

WDD 230

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CSS Media Queries

Overview

CSS Media Queries are used to provide alternative CSS declarations for rendering content in different viewports. Web designers use media queries to decide when a design or layout change/transformation is needed based upon the site content. Web developers code breakpoints based upon conditions such as a minimum viewport width to meet the intent of the design.

"Do NOT define breakpoints based on device classes. Defining breakpoints based on specific devices, products, brand names, or operating systems that are in use today can result in a maintenance nightmare. Instead, the content itself should determine how the layout adjusts to its container."

- [How to choose breakpoints](#) - Responsive Web - Google Web Fundamentals

Prepare

CSS media queries are essential to responsive web design. The @media at-rule specifies condition(s) to create a block of CSS rules that are applied if the condition(s) evaluates to true. This is extremely useful as selected elements can be repositioned, resized, hidden, exposed, etc. based upon the user's viewport size. Here is the general syntax is setting up a CSS @media query:

```
@media not|only mediatype and (expressions) {  
  /* CSS rules go here inside the @media query's opening and closing  
}
```

Here is an example CSS media query which could be embedded in a CSS file or be the entire contents of a CSS file if wanted. This example only has one CSS rule.

```
@media screen and (min-width: 640px) {  
  h1 {  
    font-size: 2.5rem;  
    margin: 1rem;  
    color: navy;  
  }  
}
```

```
}  
}
```

Note that curly brackets { } are used to contain a specific media query and are also used to define CSS Rules. Be sure to keep track of your bracket scope (start and end). Using automatic VS Code Format Document features will help you recognize issues with your structure.

Sample code explanation

- 1** The **@media screen and (min-width: 640px) {** is the signature line of the @media query block of CSS rules to be applied if the conditions are met. In this case the conditions are if the media type is a screen and the viewport minimum width is at least 640 pixels wide.
- 2** The **h1 {** is a heading 1 (<h1>) element selector which starts the defined CSS rule.
- 3** - **5** The **@font-size: 2.5rem; margin: 1rem; color: navy;** are declarations to be applied to any <h1> elements if the @media query conditions are met.
- 6** The first **}** closes the CSS rule for <h1> code elements.
- 7** The last **}** closes the media query.

 [Media Query Demonstration](#)

Design Considerations: The Viewport

 [Designing for A Viewport](#)

(13:30 minutes - Transcript - [Designing for a Viewport Transcript](#))

Activity Instructions

Step 1: File and Folder Setup

1. Add a new HTML file named "media-query.html" in the lesson01 folder.
2. Add two CSS files to the lesson01 styles folder named "media-query.css" and "media-query-large.css".

Step 2: HTML

1. In your media-query.html file, create a valid HTML page with standard head content including

- ☒ Meta Charset Attribute
- ☒ Meta Viewport Element
- ☒ Title Element
- ☒ Meta Description Element
- ☒ Meta Author Element
- ☒ Link to a Google Font named "Roboto".
- ☒ Link references to your CSS files. Link the media-query.css file first.

▼ Example

```
<head>
  <meta charset="utf-8">
  <meta name="viewport" content="width=device-width, in:
<title>WDD 230 - Media Query Example</title>
  <meta name="description" content="Media query learning
  <meta name="author" content="[Put your full name here]
  <link rel="preconnect" href="https://fonts.googleapis
  <link rel="preconnect" href="https://fonts.gstatic.co
  <link href="https://fonts.googleapis.com/css2?family=I
  <link rel="stylesheet" href="styles/media-query.css">
  <link rel="stylesheet" href="styles/media-query-large
</head>
```

2. In the body of the HTML document, add a header with an h1, a main element with two section elements, and a footer element.

1. The h1 element should contain the words "Media Query Example".
2. Each section h2 heading contains a scripture with book, chapter, and verse.
3. The section paragraph contains a copy of the actual scripture referenced in the heading.
4. The footer should contain your name.

▼ Example

```
<header>
  <h1>Media Query Example</h1>
</header>
<main>
```

```

<section>
  <h2>2 Nephi 32:9</h2>
  <p>But behold, I say unto you that ye must pray alwa
</section>
<section>
  <h2>Helaman 12:24</h2>
  <p>And may God grant, in his great fulness, that mei
</section>
</main>
<footer>
  [Your Full Name Here]
</footer>

```

Step 3: CSS

1. Style the document as shown in the example screenshots given below.

1. In the media-query.css,

1. do not include a media query,
2. use the Google Font - Roboto in the body rule,
3. the header, main, and footer each
 1. have a maximum width of 640 pixels
 2. are centered on the page using **margin: 1rem auto**
 3. include a faint border and appropriate padding
 4. have a blueish background color of your choice
4. set the main element to be a CSS grid with a grid template of only one column, and a equal gap of 1rem, and

If you had a question to pose to the class in MS Teams or to your group, use specific language like: "*I have a question about the media-query assignment part 5.1.4. I do not know how to set the main element grid to only one column with an even gap of 1rem.*"

5. set the section elements to also have padding and a white background.

▼ Example

```

body {
  font-family: 'Roboto', sans-serif;
}

header, main, footer {

```

```
max-width: 640px;
margin: 1rem auto;
border: 1px solid #bbb;
padding: 1rem;
background-color: #e6f2ff;
}

main {
  display: grid;
  grid-template-columns: 1fr;
  grid-gap: 1rem;
}

section {
  padding: 1rem;
  background-color: #fff;
}
```

2. In the media-query-large.css,

1. write a containing media query to be applied at a viewport width of 500px or greater.

```
@media screen and (min-width: 500px)
```

2. change the header to a black background with white text, and
3. change the main element to display two columns of equal size.

▼ Hint

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

Example Screenshots

Media Query Example

2 Nephi 32:9

But behold, I say unto you that ye must pray always, and not faint; that ye must not perform any thing unto the Lord save in the first place ye shall pray unto the Father in the name of Christ, that he will consecrate thy performance unto thee, that thy performance may be for the welfare of thy soul.

Helaman 12:24

24 And may God grant, in his great fulness, that men might be brought unto repentance and good works, that they might be restored unto grace for grace, according to their works.

Rubia M. Francesco

Figure 1: Mobile View Screenshot

Media Query Example

2 Nephi 32:9

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Figure 2: Wider View Screenshot

Testing

- Always test your work and validate your code.

Submission

1. Commit and push (upload) your work to your wdd230 GitHub Pages enabled repository.
2. Your home portal page build assignment this week will ask you to link to each learning activity.

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