Q.1 What is a Media Query in CSS, and what is its purpose?

Ans:- Media queries in CSS allow you to define different styles for different device types, screen sizes, and orientations. This is particularly useful for creating responsive web designs that adapt to different devices and screen sizes.

Media queries are written using the @media rule, followed by one or more conditions in parentheses. The conditions can be based on various criteria, including the device width, device height, orientation, and pixel density.

Q.2 How do you define a media query in CSS?

Ans:-Media: The @media rule is the starting point for defining media queries in CSS. It is used to define a block of styles that should only be applied under certain conditions qi.e. based on media query conditions).

@media screen (min-width: 320px) and (max-width: 768)

Media type: The media type is a keyword that specifies the type of device or media being targeted. There are several media types that can be used in a media query, including°

all: The media type targets all devices and media types

screen: This media type targets devices with a screen, such as desktops, laptops, tablets, and smartphones.

print: This media type targets device that are used for printing, such as printers and PDF generators.

speech: This media type targets speech-based devices, such as screen readers.

Q.2 Explain the concept of Breakpoints in Responsive Web Design and How They are used in Media Queries.

Ans:- Every website is accessed via devices with different screen sizes and resolutions. The software has to render perfectly across each screen size. Content or images cannot be distorted, cut out, or obscured.To allow this, developers have to use CSS breakpoints. These are points defined in the code. Website content responds to these points and adjusts itself to the screen size to display the accurate layout.Since CSS breakpoints for responsive design are implemented with media queries, they are also sometimes termed media query breakpointsWith CSS breakpoints in place, the website content

will align itself with screen size and displays itself in a way that pleases the eye and facilitates visual consumption.

Q.4 What is the purpose of using Media Queries for Print Media?

Ans:- the purpose of using Media Queries for Print Media Used for printers

Q.5 What is the purpose of the orientation media feature?

Ans:-

- Properties are used in *declarations* to give information about how to present a document. Media features are used in *expressions* to describe requirements of the output device.

  Most media features accept optional 'min-' or 'max-' prefixes to express "greater or equal to" and "smaller or equal to" constraints. This syntax is used to avoid "<" and ">" characters which may conflict with HTML and XML. Th

- Properties always require a value to form a declaration. Media features, on the other hand, can also be used without a value. For a media feature *feature*, (*feature*) will evaluate to true if (*feature*:*x*) will evaluate to true for a value *x* other than zero or zero followed by a unit identifier (i.e., other than 0, 0px, 0em, etc.). Media features that are prefixed by min/max cannot be used without a value. When a media feature prefixed with min/max is used without a value it makes the media query malformed.

Q.6 Imagine you are a web developer working for a creative agency that specializes in building visually appealing and interactive websites. The agency has recently received a client request to create a landing page similar to the design of the one-page website: https://www.getonecard.app/. The client wants to showcase a video prominently on the page to engage visitors.Your task is to create a simple webpage that replicates the one-page landing page design, including a responsive layout and an HTML video. The below images are for your reference. Some browsers don't allow you to play videos without the controls attribute. So, you can add controls here, we will learn how to play a video without the controls attribute in the later section.

```html
<!DOCTYPE html>

<html lang="en">

  <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="https://fonts.googleapis.com/css2?family=Material+Symbols+Outlined:o
psz,wght,FILL,GRAD@20..48,100..700,0..1,-50..200"

    />

    <title>Landing Page</title>



    <style>

      .material-symbols-outlined {

        font-variation-settings: "FILL" 0, "wght" 400, "GRAD" 0, "opsz"
48;

        color: #fff;

      }

      body {

        font-family: "Trebuchet MS", "Lucida Sans Unicode", "Lucida
Grande",

          "Lucida Sans", Arial, sans-serif;
```

```css
}


nav {

  height: 50px;

  background-color: #242b2e;

  display: flex;

  align-items: center;

  padding: 5px;

}



.large-screens {

  max-width: 1200px;

  width: 100%;

  margin: auto;

  justify-content: space-between;

  display: none;

}


.small-screens {

  margin: 0px 20px;

  display: flex;

  justify-content: space-between;

  width: 100%;
```

```css
    flex-wrap: wrap;

}


.large-screens > img {

  width: 50px;

}


.small-screens > img {

  width: 30px;

}


.nav-links {

  display: flex;

  align-items: center;

}


.nav-links a {

  text-decoration: none;

  color: #fff;

  margin-right: 25px;

}


.nav-links a:hover {
```

```css
  color: #76b5d3;

  scale: 1.1;

}


.large-screens button {

  padding: 0px 40px;

  margin: 10px 0px;

  border: 0;

  border-radius: 5px;

  background-color: #0072e1;

  color: #fff;

  font-weight: bold;

}


.large-screens button:hover {

  scale: 1.1;

  cursor: pointer;

}


.hero-section {

  max-width: 1200px;

  width: 100%;

  margin: auto;
```

```css
  display: flex;

  flex-direction: column;

  align-items: center;

}


.hero-section > video {

  width: 90%;

  border: 0;

  outline: 0;

}


.hero-section > .text-section {

  height: 600px;

  width: 100%;

  display: flex;

  flex-direction: column;

  justify-content: center;

  margin-left: 20px;

}


.text-section > h3 {

  font-size: 30px;

  margin-bottom: 0;
```

```css
}


.text-section > h1 {

  font-size: 60px;

  margin-top: 5px;

  color: #1893f7;

  margin-bottom: 0;

}



.text-section > h4 {

  font-size: 20px;

  margin: 30px 0px;

  color: #1893f7;

}



.sponsor-images img {

  width: 60%;

  margin-bottom: 20px;

}



.info-section {

  max-width: 1200px;

  width: 100%;
```

```css
  margin: auto;

  display: flex;

  flex-direction: column;

  align-items: center;

  padding: 100px 0px;

}


.info-section h1 {

  font-size: 30px;

  color: #383cc1;

  text-align: center;

}


.info-section p {

  font-size: 20px;

  margin-bottom: 0;

  margin-top: 10px;

  font-weight: lighter;

  text-align: center;

}


@media screen and (min-width: 800px) {

  .large-screens {
```

```css
  display: flex;

}

.small-screens {

  display: none;

}


.hero-section {

  flex-direction: row;

  align-items: start;

  justify-content: space-between;

}


.hero-section > video {

  width: 600px;

  height: 600px;

}


.info-section {

  background-color: #000;

  color: #fff;

}


.info-section h1 {
```

```
        font-size: 60px;

      }


      .info-section p {

        font-size: 40px;

      }

    }

  </style>

</head>

<body>

  <nav>

    <section class="large-screens">

      <img

        src="https://cdn.logo.com/hotlink-ok/logo-social-sq.png"

        alt="Logo"

      />

      <div class="nav-links">

        <a href="#">Home</a><a href="#">Blog</a><a href="#">About</a

        ><a href="#">Contact</a>

      </div>

      <button>Login</button>

    </section>
```

```html
    <section class="small-screens">

      <img

        src="https://cdn.logo.com/hotlink-ok/logo-social-sq.png"

        alt="Logo"

      />



      <div>

        <span class="material-symbols-outlined"> menu </span>

      </div>

    </section>

  </nav>



  <main class="hero-section">

    <div class="text-section">

      <h3>Say Hi To</h3>

      <h1>One Card</h1>

      <h4>Co-branded Card Issuers :</h4>

      <div class="sponsor-images">

        <img

src="https://www.getonecard.app/images/legal/Banking_partners_24thJan_dark
___.png"

          alt="sponsor1"

        />
```

```html
      </div>

      <p>

        India's best metal credit card. Built with full-stack tech.
Backed by

        the principles of simplicity, transparency, and giving back
control to

        the user.

      </p>

    </div>

    <video

      loop

      autoplay

      controls

      src="https://www.getonecard.app/images/say_hi_2x_d3_.mp4"

    ></video>

  </main>


  <section class="info-section">

    <h1>No Hidden Fees Ever</h1>

    <p>No Joining Fees.</p>

    <p>No Annual Fees.</p>

    <p>No Rewards Redemption Fees.</p>

  </section>

</body>
```

```
</html>
```

Q.7 You are tasked with building a webpage that displays an image gallery using a grid layout. The challenge is to ensure the gallery is visually appealing and functional on both large and small screens. On large screens, the gallery should display multiple images per row, while on small screens, it should collapse into a single column for optimal viewing. Refer to the attached images for visual reference. Implement this using CSS Grid and media queries for responsiveness.

Ans:-

```html
<!DOCTYPE html>

<html lang="en">

  <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" />

    <title>Responsive Grid</title>

    <style>

      h1 {

        text-align: center;

        font-family: "Trebuchet MS", "Lucida Sans Unicode", "Lucida Grande",
```

```css
      "Lucida Sans", Arial, sans-serif;

  text-decoration: underline;

}

.grid-container {

  max-width: 1200px;

  width: 100%;

  margin: auto;

  display: grid;

  grid-template-columns: repeat(3, 1fr);

  grid-gap: 10px;

  padding: 10px;

}


.grid-item {

  padding: 2px;

  height: 250px;

  text-align: center;

  border-radius: 20px;

}


.grid-item > img {

  width: 100%;

  height: 100%;
```

```html
      border-radius: 20px;

      border: 3px solid black;

    }


    @media (max-width: 768px) {

      .grid-container {

        grid-template-columns: 1fr;

      }

    }

  </style>

</head>

<body>

  <h1>Random Images</h1>

  <div class="grid-container">

    <div class="grid-item">

      <img

src="https://images.pexels.com/photos/276267/pexels-photo-276267.jpeg?auto
=compress&cs=tinysrgb&w=800"

        alt="Image-01"

      />

    </div>

    <div class="grid-item">

      <img
```

```
src="https://images.pexels.com/photos/34299/herbs-flavoring-seasoning-cook
ing.jpg?auto=compress&cs=tinysrgb&w=800"

        alt="Image-01"

      />

    </div>

    <div class="grid-item">

      <img

src="https://images.pexels.com/photos/4033148/pexels-photo-4033148.jpeg?au
to=compress&cs=tinysrgb&w=800"

        alt="Image-01"

      />

    </div>

    <div class="grid-item">

      <img

src="https://images.pexels.com/photos/7256897/pexels-photo-7256897.jpeg?au
to=compress&cs=tinysrgb&w=800"

        alt="Image-01"

      />

    </div>

    <div class="grid-item">

      <img

src="https://images.pexels.com/photos/7256897/pexels-photo-7256897.jpeg?au
to=compress&cs=tinysrgb&w=800"
```

```
        alt="Image-01"

      />

    </div>

    <div class="grid-item">

      <img

src="https://images.pexels.com/photos/4614204/pexels-photo-4614204.jpeg?au
to=compress&cs=tinysrgb&w=800"

        alt="Image-01"

      />

    </div>

  </div>

 </body>

</html>
```

Q.8 In this coding challenge, your task is to create an information section for the previously built OneCard webpage clone, focusing on the different modes like dark and light modes. The webpage should look different depending on the screen size: dark mode for larger screens and light mode for smaller devices. The reference images are attached below.

Ans:-

```
<!DOCTYPE html>

<html lang="en">
```

```html
<head>

    <meta name="viewport" content="width=device-width,
initial-scale=1.0" />

    <title>Random Quote Generator</title>


    <style>

      body {

        padding: 0;

        margin: 0;

        min-height: 100vh;

        display: flex;

        align-items: flex-end;

        font-family: "Trebuchet MS", "Lucida Sans Unicode", "Lucida
Grande",

          "Lucida Sans", Arial, sans-serif;

      }

      footer {

        background-color: #121315;

        color: #a7a7a7;

        font-size: 16px;
```

```css
    padding: 50px 0px;

}

footer * {

  box-sizing: border-box;

  border: none;

  outline: none;

}

.row {

  padding: 1em 1em;

}

.row.primary {

  display: grid;

  grid-template-columns: 2fr 1fr 1fr 2fr;

  align-items: stretch;

}

.column {

  width: 100%;

  display: flex;

  flex-direction: column;
```

```css
  padding: 0 40px;

  min-height: 55px;

}

h3 {

  width: 100%;

  text-align: left;

  color: white;

  font-size: 1.4em;

  white-space: nowrap;

}

ul {

  list-style: none;

  display: flex;

  flex-direction: column;

  padding: 0;

  margin: 0;

}

li:not(:first-child) {

  margin-top: 30px;
```

```css
}

ul li a {

  color: #a7a7a7;

  text-decoration: none;

}

ul li a:hover {

  color: #2a8ded;

}

.about p {

  text-align: justify;

  line-height: 2;

  margin: 0;

}

input,

button {

  font-size: 14px;

  padding: 18px;

  width: 100%;

  border-radius: 5px;
```

```css
    margin-bottom: 5px;

}

button {

  background-color: #1893f7;

  color: #ffffff;

}



.copyright {

  padding: 10px 20px;

  background-color: #25262e;

}

.footer-menu {

  float: left;

  margin-top: 10px;

}



.footer-menu a {

  color: #cfd2d6;

  padding: 6px;
```

```css
      text-decoration: none;

    }

    .footer-menu a:hover {

      color: #27bcda;

    }

    @media screen and (max-width: 850px) {

      .row.primary {

        grid-template-columns: 1fr;

      }

    }

  </style>

</head>

<body>

  <footer>

    <div class="row primary">

      <div class="column about">

        <h3>One Card</h3>

        <p>
```

```html
        India's best metal credit card. Built with full-stack
tech. Backed

        by the principles of simplicity, transparency, and
giving back

        control to the user.

      </p>

    </div>

    <div class="column links">

      <h3>Navigation</h3>

      <ul>

        <li>

          <a href="#">Home</a>

        </li>

        <li>

          <a href="#">About Us</a>

        </li>

        <li>

          <a href="#">Careers</a>

        </li>

        <li>
```

```html
        <a href="#">Offers</a>

      </li>

    </ul>

  </div>

  <div class="column links">

    <h3>Support</h3>

    <ul>

      <li>

        <a href="#">F.A.Q</a>

      </li>

      <li>

        <a href="#">Cookies Policy</a>

      </li>

      <li>

        <a href="#">Terms Of Service</a>

      </li>

      <li>

        <a href="#">Support</a>

      </li>
```

```
            </ul>

        </div>

        <div class="column subscribe">

            <h3>Newsletter</h3>

            <div>

                <input type="email" placeholder="Your email id here" />

                <button>Subscribe</button>

            </div>

        </div>

    </div>

    </footer>

  </body>

</html>
```

Q.9 You have reached the final task of learning responsive web design, which involves designing a responsive footer. Your goal is to build a simple webpage footer that matches the design shown in the attached image. The footer should adapt to different screen sizes, ensuring optimal visibility and alignment of the content. Refer to the attached image for a visual reference

```html
<!DOCTYPE html>

<html lang="en">

  <head>

    <meta name="viewport" content="width=device-width,
initial-scale=1.0" />

    <title>Random Quote Generator</title>


    <style>

      body {

        padding: 0;

        margin: 0;

        min-height: 100vh;

        display: flex;

        align-items: flex-end;

        font-family: "Trebuchet MS", "Lucida Sans Unicode", "Lucida
Grande",

          "Lucida Sans", Arial, sans-serif;

      }

      footer {

        background-color: #121315;
```

```css
    color: #a7a7a7;

    font-size: 16px;

    padding: 50px 0px;

}

footer * {

    box-sizing: border-box;

    border: none;

    outline: none;

}

.row {

    padding: 1em 1em;

}

.row.primary {

    display: grid;

    grid-template-columns: 2fr 1fr 1fr 2fr;

    align-items: stretch;

}

.column {

    width: 100%;
```

```css
  display: flex;

  flex-direction: column;

  padding: 0 40px;

  min-height: 55px;

}

h3 {

  width: 100%;

  text-align: left;

  color: white;

  font-size: 1.4em;

  white-space: nowrap;

}

ul {

  list-style: none;

  display: flex;

  flex-direction: column;

  padding: 0;

  margin: 0;

}
```

```css
li:not(:first-child) {

  margin-top: 30px;

}

ul li a {

  color: #a7a7a7;

  text-decoration: none;

}

ul li a:hover {

  color: #2a8ded;

}

.about p {

  text-align: justify;

  line-height: 2;

  margin: 0;

}

input,

button {

  font-size: 14px;

  padding: 18px;
```

```css
    width: 100%;

    border-radius: 5px;

    margin-bottom: 5px;

}

button {

    background-color: #1893f7;

    color: #ffffff;

}


.copyright {

    padding: 10px 20px;

    background-color: #25262e;

}

.footer-menu {

    float: left;

    margin-top: 10px;

}


.footer-menu a {
```

```css
      color: #cfd2d6;

      padding: 6px;


      text-decoration: none;

    }

    .footer-menu a:hover {

      color: #27bcda;

    }

    @media screen and (max-width: 850px) {

      .row.primary {

        grid-template-columns: 1fr;

      }

    }

  </style>

</head>

<body>

  <footer>

    <div class="row primary">

      <div class="column about">
```

```html
        <h3>One Card</h3>

        <p>

            India's best metal credit card. Built with full-stack
tech. Backed

            by the principles of simplicity, transparency, and
giving back

            control to the user.

        </p>

    </div>

    <div class="column links">

        <h3>Navigation</h3>

        <ul>

            <li>

                <a href="#">Home</a>

            </li>

            <li>

                <a href="#">About Us</a>

            </li>

            <li>

                <a href="#">Careers</a>
```

```html
        </li>

        <li>

          <a href="#">Offers</a>

        </li>

      </ul>

    </div>

    <div class="column links">

      <h3>Support</h3>

      <ul>

        <li>

          <a href="#">F.A.Q</a>

        </li>

        <li>

          <a href="#">Cookies Policy</a>

        </li>

        <li>

          <a href="#">Terms Of Service</a>

        </li>

        <li>
```

```
                    <a href="#">Support</a>

                  </li>

                </ul>

              </div>

              <div class="column subscribe">

                <h3>Newsletter</h3>

                <div>

                  <input type="email" placeholder="Your email id here" />

                  <button>Subscribe</button>

                </div>

              </div>

            </div>

          </footer>

    </body>

</html>
```

Q.10 You have been given to create a student dashboard page that includes a student details table. The challenge lies in handling the table's display on different screen sizes. On large screens, the table should be fully visible, while on small screens, it should have an internal scroll to ensure proper visibility of information. Refer to the attached images for visual reference.

```
<!DOCTYPE html>
```

```html
<html lang="en">

  <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"
/>

    <title>Table</title>

    <style>

      body {

        background-color: #1f1f1f;

        color: #fff;

        font-family: "Trebuchet MS", "Lucida Sans Unicode", "Lucida
Grande",

          "Lucida Sans", Arial, sans-serif;

      }


      .container {

        max-width: 1200px;

        width: 100%;

        margin: auto;
```

```css
}


.container > h1 {

  color: #cad5e2;

  margin-bottom: 50px;

}



table {

  width: 90%;

  margin: auto;

  border-collapse: collapse;

  border: 1px solid #cad5e2;

}



th,

td {

  padding: 8px;

  text-align: left;

  border-bottom: 1px solid #ddd;
```

```
          }


    @media (max-width: 600px) {

      table {

        overflow-x: auto;

        display: block;

      }



      tr,

      td {

        white-space: nowrap;

        font-size: 18px;

      }

    }

  </style>

</head>

<body>

  <div class="container">

    <h1>Student DashBoard</h1>
```

```html
<table>

  <thead>

    <tr>

      <th>Name</th>

      <th>Email</th>

      <th>Phone</th>

    </tr>

  </thead>

  <tbody>

    <tr>

      <td>Rahul Sharma</td>

      <td>rahul.sharma@example.com</td>

      <td>9876543210</td>

    </tr>

    <tr>

      <td>Priya Patel</td>

      <td>priya.patel@example.com</td>

      <td>8765432109</td>

    </tr>
```

```html
<tr>

  <td>Amit Singh</td>

  <td>amit.singh@example.com</td>

  <td>7654321098</td>

</tr>

<tr>

  <td>Sneha Verma</td>

  <td>sneha.verma@example.com</td>

  <td>6543210987</td>

</tr>

<tr>

  <td>Mohit Agarwal</td>

  <td>mohit.agarwal@example.com</td>

  <td>5432109876</td>

</tr>

<tr>

  <td>Neha Gupta</td>

  <td>neha.gupta@example.com</td>

  <td>4321098765</td>
```

```html
      </tr>

      <tr>

        <td>Rajesh Kumar</td>

        <td>rajesh.kumar@example.com</td>

        <td>3210987654</td>

      </tr>

      <tr>

        <td>Anita Desai</td>

        <td>anita.desai@example.com</td>

        <td>2109876543</td>

      </tr>

      <tr>

        <td>Varun Malhotra</td>

        <td>varun.malhotra@example.com</td>

        <td>1098765432</td>

      </tr>

      <tr>

        <td>Pooja Mehta</td>

        <td>pooja.mehta@example.com</td>
```

```html
            <td>0987654321</td>

          </tr>

        </tbody>

      </table>

    </div>

  </body>

</html>
```