Assignment Questions 3

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

**Ans.:** A media query is a CSS rule that allows you to apply different styles to a page depending on screen size of display. For example, you could use a media query to change the font size on a mobile device so that it is easier to read.

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

**Ans.:** Media queries are defined using the @media rule. The media type specifies the type of device that the media query is targeting. The media features specify the capabilities of the device that the media query is targeting.

💡 **Q.3** Explain the concept of Breakpoints in Responsive Web Design and How They are used in Media Queries.

**Ans.:** Breakpoints are a key concept in responsive web design. They are the points at which the layout of a web page changes depending on the size of the screen. Breakpoints are typically defined in media queries, which are CSS rules that allow you to apply different styles to a page depending on the capabilities of the device it is being displayed on.

For example, a breakpoint at 768px. This means that the layout of your web page will change when the width of the viewport reaches 768px. At this point, you might want to collapse the sidebar or make the text larger.  
 A media query is composed of an optional media type and any number of media feature expressions, which may optionally be combined in various ways using logical operators. Media queries are case-insensitive.

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

**Ans.:** Media queries can be used for print media to:

1. Change the layout of the page. For example, you might want to change the margins or gutters on a printed page to make it easier to read.
2. Add or remove content. For example, you might want to add a table of contents or remove a sidebar on a printed page.
3. Change the font size or color. For example, you might want to make the font larger or change the color of the text on a printed page.
4. Add headers and footers. Headers and footers are often added to printed pages to provide information about the document, such as the title, author, or date.
5. Change the orientation of the page. You can change the orientation of the page from portrait to landscape, or vice versa.

Media queries for print media are typically defined in a separate CSS file called print.css. This file is only loaded when the page is being printed, so it does not affect the way the page looks on a screen.

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

**Ans.:** The orientation media feature is used to test the orientation of the viewport (or the page box, for paged media). It has two possible values: portrait and landscape.

Portrait: The height of the viewport is greater than or equal to the width.

Landscape: The width of the viewport is greater than or equal to the height.

The orientation media feature can be used to apply different styles to a page depending on the orientation of the viewport. For example, you might want to change the layout of a web page to be more vertical in portrait orientation and more horizontal in landscape orientation.

💡 **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 sections.

**Ans.:** Code is in same folder.

💡 **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.:** Code is in same folder.

💡 **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.:** Code is in same folder.

💡 **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.

**Ans.:** Code is in same folder.

💡 **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.

**Ans.:** Code is in same folder.