# Department of Computing

**CS-344: Web Engineering**

**Class:** BESE-11AB

# Lab 05: Advanced CSS

**Date: 13.10.22**

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**BESE 11-A**

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# Lab 05: Advanced CSS

### Introduction:

Students have learned advanced concepts of CSS3, media queries, and responsive web design. In this lab, student will practically design a responsive web page using the concepts learned in the lectures.

### Lab Objectives:

The objective of this lab is to help students in designing a responsive web page using divisions, CSS3, and media queries. Students will apply different CSS styles and responsive web designing concepts they have learned in the lectures to design the layout of a web page.

### Tools:

Dreamweaver, notepad, browser.

### Helping Material:

Lecture slides.

W3Schools: <https://www.w3schools.com/html/html_responsive.asp>

<https://www.w3schools.com/Css/css_rwd_intro.asp>

Plenty of DIV examples: <http://www.mobilefish.com/tutorials/css/css_quickguide_div_examples_containers.html>

### Lab Task

### Task 1

In the previous labs, you have designed a website which is similar to BBC’s website using tables and divisions. Designing the layout of a website using tables and divisions alone is non-trivial due to limited flexibility, layout distortions, and an inability to response against the change in screen size (e.g. browser’s window resized). Professional websites like BBC are designed using HTML5 and CSS3. The responsiveness of the BBC website can be observed by resizing browser’s window. When carefully observing this layout, one can easily see that there are three different layouts which are adapted whenever the screen size is changed. The three layouts are: a) smart phone layout, b) tablet layout, and c) desktop layout.

**Lab Task:**

Design a responsive web page which has a layout similar to the BBC’s website. Your layout must be based on DIVs and CSS3. There must be three different layouts for the smart phone, tablet, and desktop. The layouts must be adapted automatically upon a relevant change in the screen size. An RWD example is already uploaded on LMS. You should use it as an example and extend it to design a responsive web page which is similar to BBC’s web site.

**Hints**

1. Feel free to browse BBC’s website and look into its page source to see how the layout is designed.
2. You can change the color scheme as per your choice.
3. BBC’s website has a menu (More) and a search bar. You can skip both in your layout.
4. You are encouraged to use most of the HTML tags and CSS styles you have learned so far or even new tags, which you can learn from W3Schools.
5. Make good use of HTML colors, fonts, font-family, font-sizes and other styles for the ***look and feel*** of the web page.
6. Make sure to test your website with different resolutions by changing the resolution of your screen.

**Important:** Upload your html and CSS files along with the solution.

|  |
| --- |
| Solution |
| Screenshot of web page  Laptop View:    Table View:    Mobile View:    HTML Code  <!DOCTYPE html>  <html><filesystem:chrome-extension://fdpohaocaechififmbbbbbknoalclacl/persistent/screencapture-file-D-OneDrive-National-University-of-Sciences-Technology-Nust-seecs-Semester-5-Web-Engineering-Labs-Lab5-Tanzeel-Ur-Rehman-345510-LAB-5-Tanzeel-Ur-Rehman-345510-BESE11-A-Lab-5-html-2022-10-16-22_12_34.png>    <head>      <meta charset="utf-8" />      <meta http-equiv="X-UA-Compatible" content="IE=edge" />      <title>BBC-Homepage</title>      <meta name="description" content="" />      <meta name="viewport" content="width=device-width, initial-scale=1" />      <link        rel="stylesheet"        href="https://cdnjs.cloudflare.com/ajax/libs/font-awesome/6.2.0/css/all.min.css"        integrity="sha512-xh6O/CkQoPOWDdYTDqeRdPCVd1SpvCA9XXcUnZS2FmJNp1coAFzvtCN9BmamE+4aHK8yyUHUSCcJHgXloTyT2A=="        crossorigin="anonymous"        referrerpolicy="no-referrer"      />      <link rel="stylesheet" href="./lab5.css" type="text/css" />    </head>    <body>      <!-- Navbar -->      <div class="navbar">        <div class="logo">          <div class="logoimg">            <img src="./images/logo.png" alt="logo" />          </div>          <div class="signin">            <svg              style="fill: white"              width="35px"              height="auto"              xmlns="http://www.w3.org/2000/svg"              viewBox="0 0 24 24"            >              <g data-name="Layer 2">                <path                  d="M12 11a4 4 0 1 0-4-4 4 4 0 0 0 4 4zm6 10a1 1 0 0 0 1-1 7 7 0 0 0-14 0 1 1 0 0 0 1 1z"                  data-name="person"                />              </g>            </svg>            <h4>Sign in</h4>          </div>        </div>        <div class="heading">          <h4>Home</h4>          <h4>News</h4>          <h4>Sport</h4>          <h4>Reel</h4>          <h4>Worklife</h4>          <h4>Travel</h4>          <h4>Future</h4>          <h4>Culture</h4>        </div>        <i class="fa-sharp fa-solid fa-ellipsis"></i>        <span>          <svg xmlns="http://www.w3.org/2000/svg" viewBox="0 0 24 24">            <g data-name="Layer 2">              <path                d="m20.71 19.29-3.4-3.39A7.92 7.92 0 0 0 19 11a8 8 0 1 0-8 8 7.92 7.92 0 0 0 4.9-1.69l3.39 3.4a1 1 0 0 0 1.42 0 1 1 0 0 0 0-1.42zM5 11a6 6 0 1 1 6 6 6 6 0 0 1-6-6z"                data-name="search"              />            </g>          </svg>          <p>&nbsp; Search BBC</p>        </span>      </div>      <!-- Welcome and Date -->      <div class="welcome">        <h2>Welcome to BBC.com</h2>        <h2 class="date">Thursday,29 September</h2>      </div>      <!-- Five Grid -->      <div class="fivegrid">        <div class="largeimg">          <img            src="https://ichef.bbci.co.uk/news/976/cpsprodpb/F121/production/\_126892716\_kremre.jpg.webp"            alt=""          />          <div>            <h3>Russia to formally annex four more areas of Ukraine</h3>            <p>              Russia is to press ahead with annexation days after conducting              unrecognised referendums.            </p>            <p>              &nbsp; &nbsp;              <span style="color: red"><b>|&nbsp; </b></span>EUROPE            </p>          </div>        </div>        <div class="fourgrid">          <div class="top">            <img              src="https://ichef.bbci.co.uk/news/976/cpsprodpb/5487/production/\_126893612\_7d66af1c96925a4c1088b19e928fc7cf5af6ef49.jpg.webp"              alt=""            />            <div>              <h4>Finland closes border to Russian tourists</h4>              <p>                &nbsp; &nbsp;                <span style="color: #47a1d8"><b>|&nbsp; </b></span>EUROPE              </p>            </div>          </div>          <div class="top">            <img              src="https://ichef.bbci.co.uk/news/976/cpsprodpb/ACB1/production/\_126890244\_coolio\_getty.jpg.webp"              alt=""            />            <div>              <h4>Pfeiffer and Snoop lead trivutes to rapper Coolio</h4>              <p>                &nbsp; &nbsp;                <span style="color: #47a1d8"><b>|&nbsp; </b></span>ENTERTAINMENT &                ARTS              </p>            </div>          </div>          <div>            <img              src="https://ychef.files.bbci.co.uk/1600x900/p0cyt548.webp"              alt=""            />            <div>              <h4>Why a 1922 horror film still terrifies</h4>              <p>                &nbsp; &nbsp;                <span style="color: #47a1d8"><b>|&nbsp; </b></span>CULTURE              </p>            </div>          </div>          <div>            <img              src="https://ychef.files.bbci.co.uk/1600x900/p0d2zz7t.webp"              alt=""            />            <div>              <h4>The dark side of hidden overwork</h4>              <p>                &nbsp; &nbsp;                <span style="color: #47a1d8"><b>|&nbsp; </b></span>WORKLIFE              </p>            </div>          </div>        </div>        <div style="clear: both"></div>      </div>      <!-- News -->    <div class="section-heading">      <span style="color: #ff0000">|</span>      <h1>      </h1>News</h1>    </div>    <div class="news">      <div>        <img          src="https://ichef.bbc.co.uk/wwhp/624/cpsprodpb/7B97/production/\_126893613\_7d66af1c96925a4c1088b19e928fc7cf5af6ef49.jpg"          alt="ship" />        <div>          <h3>Finland closes border to Russian tourists</h3>          <p>            it now means all Russia's European Union neighbours have shut their            borders to its tourists.          </p>          <span style="color: #ff0000"><b>|&nbsp; </b></span>EUROPE        </div>      </div>      <div>        <img src="https://ichef.bbc.co.uk/wwhp/624/cpsprodpb/2C37/production/\_126891311\_leakreuters.jpg" alt="Smoke" />        <div>          <h3>US Army doctor and wife charged with Russia spying</h3>          <p>            The army major doctor and her wife, a civillain doctor, are charged            over plans to leak health information.          </p>          <span style="color: #ff0000"><b>|&nbsp; </b></span>US & CANADA        </div>      </div>      <div>        <img          src="https://ichef.bbc.co.uk/wwhp/624/cpsprodpb/0DB5/production/\_126890530\_28.kidsatfencelineinfrontofgasflaringfromnahranomarextrawide-chusseinfaleh\_bbc-1.jpg"          alt="flame" />        <div>          <h3>PM to meet fiscal watchdog after market tumoil</h3>          <p>            Liz Truss and the Chancellor Kwasi Kwarteng will meet the            independent forecaster the OBR on Friday.          </p>          <span style="color: #ff0000"><b>|&nbsp; </b></span>UK POLITICS        </div>      </div>    </div>      <!-- Sports -->    <div class="section-heading">      <span style="color: yellow">|</span>      <h1>      </h1>Sport</h1>    </div>    <div class="news">      <div>        <img src="https://ichef.bbc.co.uk/wwhp/624/cpsprodpb/86D7/production/\_126891543\_boxingsplit.png" alt="ship" />        <div>          <h3>Fury again urges Joshua to sign fight contract</h3>          <p>            Tyson Fury urges fellow British heavyweight Anthony Joshua to sign a            contract for a world-title fight in December.          </p>          <span style="color: yellow"><b>|&nbsp; </b></span>BOXING        </div>      </div>      <div>        <img src="https://ichef.bbc.co.uk/wwhp/624/cpsprodpb/43ED/production/\_126898371\_bethmead\_getty.jpg" alt="Smoke" />        <div>          <h3>Concussion subs not allowed in Uefa competitions</h3>          <p>            Udfa confirms it does not allow concussion substitutions following            confusion over a head injury suffered by Beth Mead in Arsenal            women's game against Ajax.          </p>          <span style="color: yellow"><b>|&nbsp; </b></span>FOOTBALL        </div>      </div>      <div>        <img src="https://ichef.bbc.co.uk/wwhp/624/cpsprodpb/1555D/production/\_126898378\_gettyimages-1423195630.jpg"          alt="flame" />        <div>          <h3>PGA Tour launches LIV lawsuit counterclaim</h3>          <p>            The PGA Tour launches a counterclaim lawsuit against the            Saudi-backed LIV Golf series, saying it enticed players to breach            contracts and help's sportswash' the nation's human rights record.          </p>          <span style="color: yellow"><b>|&nbsp; </b></span>        </div>      </div>    </div>         <!-- Asia News  -->   <div class="section-heading">      <span style="color: blue">|</span>      <h1>      </h1>Asia News</h1>    </div>      <div class="asianews">      <div>          <img              src="https://ichef.bbc.co.uk/wwhp/304/cpsprodpb/A077/production/\_126897014\_mediaitem126897013.jpg"              alt="ship"            />      <div>            <h3>Flurry of N Korea missiles for Kamala Harris visit</h3>            <p>              The US vice-president's visit to South Korea saw aseries of banned              missile launches by the North.            </p>            <span style="color: blue"><b>|&nbsp; </b></span>Asia        </div>      </div>      <div>            <img              src="https://ichef.bbc.co.uk/wwhp/304/cpsprodpb/1843C/production/\_126888399\_seanturnellandaungsansuukyi.png"              alt="Smoke"            />      <div>            <h3>Australian adviser to Suu Kyi jailed in Myanmar</h3>            <p>              Sean Turnell was sentenced with the country's ousted leader to three              years for breaching state secrets.            </p>            <span style="color: blue"><b>|&nbsp; </b></span>Asia        </div>      </div>      <div>          <img              src="https://ichef.bbc.co.uk/wwhp/304/cpsprodpb/409B/production/\_126893561\_mobile\_phone\_2\_getty.jpg"              alt="flame"            />        <div>            <h3>How a massive data breach has exposed Australia</h3>            <p>              Anger rises after 40% of Australians had details stolen in possibly              the nation's worst-ever breach.            </p>            <span style="color: blue"><b>|&nbsp; </b></span>AUSTRALIA        </div>      </div>      <div>          <img              src="https://ichef.bbc.co.uk/wwhp/304/cpsprodpb/A918/production/\_126888234\_neveragainepa.jpg"              alt="flame"            />        <div>            <h3>Fighting to remember a decade of torture in the Philippines</h3>            <p>              Many young Filipinos know little about a decade of martial law that              saw thousands arrested and killed            </p>            <span style="color: blue"><b>|&nbsp; </b></span>ASIA        </div>      </div>    </div>      <!-- Footer -->      <div class="footbck">        <div class="footer">          <h2>Explore the BBC</h2>          <div>            <div>              <h5>Home</h5>              <h5>Future</h5>            </div>            <div>              <h5>News</h5>              <h5>Culture</h5>            </div>            <div>              <h5>Sport</h5>              <h5>TV</h5>            </div>            <div>              <h5>Reel</h5>              <h5>Weather</h5>            </div>            <div>              <h5>Worklife</h5>              <h5>Sounds</h5>            </div>            <div>              <div>                <h5>Travel</h5>              </div>            </div>          </div>          <p>            Terms of Use &nbsp;&nbsp; About the BBC &nbsp;&nbsp; Privacy Policy            &nbsp;&nbsp; Cookies &nbsp;&nbsp; Accessibility Help &nbsp;&nbsp;            Parental Guidance &nbsp;&nbsp; Contact the BBC &nbsp;&nbsp; BBC emails            for you &nbsp;&nbsp; Advertise with us &nbsp;&nbsp; AdChoices / Do Not            Sell My Info          </p>          <p>            Copyright © 2022 BBC. The BBC is not responsible for the content of            external sites. Read about our approach to external linking.          </p>        </div>      </div>    </body>  </html>  CSS Code      \*{           box-sizing: border-box;      }      body {          width: 100vw;          margin: 0%;          padding: 0%;          overflow-x: hidden;          font-family: Arial, Helvetica, sans-serif;      }      img {          width: 100%;          object-fit: fill;      }  /\* navbar \*/      .navbar {          background-color: black;          color: white;          display: flex;          justify-content: space-around;          align-items: center;          height: 50px;      }  /\* dots \*/      .navbar i {          color: white;          font-size: 3vw;          margin:0 30px;          display: none;      }      .navbar .dots{          display: none;      }      .navbar h4{          font-size: .7em;      }      .navbar p{          font-size: .6em;      }      .navbar div {          display: flex;          justify-content: center;          align-items: center;          margin: 0;      }      .navbar .logo {          display: flex;          width: 20%;          justify-self: right;          margin-left:2%;      }      .navbar .logo .logoimg{          width: 50%;          margin: 0;      }      .navbar .logo .signin {          display: flex;          }      .navbar .logo .signin svg{          width: 3vw;      }      .navbar .heading {          display: flex;          justify-content: space-between;          width: 56%;      }      .navbar .heading h5{          font-size: 1vw;      }      .navbar span {          width: 18%;          display: flex;          align-items: center;          justify-content: flex-start;          background-color: #3a3c3e;          margin: 8px 2%;      }      .navbar span svg{          fill: white;          width: 10%;      }      .navbar div h4:hover,      .navbar div i:hover,      .navbar span:hover,      .navbar .signin:hover,      .navbar img:hover {          opacity: 0.7;          cursor: pointer;      }      /\*Navbar END  \*/      /\* Welcome and Date \*/      .welcome {          max-width: 90%;          margin: auto;          display: flex;          justify-content: space-between;      }      .welcome h2{          font-size: 2vw;      }      .welcome .date {          color: #9b8c8c;      }      /\* Welcome Date END  \*/      /\* Five Grid \*/      .fivegrid h3{          font-size: 0.8em;      }      .fivegrid h4{          font-size: 0.7em;      }      .fivegrid p{          font-size: .6em;      }      .fivegrid {          width: 90%;          margin: auto;          color: white;          display: flex;          justify-content: space-between;          flex-wrap: wrap;      }      .fivegrid .largeimg {          width: 49%;          margin: 0.5%;      }   .fivegrid .largeimg img{      position: relative;   }      .fivegrid .largeimg >div {          position: absolute;          margin-left: 15px;          margin-top: -10%;      }      .fivegrid .fourgrid{          width: 49%;          display: flex;          flex-wrap: wrap;          justify-content: space-between;          align-items: flex-start;          margin: 0.5%;      }      .fourgrid>div {          width: 48%;          margin: 0 0.5%;     }      .fourgrid>div img {          position: relative;      }      .fourgrid>div div{          position: absolute;          margin-top: -6%;          margin-left: 5px;      }      .fourgrid>div div p{          position:relative;          top: -10px;          width: 80%;      }      .fourgrid>div div h4 {          width: 80%;      }        .section-heading {          margin: 30px 6%;          display: flex;          align-items: center;          font-size: 30px;      }      .section-heading span {          font-weight: bolder;          font-size: 40px;          position: relative;          margin-top: -4px;          margin-right: 5px;      }      .news {          display: flex;          justify-content: space-between;          width: 90%;          margin: auto;          overflow-x: auto;          scroll-snap-type: x mandatory;      }      .news>div {          width: 32%;          margin: 0 10px;          scroll-snap-align: start;          min-width: 275px;      }      .asianews {          display: flex;          justify-content: space-between;          width: 90%;          margin: auto;          overflow-x: auto;          scroll-snap-type: x mandatory;          flex-wrap: nowrap;      }      .asianews>div {          width: 24%;          scroll-snap-align: start;          min-width: 270px;          margin: 0 10px;      }        /\* Footer \*/      .footbck {          width: 100%;          background-color: #4C4C4C;      }      .footer {          width: 75%;          display: flex;          margin: auto;          margin-top: 20px;          flex-direction: column;      }      .footer h2{          font-size: 2vw;      }      .footer p{          line-height: 20px;          font-size: 0.8vw;      }      .footer {          margin-top: 50px;          color: white;          line-height: 5px;          font-size: small;          margin-bottom: 10px;      }      .footer>div {          display: flex;          justify-content: space-between;          border-bottom: 0.5px solid #707070;          padding-bottom: 20px;          padding-right: 10%;      }      .footer>div div:not(:first-of-type) {          border-left: 0.5px solid #707070;          padding-left: 3%;      }      .footer hr {          background-color: whitesmoke;          height: 10px;      }      .footer div div h5 {          font-size: 1vw;      }      @media only screen and (max-width: 1000px) {          .navbar{              height: 46px;          }          .navbar span {              display: none;          }          .navbar .logo {              width: 25%;          }          .navbar .logo .signin svg {              width: 4vw;          }          .fivegrid{              flex-direction: column;          }          .fivegrid .largeimg{              width: 100%;          }          .fivegrid .fourgrid{              width: 100%;              margin-top: 3%;          }          .fivegrid .largeimg div {              margin-top: -18%;          }          .fourgrid>div div {              margin-top: -12%;          }      }      @media only screen and (max-width: 600px) {          .navbar {                  height: 36px;                  justify-content: space-between;              }          .navbar .logo {              width: 40%;          }          .navbar .logo .signin svg {              width: 5vw;          }          .footer p {              line-height: 8px;          }          .navbar .heading {              display: none;          }          .navbar i {              display: block;          }          .fivegrid{              width: 98%;          }          .fivegrid .largeimg div {              margin-top: -28%;          }          .fourgrid>div div {              margin-top: -18%;          }      }      @media only screen and (max-width: 375px) {          .fivegrid .largeimg div {                  margin-top: -38%;              }                .fourgrid>div div {                  margin-top: -24%;              }      } |

### Deliverables

Compile a single word document by filling in the solution part and submit this Word file on LMS. You must include your name, ID, and class on first page. The lab grading policy is as follows: The lab is graded between 0 to 10 marks. For some of the labs, students have to present their solutions in a viva session. In case of any problems with submissions on LMS, you should contact your lab engineer Ms. Ayesha Asif by email at [ayesha.asif@seecs.edu.pk](mailto:ayesha.asif@seecs.edu.pk).