

Assignment 4

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Part 1. Media Queries

Task 0. Responsive Typography

```
part1 > task0.html > html > body > a
1 <!DOCTYPE html>
2 <html lang="en">
3
4 <head>
5   <meta charset="UTF-8">
6   <meta name="viewport" content="width=device-width, initial-scale=1">
7   <title>Part 1, task 0</title>
8
9   <link rel="stylesheet" href="task0.css">
10  <style>
11    * {
12      box-sizing: border-box;
13    }
14
15    body {
16      margin: 0;
17      font-family: system-ui, -apple-system, Segoe UI, Roboto, Arial, sans-serif;
18    }
19  </style>
20 </head>
21
22 <body>
23
24   <main>
25     <h1>Responsive Typography Demo</h1>
26     <h2>Student: Karina Tulegenova - Group: SE-2419</h2>
27     <p>
28       Short text in paragraph 1
29     </p>
30     <p>
31       Short text in paragraph 2
32     </p>
33   </main>
34   <a href=" ../index.html">← Back to Main Page</a>
35 </body>
36
37 </html>
```

Task 1. Responsive Layout with Media Queries

```
1 <!DOCTYPE html>
2 <html lang="en">
3
4 <head>
5   <meta charset="UTF-8">
6   <meta name="viewport" content="width=device-width, initial-scale=1">
7   <title>Part 1, task 1</title>
8
9   <link rel="stylesheet" href="task1.css">
10  <style>
11    * {
12      box-sizing: border-box;
13    }
14
15    body {
16      margin: 0;
17      font-family: system-ui, -apple-system, Segoe UI, Roboto, Arial, sans-serif;
18    }
19  </style>
20 </head>
21
22 <body>
23
24   <main>
25     <h1>Responsive Grid with Media Queries</h1>
26     <p>Desktop: Three in a row - Tablet: Two per row - Mobile: Stacked</p>
27     <section class="grid">
28       <div class="box">Box 1</div>
29       <div class="box">Box 2</div>
30       <div class="box">Box 3</div>
31     </section>
32   </main>
33   <a href=" ../index.html">← Back to Main Page</a>
34 </body>
35
36 </html>
```

```
1 body { padding: 1.25rem; }
2 h1 { margin: 0 0 1rem; }
3 .grid {
4   display: grid;
5   gap: 1rem;
6   grid-template-columns: 1fr;
7 }
8 .box {
9   background: #f2f2f2;
10  border: 1px solid #e0e0e0;
11  padding: 1.25rem;
12  border-radius: 12px;
13  min-height: 100px;
14  display: flex;
15  align-items: center;
16  justify-content: center;
17  font-weight: 600;
18 }
19
20 @media (min-width: 768px) {
21   .grid {
22     grid-template-columns: repeat(2, 1fr);
23   }
24 }
25
26 @media (min-width: 992px) {
27   .grid {
28     grid-template-columns: repeat(3, 1fr);
29   }
30 }
```

Part 2. Bootstrap Grid System

Task 2. Bootstrap Responsive Columns

```
1 <!DOCTYPE html>
2 <html lang="en">
3
4 <head>
5   <meta charset="UTF-8">
6   <meta name="viewport" content="width=device-width, initial-scale=1">
7   <title>Part 2, task 2</title>
8   <link href="https://cdn.jsdelivr.net/npm/bootstrap@5.3.3/dist/css/bootstrap.min.css" rel="stylesheet">
9
10  <style>
11    * {
12      box-sizing: border-box;
13    }
14
15    body {
16      margin: 0;
17      font-family: system-ui, -apple-system, Segoe UI, Roboto, Arial, sans-serif;
18    }
19  </style>
20 </head>
21
22 <body>
23
24   <div class="container py-4">
25     <h1 class="mb-1">Bootstrap Grid 12 Columns</h1>
26     <p class="text-muted">Desktop: 3x4 columns · Tablet: 2 in first row, 1 in second · Mobile: stacked</p>
27     <div class="row g-3">
28       <div class="col-12 col-md-6 col-lg-4">
29         <div class="p-4 border rounded-4">Column A</div>
30       </div>
31       <div class="col-12 col-md-6 col-lg-4">
32         <div class="p-4 border rounded-4">Column B</div>
33       </div>
34       <div class="col-12 col-md-6 col-lg-4">
35         <div class="p-4 border rounded-4">Column C</div>
36       </div>
37     </div>
38   </div>
39   <script src="https://cdn.jsdelivr.net/npm/bootstrap@5.3.3/dist/js/bootstrap.bundle.min.js"></script>
40   <a href=" ../index.html">+ Back to Main Page</a>
41 </body>
42
43 </html>
```

part2 > task3.html > html > body > a

```
1 <!DOCTYPE html>
2 <html lang="en">
3
4 <head>
5   <meta charset="UTF-8">
6   <meta name="viewport" content="width=device-width, initial-scale=1">
7   <title>Part 2, task 3</title>
8   <link href="https://cdn.jsdelivr.net/npm/bootstrap@5.3.3/dist/css/bootstrap.min.css" rel="stylesheet">
9
10  <style>
11    * {
12      box-sizing: border-box;
13    }
14
15    body {
16      margin: 0;
17      font-family: system-ui, -apple-system, Segoe UI, Roboto, Arial, sans-serif;
18    }
19  </style>
20 </head>
21
22 <body>
23
24   <nav class="navbar navbar-expand-lg bg-body-tertiary">...
40 </nav>
41   <div class="container py-4">
42     <h1>Responsive Navbar Demo</h1>
43     <p>Resize to see the links collapse into a hamburger menu on small screens.</p>
44   </div>
45   <script src="https://cdn.jsdelivr.net/npm/bootstrap@5.3.3/dist/js/bootstrap.bundle.min.js"></script>
46   <a href=" ../index.html">+ Back to Main Page</a>
47 </body>
48
49 </html>
```

Part 3. Combined Project

Task 4. Responsive Portfolio Page

```
1  :root {
2    --fs-h1: 2rem;
3    --fs-h2: 1.25rem;
4    --fs-p: 1rem;
5  }
6  main { padding-top: 1rem; }
7  .sidebar {
8    position: sticky;
9    top: 1rem;
10 }
11 .profile {
12   border: 1px solid #e9ecef;
13   border-radius: 1rem;
14   padding: 1rem;
15   background: #f8f9fa;
16 }
17 .profile img {
18   width: 100%;
19   height: auto;
20   border-radius: 0.75rem;
21 }
22 .card { border-radius: 1rem; overflow: hidden; }
23 .card img { aspect-ratio: 16/9; object-fit: cover; }
24 h1, h2 { margin: 0 0 0.5rem; }
25 h1 { font-size: var(--fs-h1); }
26 h2 { font-size: var(--fs-h2); }
27 p, li { font-size: var(--fs-p); }
28
29 @media (min-width: 768px) {
30   :root {
31     --fs-h1: 2.4rem;
32     --fs-h2: 1.35rem;
33     --fs-p: 1.02rem;
34   }
35 }
36
37 @media (min-width: 992px) {
38   :root {
39     --fs-h1: 2.8rem;
40     --fs-h2: 1.5rem;
41     --fs-p: 1.06rem;
42   }
43 }
```

```

part3 > task4.html > html > body > main.container > div.row.g-4
1  <!DOCTYPE html>
2  <html lang="en">
3
4  <head>
5      <meta charset="UTF-8">
6      <meta name="viewport" content="width=device-width, initial-scale=1">
7      <title>Part 3, task 4</title>
8      <link href="https://cdn.jsdelivr.net/npm/bootstrap@5.3.3/dist/css/bootstrap.min.css" rel="stylesheet">
9      <link rel="stylesheet" href="task4.css">
10     <style>
11         * {
12             box-sizing: border-box;
13         }
14
15         body {
16             margin: 0;
17             font-family: system-ui, -apple-system, Segoe UI, Roboto, Arial, sans-serif;
18         }
19     </style>
20 </head>
21
22 <body>
23
24 > <nav class="navbar navbar-expand-lg bg-body-tertiary">...
39 </nav>
40
41 <main class="container">
42 > <header class="pt-4 pb-3 border-bottom mb-4">...
45 </header>
46
47 > <div class="row g-4">...
148 </div>
149 <a href=".." index.html" class="btn btn-primary btn-sm">← Back to Main Page</a>
150
151 </main>
152
153 > <footer class="border-top mt-4 py-3">...
157 </footer>
158 <script src="https://cdn.jsdelivr.net/npm/bootstrap@5.3.3/dist/js/bootstrap.bundle.min.js"></script>
159 </body>
160
161 </html>

```

Summary

During this assignment, I learned how to create responsive web pages using both **CSS Media Queries** and the **Bootstrap Grid System**. The project was completed in several steps, each focusing on different aspects of responsive design.

In the Media Queries part, I created a simple page with headings and paragraphs and made the typography responsive by adjusting font sizes for mobile, tablet, and desktop views. I also built a layout with three boxes that stack differently depending on screen size: side by side on desktop, two in a row on tablet, and vertically on mobile — all using only CSS.

In the Bootstrap section, I used the 12-column grid system to build a flexible layout that adjusts well across devices. I also implemented a responsive navigation bar with a logo on the left and links on the right that collapse into a hamburger menu on smaller screens.

In the final combined project, I developed a portfolio page using both Media Queries and Bootstrap. The page includes a responsive header with a navbar, a main section with portfolio cards on the left and a sidebar with personal information on the right, and a full-width footer. I applied custom media queries to fine-tune font sizes, spacing, and visibility of elements for different screen sizes.