0</h2>
<p class="features"><span> </span>1
Users</p>
<p class="features"><span> </span>4 Web
mails</p>
<p class="features"><span> </span>Responsive Website</p>
<p class="features"><span> </span>Free
SSL</p>
<div class="subscribe-now-button-container">
<button class="subscribe-now-button">Subscribe now</button>
</div>
</div>
<!-- basic plan card -->
<div class="card dark">
<h2 class="plan-name">Basic Plan</h2>
<p class="plan-for">For small business</p>
<h2 class="pricing">$29</h2>
<p class="features"><span> </span>4
Users</p>
<p class="features"><span> </span>10
Web mails</p>
<p class="features"><span> </span>Responsive Website</p>
<p class="features"><span> </span>Free SSL</p>
<div class="subscribe-now-button-container">
<button class="subscribe-now-button dark-btn">Subscribe now</button>
</div>
</div>
<!-- pro plan card -->
<div class="card">
<h2 class="plan-name">Pro Plan</h2>
<p class="plan-for">For enterprise</p>
<h2 class="pricing">$49</h2>
<p class="features"><span> </span>Unlimited users</p>
<p class="features"><span> </span>Unlimited Web mails</p>
<p class="features"><span> 
</span>Responsive Website</p>
<p class="features"><span> 
</span>Free SSL + SEO</p>
<div class="subscribe-now-button-container">
<button class="subscribe-now-button">Subscribe now</button>
</div>
</div>
</section>
</body>
</html>

Style:- body, p,h1,h2,h3{
margin: 0;
padding: 0;
font-family: sans-serif;
}
/* pricing section */
.pricing-section{

```

```

min-height:100vh;
padding-top: 100px;
display: flex;
justify-content: center;
gap: 20px;
background-color: #F4F2FD;
box-sizing: border-box;
}
/* card */
.card{
width: 250px;
height: fit-content;
background-color: white;
border-radius: 7px;
padding-top: 50px;
padding-left: 35px;
}
.plan-name{
font-size: 36px;
}
.pricing{
font-size: 36px;
font-weight: 100;
margin: 12px 0;
}

.features{
display: flex;
align-items: center;
}
.subscribe-now-button-container{
display: flex;
justify-content: center;
margin-left: -35px;
}
.subscribe-now-button{
background-color: #202842;
color: white;
border-radius: 24px;
font-size: 18px;
padding: 10px 35px;
margin: 30px auto;
border-color: transparent;
}

/* dark card theme */
.dark{
background-color: #202842;
color: white;
}
.dark-btn{
background-color: white;
color: black;

```

```
}
```

## 5. build a clone of the IRCTC Ticket booking page.

```
Answer;- <!DOCTYPE html>
<html lang="en">
<head>
<meta charset="UTF-8">
<meta name="viewport" content="width=device-width, initial-scale=1.0">
<title>CSS FLEX</title>
<link rel="stylesheet" href="/Train.css">
</head>
<body>
<!-- full wrapper container -->
<div class="full-container">
<!-- left section -->
<section class="left">
<!-- navigation container -->
<nav>
<div class="logos-container">


</div>
<div class="navigation-container">
<ul>
<li>Ask Disha</li>
<li>Contact us</li>
<li>Alerts</li>
</ul>
<ul>
<li>
<button class="selected">Login</button>
</li>
<li>
<button>Register</button>
</li>
<li>
<button>Agent Login</button>
</li>
</ul>
</div>
</nav>
<!-- main section -->
<main>
<div>
<h2 class="main-title">Indian Railways</h2>
<p class="sub-main-title">
<span class="green-text">
Safety
</span>
<span class="orange-text">
Security
</span>
<span class="blue-text">
Punctuality

```

```

</span>
</p>
</div>
<div class="choose-container">
<button class="selected"> BOOK
Ticket</button>
<button> PNR Status</button>
<button> Charts / Vacancy</
button>
</div>
<div class="journey-details-container">
<div class="journey-details-section-container">
<div class="card-element">
<div class="card-element-image-container">

</div>
<div class="select-option">
<div class="dropdown">
<span>From</span>

</div>
<div class="choose-location">
<h2>Bangalore</h2>
<span>KSR - Bangalore</span>
</div>
</div>
</div>
</div>
<div class="center-from-to-arrow">

</div>
<div class="card-element">
<div class="card-element-image-container">

</div>
<div class="select-option">
<div class="dropdown">
<span>To</span>

</div>
<div class="choose-location">
<h2>Kasaragod</h2>
<span>KSD - Kasaragod</span>
</div>
</div>
</div>
</div>
</div>
<div class="journey-details-section-container">
<div class="card-element">
<div class="card-element-image-container">

</div>
<div class="select-option">
<div class="dropdown">
<span>Date</span>

```

```


</div>
<div class="choose-location">
<h2>01 Aug 23</h2>
<span>Tuesday</span>
</div>
</div>
</div>
<div class="card-element">
<div class="card-element-image-container">

</div>
<div class="select-option">
<div class="dropdown">
<span>Class</span>

</div>
<div class="choose-location">
<h2>3A</h2>
<span>AC 3 tier</span>
</div>
</div>
</div>
<div class="card-element">
<div class="card-element-image-container">

</div>
<div class="select-option">
<div class="dropdown">
<span>Seat Type</span>

</div>
<div class="choose-location">
<h2>TATKAL</h2>
<span>AC 3 Tier</span>
</div>
</div>
</div>
</div>
</div>
<button class="search-button">Search Train </button>
</main>
</section>
<!-- right section -->
<section class="right">

</section>
</div>
</body>
</html>
Style:- /* Universal */
*{
list-style: none;

```

```
margin: 0%;
padding: 0%;
}
/* full wrapper container */
.full-container{
max-width: 1440px;
min-width: 1024px;
margin: 0 auto;
display: flex;
font-family: sans-serif;
}
/* right section */
.right{
width: 50%;
height: auto;
}
.right img{
height: 100%;
width: 100%;
}
/* left section */
.left{
width: 50%;
padding: 50px 70px;
display: flex;
flex-direction: column;
}
/* navigation section */
nav{
display: flex;
justify-content: space-between;
margin-bottom: 80px;
}
.logos-container{
display: flex;
gap: 20px;
}
.logos-container img{
height: 75px;
width: 75px;
}
.navigation-container{
display: flex;
flex-direction: column;
gap: 10px;
}
.navigation-container ul{
display: flex;
gap: 20px;
font-size: 15px;
}
.navigation-container li{
cursor: pointer;
}
```



```

.navigation-container button{
padding: 4px 7px;
border: 1px solid lightgray;
background-color: transparent;
border-radius: 3px;
cursor: pointer;
}
.navigation-container .selected{
background-color: #FB792B;
border-color: #FB792B;
color: white;
}
/* main section */
main{
display: flex;
flex-direction: column;
gap: 50px;
}
main .main-title{
font-size: 40px;
margin-bottom: 20px;
}
main .sub-main-title{
display: flex;
gap: 15px;
font-size: 27px;
}
main .choose-container{
display: flex;
gap: 15px;
}
main .choose-container button{
display: flex;
align-items: center;
justify-content: center;
gap: 10px;
padding: 5px 10px;
font-size: 12px;
font-weight: 700;
background-color: transparent;
border: 1px solid lightgray;
border-radius: 3px;
cursor: pointer;
}
main .choose-container .selected{
border-color: #213D77 ;
background-color: #213D77;
color: white;
}
main .journey-details-section-container{
border: 1px solid lightgray;
padding: 15px 0px;
margin-bottom: 10px;
border-radius: 5px;
}

```

```

display: flex;
flex-wrap: wrap;
align-items: center;
justify-content: space-evenly;
}

main .card-element{
display: flex;
align-items: center;

}
.card-element-image-container img{
width: 40px;
height: 40px;
margin-right: 10px;
}
main .select-option{
display: flex;
flex-direction: column;
gap: 5px;
cursor: pointer;
}
main .choose-location span{
font-size: 12px;
color: gray;
}
main .dropdown{
display: flex;
align-items: center;
color: gray;
}
/* search train button */
.search-button{
display: flex;
align-items: center;
justify-content: center;
gap: 15px;
font-weight: 700;
background-color: #01BB0A;
padding: 15px 0;
font-size: 20px;
color: white;
border: none;
border-radius: 4px;
cursor: pointer;
}
/* common class */
.green-text{
color: #01BB0A;
}
.orange-text{
color: #FB792B;
}

```

```
.blue-text{  
color: #213D77;  
}  
.border-right-left{  
height: 100%;  
width: 0;  
border-right: 1px solid lightgray;  
}
```