

INDIAN INSTITUTE OF INFORMATION TECHNOLOGY, SONEPAT



Application Programming Practical File June, 2020

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Index

S. No	Experiment
1	Creating an HTML web page form
2	Creating Home page using HTML
3	Creating web page using XHTML and CSS and understanding their use
4	Setting up and configuring Apache Tomcat Server
5	Understanding modifications of web.xml
6	Creating websites using php
7	Understanding Javascript 1. Dice game 2. Drum kit
8	Writing and Understanding python using example

Experiment 1 :

Create an HTML web page form.

Outputs:-

The image displays a web registration form with a dark theme. On the left, the main heading 'REGISTRATION FORM' is centered, followed by a subtitle 'Learn programming languages like HTML, CSS, Java Script, PHP etc.' and two buttons: 'Learn Front-End' and 'Learn Back-End'. On the right, a sidebar titled 'REGISTER HERE' contains the registration fields: 'Full name', 'Email', 'Phone number', 'Password', and a dropdown menu for 'Course type*'. Below these fields is a checkbox labeled 'I agree to the Privacy Policy' and a large blue 'Submit' button.

REGISTRATION FORM

Learn programming languages like HTML, CSS, Java Script, PHP etc.

Learn Front-End Learn Back-End

REGISTER HERE

Full name

Email

Phone number

Password

Course type*

☐ I agree to the [Privacy Policy](#)

Submit

Source code:-

1. HTML CODE:

```
<!DOCTYPE html>
<html>
  <head>
    <title>Educational registration form</title>
    <link
      href="https://fonts.googleapis.com/css?family=Roboto:300,400,500,700"
      rel="stylesheet"
    />
    <link rel="stylesheet" href="html form.css" />
  </head>
  <body>
    <div class="main-block">
      <div class="left-part">
        <h1>Registration Form</h1>
        <p>Learn programming languages like HTML, CSS, Java Script, PHP etc.</p>
        <div class="btn-group">
          <a class="btn-item" href="">Learn Front-End</a>
          <a class="btn-item" href="">Learn Back-End</a>
        </div>
      </div>
      <form action="">
        <div class="title">
          <h2>Register here</h2>
        </div>
        <div class="info">
          <input
            class="fname"
            type="text"
            name="name"
            placeholder="Full name"
          />
          <input type="text" name="name" placeholder="Email" />
          <input type="text" name="name" placeholder="Phone number" />
          <input type="password" name="name" placeholder="Password" />
          <select>
            <option value="course-type" selected>Course type*</option>
            <option value="short-courses">Short courses</option>
            <option value="featured-courses">Featured courses</option>
            <option value="undergraduate">Undergraduate</option>
            <option value="diploma">Diploma</option>
            <option value="certificate">Certificate</option>
            <option value="masters-degree">Masters degree</option>
            <option value="postgraduate">Postgraduate</option>
          </select>
        </div>
      </form>
    </div>
  </body>
</html>
```

```
</div>
<div class="checkbox">
  <input type="checkbox" name="checkbox" /><span
    >I agree to the <a href="">Privacy Policy.</a></span
  >
</div>
<button type="submit" href="">Submit</button>
</form>
</div>
</body>
</html>
```

2. CSS CODE:

```
html, body {  
  min-height: 100%;  
}
```

```
body, div, form, input, select, p {  
  padding: 0;  
  margin: 0;  
  outline: none;  
  font-family: Roboto, Arial, sans-serif;  
  font-size: 16px;  
  color: #eee;  
}
```

```
body {  
  background-color: darkslategrey;  
  background-size: cover;  
}
```

```
h1, h2 {  
  text-transform: uppercase;  
  font-weight: 400;  
}
```

```
h2 {  
  margin: 0 0 0 8px;  
}
```

```
.main-block {  
  display: flex;  
  flex-direction: column;  
  justify-content: center;  
  align-items: center;  
  height: 100%;  
  padding: 25px;  
  background: rgba(0, 0, 0, 0.5);  
}
```

```
.left-part, form {  
  padding: 25px;  
}
```

```
.left-part {  
  text-align: center;  
}
```

```
.fa-graduation-cap {  
  font-size: 72px;  
}
```

```
form {
```

```
background: rgba(0, 0, 0, 0.7);  
}
```

```
.title {  
display: flex;  
align-items: center;  
margin-bottom: 20px;  
}
```

```
.info {  
display: flex;  
flex-direction: column;  
}
```

```
input, select {  
padding: 5px;  
margin-bottom: 30px;  
background: transparent;  
border: none;  
border-bottom: 1px solid #eee;  
}
```

```
input::placeholder {  
color: #eee;  
}
```

```
option:focus {  
border: none;  
}
```

```
option {  
background: black;  
border: none;  
}
```

```
.checkbox input {  
margin: 0 10px 0 0;  
vertical-align: middle;  
}
```

```
.checkbox a {  
color: #26a9e0;  
}
```

```
.checkbox a:hover {  
color: #85d6de;  
}
```

```
.btn-item, button {  
padding: 10px 5px;  
margin-top: 20px;  
border-radius: 5px;  
border: none;
```

```
background: #26a9e0;
text-decoration: none;
font-size: 15px;
font-weight: 400;
color: #fff;
}
```

```
.btn-item {
display: inline-block;
margin: 20px 5px 0;
}
```

```
button {
width: 100%;
}
```

```
button:hover, .btn-item:hover {
background: #85d6de;
}
```

```
@media (min-width: 568px) {
html, body {
height: 100%;
}
```

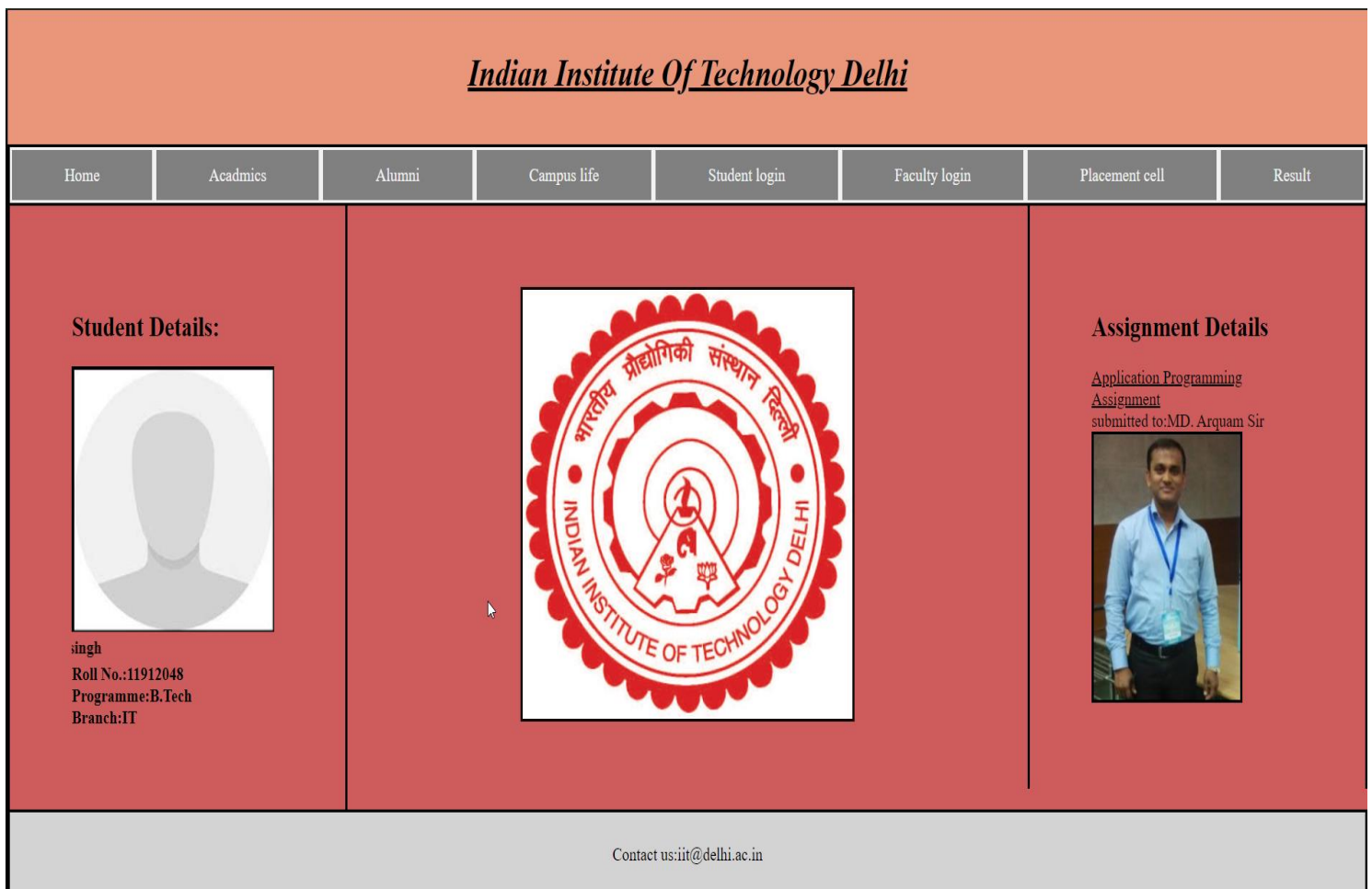
```
.main-block {
flex-direction: row;
height: calc(100% - 50px);
}
```

```
.left-part, form {
flex: 1;
height: auto;
}
}
```


Experiment 2 :

Create a home page using HTML.

Outputs:-



Source Code:

1. HTML CODE:

```
<!DOCTYPE html>
<html lang="en">
<head>
  <title>CSS Website Layout</title>
  <meta charset="utf-8" />
  <meta name="viewport" content="width=device-width, initial-scale=1" />
  <style>
    * {
      box-sizing: border-box;
    }

    body {
      margin:auto;
    }

    .header {
      background-color:darksalmon;
      padding: 20px;
      text-align: center;
      color: crimson
      border:solid;
    }

    .topnav {
      overflow: hidden;
      background-color: gray;
      border:solid;
    }

    .topnav a {
      float:left;
      display: block;
      color: #f2f2f2;
      text-align: center;
      padding: 12px 58.5px;
      text-decoration: none;
      border:solid;
    }

    .topnav a:hover {
      background-color:navajowhite;
      color: black;
    }

    .topnav a:active{
      background-color: blanchedalmond;
      color: cornflowerblue;
      text-decoration: underline;
    }
  </style>
</head>
<body>
```

```

    }

.column {
    float: left;
    padding: 69px;
}

.column.side {
    width: 25%;

    background-color: indianred;
    border-left: solid;
    border-right: solid;
}

.column.middle {
    width: 50%;
    background-size: 69px;
    background-color: indianred;
}

.row:after {
    content: "";
    display: table;
    clear: both;
}

@media screen and (max-width: 1080px) {
    .column.side, .column.middle {
        width: 100%;
    }
}

.footer {
    background-color: lightgrey;
    padding: 10px;
    text-align: center;
    border: solid;
}

    .position{
        display: block;
        margin-left: auto;
        margin-right: auto;
        width: 60%;
        background-color: crimson;
        border: solid #100808;}

    .x{
        border: solid;
        background-color: indianred;
    }

```

```

</style>
</head>
<body class="x">
  <div class="header">
    <h1>
      <strong>
        <em><u>Indian Institute Of Technology Delhi</u></em></strong>
      </h1>
    </div>

  <div class="topnav">
    <a href="#">Home</a>
    <a href="#">Acadmics</a>
    <a href="#">Alumni</a>
    <a href="#">Campus life</a>
    <a href="#">Student login</a>
    <a href="#">Faculty login</a>
    <a href="#">Placement cell</a>
    <a href="#">Result</a>
  </div>
  <div class="bg">
    <div class="row">
      <div class="column side">
        <h2>Student Details:</h2>
         <br />
        <b>
          <marquee>Name:Gurkirat singh</marquee><br />
          Roll No.:11912048<br />
          Programme:B.Tech<br />
          Branch:IT<br />
        </b>
      </div>

      <div class="column middle">
        
      </div>

      <div class="column side">
        <h2>Assignment Details</h2>

        <u>Application Programming Assignment<br /></u>
        submitted to:MD. Arquam Sir<br />
        
      </div>
    </div>
  </div>

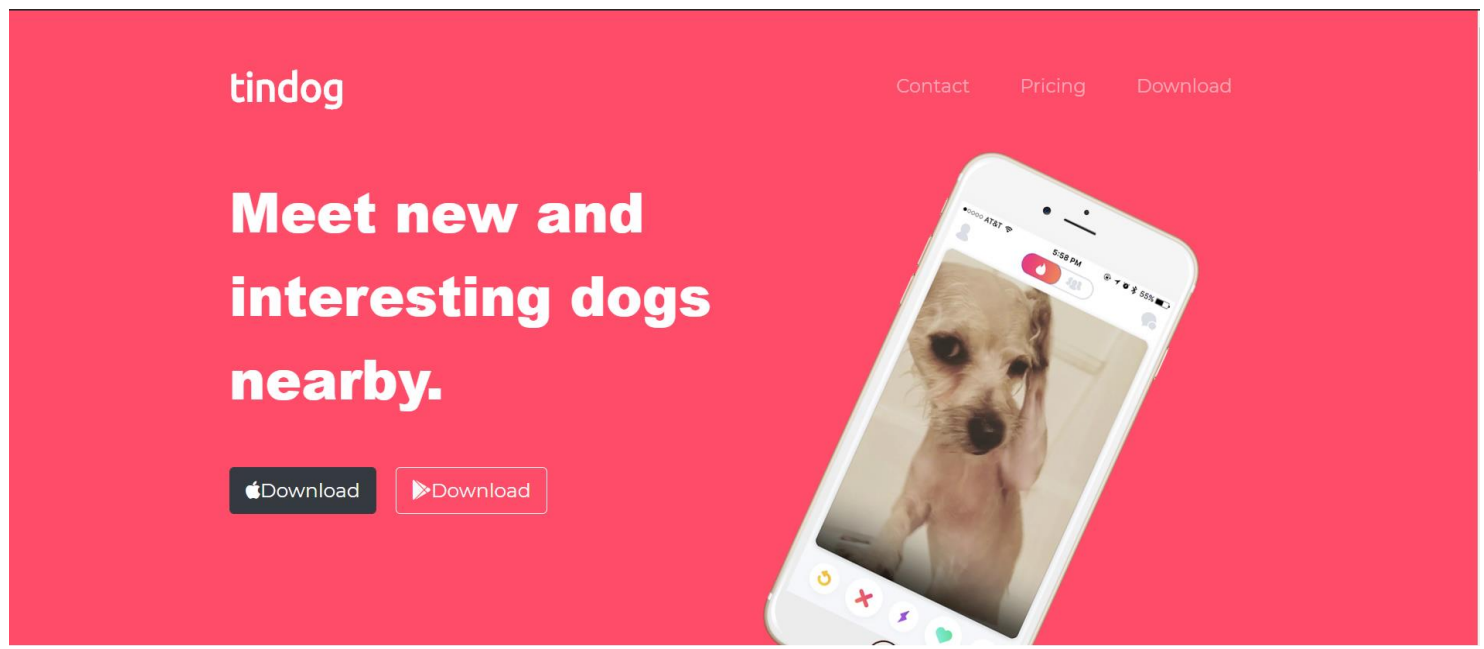
  <div class="footer">
    <p>Contact us:iit@delhi.ac.in</p>
  </div>
</body>
</html>

```

Experiment 3 :

Creating a web page using XHTML and CSS to understand its use.

Outputs:-



Easy to use.

So easy to use, even your dog could do it.



Elite Clientele

We have all the dogs, the greatest dogs.



Guaranteed to work.

Find the love of your dog's life or your money back.

**I no longer have to sniff
other dogs for love. I've
found the hottest Corgi on
TinDog. Woof.**



Pebbles, New York

file:///C:/Users/qur21/Desktop/AP PRACTICALS/creating website using HTML and css/index.html#carouselExampleControls

A Plan for Every Dog's Needs

Simple and affordable price plans for your and your dog.

Chihuahua

Free

5 Matches Per Day

10 Messages Per Day

Unlimited App Usage

Sign Up

Labrador

\$49 / mo

Unlimited Matches

Unlimited Messages

Unlimited App Usage

Sign Up

Mastiff

\$99 / mo

Priority Listing

Unlimited Matches

Unlimited Messages

Unlimited App Usage

Sign Up

Source Code:

1. HTML CODE:

```
<!DOCTYPE html>
<html>
<head>
  <meta charset="utf-8" />
  <title>TinDog</title>
  <link
    rel="stylesheet"
    href="https://stackpath.bootstrapcdn.com/bootstrap/4.5.0/css/bootstrap.min.css"
    integrity="sha384-9alt2nRpC12Uk9gS9baDI411NQApFmC26EwAOH8WgZl5MYXxFc+NcPb1dKGj7Sk"
    crossorigin="anonymous"
  />
  <script
    src="https://kit.fontawesome.com/712e9dec39.js"
    crossorigin="anonymous"
  ></script>
  <link rel="stylesheet" href="css/styles.css" />
  <script
    src="https://code.jquery.com/jquery-3.5.1.slim.min.js"
    integrity="sha384-DfXdz2htPH0lsSSs5nCTpuj/zy4C+OGpamoFVy38MVBnE+IbbVYUew+OrCXaRkfj"
    crossorigin="anonymous"
  ></script>
  <script
    src="https://cdn.jsdelivr.net/npm/popper.js@1.16.0/dist/umd/popper.min.js"
    integrity="sha384-Q6E9RHvblyZFJoft+2mJbHaEWldlvI9IOYy5n3zV9zzTtm13UksdQRVvoxMfooAo"
    crossorigin="anonymous"
  ></script>
  <script
    src="https://stackpath.bootstrapcdn.com/bootstrap/4.5.0/js/bootstrap.min.js"
    integrity="sha384-OgVRvuATP1z7JjHLkuOU7Xw704+h835Lr+6QL9UvYjZE3lpu6Tp75j7Bh/kR0JKI"
    crossorigin="anonymous"
  ></script>
  <link
    href="https://fonts.googleapis.com/css2?family=Montserrat:wght@400;900&family=Ubuntu&display=swap"
    rel="stylesheet"
  />
</head>

<body>
  <section id="title">
    <!-- Nav Bar -->
    <div class="container-fluid">
      <nav class="navbar navbar-expand-lg navbar-dark">
        <a class="navbar-brand" href=""><strong>tindog</strong></a>
        <button
          class="navbar-toggler"
          type="button"
          data-toggle="collapse"
          data-target="#navbarSupportedContent"
```

```
aria-controls="navbarSupportedContent"
aria-expanded="false"
aria-label="Toggle navigation"
>
  <span class="navbar-toggler-icon"></span>
</button>
<div class="collapse navbar-collapse" id="navbarSupportedContent">
  <ul class="navbar-nav ml-auto">
    <li class="nav-item">
      <a class="nav-link" href="#footer">Contact</a>
    </li>
    <li class="nav-item">
      <a class="nav-link" href="#pricing">Pricing</a>
    </li>
    <li class="nav-item">
      <a class="nav-link" href="#cta">Download</a>
    </li>
  </ul>
</div>
</nav>
```

<!-- Title -->

```
<div class="row">
  <div class="col-lg-6 col-md-12 col pt-md-5">
    <h1>Meet new and interesting dogs nearby.</h1>
    <button type="button" class="btn btn-dark btn-lg custom_button">
      <i class="fab fa-apple"></i>Download
    </button>
    <button
      type="button"
      class="btn btn-outline-light btn-lg custom_button"
    >
      <i class="fab fa-google-play"></i>Download
    </button>
  </div>
  <div class="col-lg-6 col-md-12 col pt-md-5">
    
  </div>
</div>
</div>
</section>
```

<!-- Features -->

```
<section id="features">
  <div class="container-fluid">
    <div class="row">
```



```

<div class="col-lg-4 col-md-12">
  <i class="fas fa-check-circle"></i>
  <h3>Easy to use.</h3>
  <p>So easy to use, even your dog could do it.</p>
</div>
<div class="col-lg-4 col-md-12">
  <i class="fas fa-bullseye"></i>
  <h3>Elite Clientele</h3>
  <p>We have all the dogs, the greatest dogs.</p>
</div>
<div class="col-lg-4 col-md-12">
  <i class="fas fa-heart"></i>
  <h3>Guaranteed to work.</h3>
  <p>Find the love of your dog's life or your money back.</p>
</div>
</div>
</div>
</div>
</section>

```

```

<!-- Testimonials -->

```

```

<section id="testimonials">
  <div
    id="carouselExampleControls"
    class="carousel slide"
    data-ride="carousel"
  >
    <div class="carousel-inner">
      <div class="carousel-item active">
        <h2>
          I no longer have to sniff other dogs for love. I've found the
          hottest Corgi on TinDog. Woof.
        </h2>
        
        <em>Pebbles, New York</em>
      </div>
      <div class="carousel-item">
        <h2 class="testimonial-text">
          My dog used to be so lonely, but with TinDog's help, they've found
          the love of their life. I think.
        </h2>
        
        <em>Beverly, Illinois</em>
      </div>
    </div>
  </section>

```

```

</div>
<a
  class="carousel-control-prev"
  href="#carouselExampleControls"
  role="button"
  data-slide="prev"
>
  <span class="carousel-control-prev-icon" aria-hidden="true"></span>
  <span class="sr-only">Previous</span>
</a>
<a
  class="carousel-control-next"
  href="#carouselExampleControls"
  role="button"
  data-slide="next"
>
  <span class="carousel-control-next-icon" aria-hidden="true"></span>
  <span class="sr-only">Next</span>
</a>
</div>
</section>

<!-- Press -->

<section id="press">
  
  
  
  
</section>

<!-- Pricing -->

<section id="pricing">
  <h2>A Plan for Every Dog's Needs</h2>
  <p>Simple and affordable price plans for you and your dog.</p>
  <div class="container-fluid">
    <div class="card-deck">
      <div class="col-lg-4 col-md-6">
        <div class="card">
          <div class="card-header">
            <h3>Chihuahua</h3>
          </div>
          <div class="card-body">
            <h2>Free</h2>
            <p>5 Matches Per Day</p>
            <p>10 Messages Per Day</p>
            <p>Unlimited App Usage</p>
          </div>
        </div>
      </div>
    </div>
  </div>

```



```
<h3 class="custom">Find the True Love of Your Dog's Life Today.</h3>
<button type="button" class="btn btn-lg btn-dark">
  <i class="fab fa-apple"></i>Download
</button>
<button type="button" class="btn btn-lg btn-light">
  <i class="fab fa-google-play"></i>Download
</button>
</section>

<!-- Footer -->

<footer id="footer">
  <i class="fab fa-twitter"></i>
  <i class="fab fa-facebook"></i>
  <i class="fab fa-instagram"></i>
  <i class="fas fa-envelope small"></i>
  <p>© Copyright 2020 TinDog</p>
</footer>
</body>
</html>
```

2. CSS CODE:

```
body {  
  font-family: "Montserrat";  
}  
  
#title {  
  background-color: #ff4c68;  
  color: #fff;  
}  
  
.container-fluid {  
  padding: 2.7% 15% 7% 15%;  
}  
  
h1 {  
  font-family: "Montserrat-Black", sans-serif;  
  font-size: 3.5rem;  
  line-height: 1.5;  
  font-weight: 900;  
  margin-bottom: 3rem;  
}  
  
.navbar-brand {  
  font-family: "Ubuntu";  
  font-size: 2.5rem;  
}  
  
.nav-item {  
  padding: 0px 18px;  
}  
  
.nav-link {  
  font-size: 1.2rem;  
  font-weight: 300;  
}  
  
.navbar {  
  padding: 0px;  
}  
  
.custom_button {  
  margin: 0% 3% 5% 0%;  
}  
  
.rotateMobile {  
  transform: rotate(25deg);  
  width: 50%;  
  z-index: 0;  
  position: absolute;  
  right: 30%;  
}
```

```
.fas {  
  color: #ef8172;  
  text-align: center;  
  font-size: 4.5rem;  
}
```

```
.fas:hover {  
  color: #ff4c68;  
}
```

```
h3 {  
  margin: 1rem auto;  
  font-family: "Montserrat";  
  font-weight: bold;  
  font-size: 1.5rem;  
  color: #000;  
  padding: 0rem;  
}
```

```
#features {  
  color: #8f8f8f;  
  text-align: center;  
  font-family: "Montserrat";  
  line-height: 1.5;  
  background-color: white;  
  padding: 7%;  
  position: relative;  
  z-index: 1;  
}
```

```
#testimonials {  
  padding: 7% 15%;  
  text-align: center;  
  background-color: #ff4c68;  
  color: #fff;  
  font-family: "Montserrat";  
}
```

```
h2 {  
  font-weight: bold;  
  font-size: 3rem;  
  line-height: 1.5;  
}
```

```
.testimonial {  
  width: 25%;  
  border-radius: 100%;  
  margin: 20px;  
}
```

```
#press {
  padding: 3%;
  text-align: center;
  background-color: #ff4c68;
  color: #fff;
  font-family: "Montserrat";
}

.presslogo {
  width: 15%;
  margin: 20px 20px 50px;
}

.carousel-item {
  padding: 4% 15%;
}

#pricing {
  text-align: center;
  font-family: "Montserrat";
  padding: 7% 4% 3% 4%;
  font-weight: 550;
}

.card-body {
  font-weight: bold;
}

p {
  color: #8f8f8f;
  padding-top: 5px;
}

@media (max-width: 1028px) {
  #title {
    text-align: center;
  }

  .rotateMobile {
    transform: rotate(0deg);
    width: 50%;
    z-index: 1;
    right: auto;
    position: static;
  }
}

#cta {
  font-family: "Montserrat";
  font-weight: 800;
  text-align: center;
}
```

```
background-color: #ff4c68;  
padding: 7% 15%;  
}
```

```
.custom {  
  color: white;  
  font-size: 3em;  
  padding-bottom: 40px;  
}
```

```
#footer {  
  text-align: center;  
  padding: 4% 15%;  
}
```

```
.small {  
  font-size: 17px;  
  color: #000;  
}
```

```
.h1 {  
  font-family: "Montserrat-Black";  
  font-size: 3rem;  
  line-height: 1.5;  
}
```


Experiment 4 :

Setting up and configuring Tomcat server.

How to Install Tomcat 7

There are certain steps we must follow for configuring Apache Tomcat 7.

Step 1

Download and Install Tomcat

1. Go to <http://tomcat.apache.org/download-70.cgi> then go to the Binary Distribution/Core/ and download the "zip" package (for example "apache-tomcat-7.0.40.zip", about 8MB).
2. Now **unzip** the downloaded file into a directory of our choice. Don't unzip onto the desktop (since its path is hard to locate). I suggest using "e:\myserver". Tomcat will be unzipped into the directory "e:\myserver\tomcat-7.0.40".

Step 2

Check the installed directory to ensure it contains the following sub-directories:

- bin folder
- logs folder
- webapps folder
- work folder
- temp folder
- conf folder
- lib folder

Step 3

Now, we need to create an Environment Variable JAVA_HOME.

We need to create an environment variable called "JAVA_HOME" and set it to our JDK installed directory.

1. To create the JAVA_HOME environment variable in Windows XP/Vista/7 we need to push the "Start" button then select "Control Panel" / "System" / "Advanced system settings". Then switch to the "Advanced" tab and select "Environment Variables" / "System Variables" then select "New" (or "Edit" for modification). In "Variable Name", enter "JAVA_HOME". In "Variable Value", enter your JDK installed directory (e.g., "c:\Program Files\Java\jdk1.7.0_{xx}").
2. For ensuring that it is set correctly, we need to start a command shell (to refresh the environment) and issue:

set JAVA_HOME

JAVA_HOME=c:\Program Files\Java\jdk1.7.0_{xx} <== Check that this is OUR JDK installed directory

3. Sometimes we need to set JRE_HOME also. So for creating JRE_HOME we need to use the same procedure. Push the "Start" button then select "Control Panel" / "System" / "Advanced system settings". Then switch to the "Advanced" tab and select "Environment Variables" / "System Variables" then select "New" (or "Edit" for modification). In "Variable Name", enter "JRE_HOME". In "Variable Value", enter your JRE installed directory (e.g., "C:\Program Files\Java\jre7\").

Step 4

Configure Tomcat Server

The configuration files of the Apache Tomcat Server are located in the "conf" sub-directory of our Tomcat installed directory, for example "E:\myserver\tomcat7.0.40\conf". There are 4 configuration XML files:

1. context.xml file
2. tomcat-users.xml file
3. server.xml file
4. web.xml file

Before proceeding, make a BACKUP of the configuration files.

Step 4(a) "conf\web.xml"; Enabling a Directory Listing

Open the configuration file "web.xml". We shall enable the directory listing by changing "listings" from "false" to "true" for the "default" servlet.

<param-value>true</param-value> like:



```
96 <servlet>
97     <servlet-name>default</servlet-name>
98     <servlet-class>
99         org.apache.catalina.servlets.DefaultServlet
100     </servlet-class>
101     <init-param>
102         <param-name>debug</param-name>
103         <param-value>0</param-value>
104     </init-param>
105     <init-param>
106         <param-name>listings</param-name>
107         <param-value>true</param-value>
108     </init-param>
109     <load-on-startup>1</load-on-startup>
110 </servlet>
```

Step 4(b) "conf\server.xml file"; set the TCP Port Number

Open the file "server.xml" in a text editor.

The default port number of Tomcat is 8080. Now we need to change the TCP port number for Tomcat, since the same port number can be used by other servers like SQL Server. We may choose any number between 1024 and 65535. We shall choose 9999 in this article.

Locate the following lines, and change port="8080" to port="9999". Like:

<Connector port="9999" protocol="HTTP/1.1" Like



```
69      port 8080
70      -->
71      <Connector port="9999" protocol="HTTP/1.1"
72                connectionTimeout="20000"
73                redirectPort="8443" />
74      <!-- A "Connector" using the shared thread
75      pool-->
76      <!--
77      <Connector executor="tomcatThreadPool"
```

Ln:1 Col:1 Sel:0|0 Dos\Windows ANSI as UTF-8 INS

Step 4(c) "conf\context.xml"; Enabling Automatic Reload

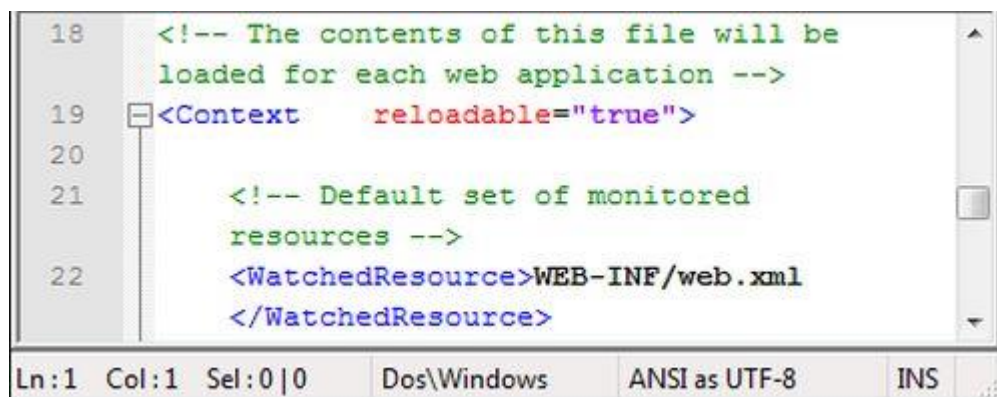
In that we set reloadable="true" to the <Context> element to enable automatic reload after code changes.

Add reloadable="true" as in the following:

<Context reloadable="true">

.....

</Context> Like



```
18      <!-- The contents of this file will be
19      loaded for each web application -->
20      <Context reloadable="true">
21
22      <!-- Default set of monitored
23      resources -->
24      <WatchedResource>WEB-INF/web.xml
25      </WatchedResource>
```

Ln:1 Col:1 Sel:0|0 Dos\Windows ANSI as UTF-8 INS

Step 4(d) (Optional) "conf\tomcat-users.xml"

It is used to manage Tomcat by adding the highlighted lines, inside the <tomcat-users> elements.

In that we can add a password and username as an optional step.

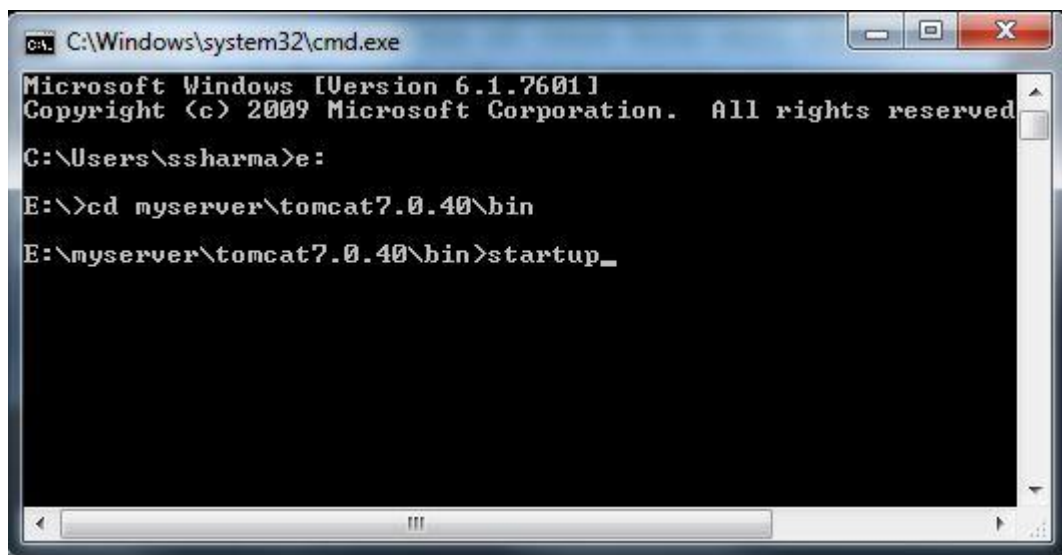
Step 5

Now, start the tomcat server

Executable programs and scripts are kept in the "bin" sub-directory of the Tomcat installed directory, e.g., "E:\myserver\tomcat7.0.40\bin".

Step 5(a) Start Server

Launch a command shell. Set the current directory to "<TOMCAT_HOME>\bin" like E:\myserver\tomcat7.0.40\bin, and run "startup.bat" as follows:

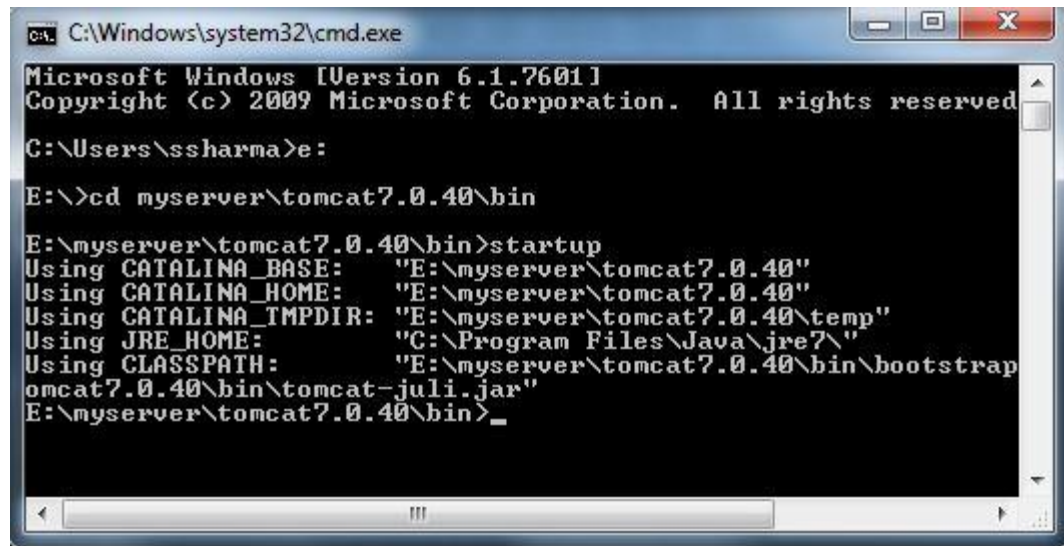


```
C:\Windows\system32\cmd.exe
Microsoft Windows [Version 6.1.7601]
Copyright (c) 2009 Microsoft Corporation. All rights reserved

C:\Users\ssharma>e:
E:\>cd myserver\tomcat7.0.40\bin
E:\myserver\tomcat7.0.40\bin>startup_
```

After that a new Tomcat console window appears. Read the messages on the console. Look out for the Tomcat's port number (double check that Tomcat is running on port 9999).....

We saw a figure like:

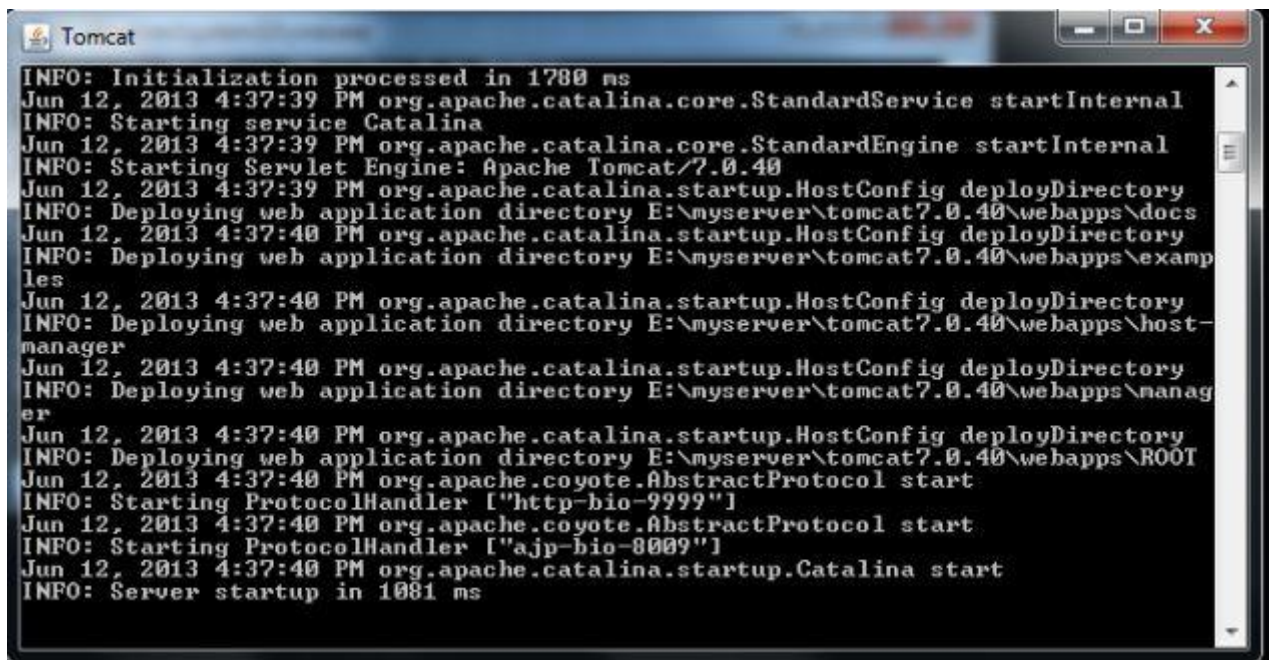


```
C:\Windows\system32\cmd.exe
Microsoft Windows [Version 6.1.7601]
Copyright (c) 2009 Microsoft Corporation. All rights reserved

C:\Users\ssharma>e:

E:\>cd myserver\tomcat7.0.40\bin

E:\myserver\tomcat7.0.40\bin>startup
Using CATALINA_BASE:   "E:\myserver\tomcat7.0.40"
Using CATALINA_HOME:   "E:\myserver\tomcat7.0.40"
Using CATALINA_TMPDIR: "E:\myserver\tomcat7.0.40\temp"
Using JRE_HOME:        "C:\Program Files\Java\jre7\"
Using CLASSPATH:       "E:\myserver\tomcat7.0.40\bin\bootstrap
omcat7.0.40\bin\tomcat-juli.jar"
E:\myserver\tomcat7.0.40\bin>_
```

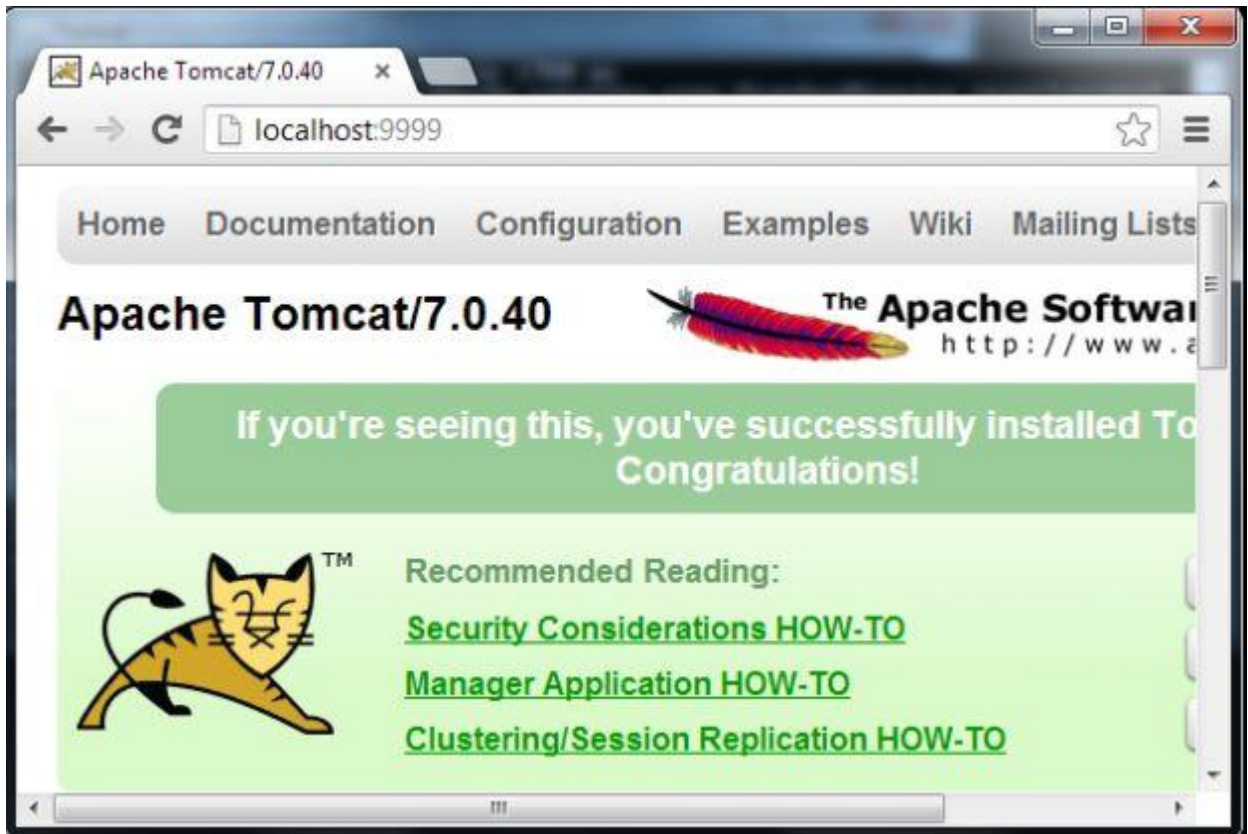


```
Tomcat
INFO: Initialization processed in 1780 ms
Jun 12, 2013 4:37:39 PM org.apache.catalina.core.StandardService startInternal
INFO: Starting service Catalina
Jun 12, 2013 4:37:39 PM org.apache.catalina.core.StandardEngine startInternal
INFO: Starting Servlet Engine: Apache Tomcat/7.0.40
Jun 12, 2013 4:37:39 PM org.apache.catalina.startup.HostConfig deployDirectory
INFO: Deploying web application directory E:\myserver\tomcat7.0.40\webapps\docs
Jun 12, 2013 4:37:40 PM org.apache.catalina.startup.HostConfig deployDirectory
INFO: Deploying web application directory E:\myserver\tomcat7.0.40\webapps\exam
les
Jun 12, 2013 4:37:40 PM org.apache.catalina.startup.HostConfig deployDirectory
INFO: Deploying web application directory E:\myserver\tomcat7.0.40\webapps\host-
manager
Jun 12, 2013 4:37:40 PM org.apache.catalina.startup.HostConfig deployDirectory
INFO: Deploying web application directory E:\myserver\tomcat7.0.40\webapps\manag
er
Jun 12, 2013 4:37:40 PM org.apache.catalina.startup.HostConfig deployDirectory
INFO: Deploying web application directory E:\myserver\tomcat7.0.40\webapps\ROOT
Jun 12, 2013 4:37:40 PM org.apache.coyote.AbstractProtocol start
INFO: Starting ProtocolHandler ["http-bio-9999"]
Jun 12, 2013 4:37:40 PM org.apache.coyote.AbstractProtocol start
INFO: Starting ProtocolHandler ["ajp-bio-8009"]
Jun 12, 2013 4:37:40 PM org.apache.catalina.startup.Catalina start
INFO: Server startup in 1081 ms
```

Step 5(b) Access the Server

Open a browser then enter the URL "<http://localhost:9999>" to access the Tomcat server's welcome page.

If we get this type of page then it means we are done.



Experiment 5 :

Understanding modification of Web.XML.

Web.XML

The web.xml file is derived from the Servlet specification, and contains information used to deploy and configure our web applications.

When configuring Tomcat, this is where we can define servlet mappings for central components. Within Tomcat, this file functions in the same way as described in the Servlet specification.

Tomcat has two web.xml files one in the conf directory and the other in the web-inf. The only divergence in Tomcat's handling of this file is that a user has the option of utilizing TOMCAT-PATH/conf/web.xml to define default values for all contexts. If this method is utilized, Tomcat will use TOMCAT-PATH/conf/web.xml as a base configuration, which can be overwritten by application-specific WEB-INF/web.xml files. That is, web.xml in conf defines parameters for all web applications whereas the web.xml in web-inf is applicable to current web applications only.

web-app

The root element of this XML deployment descriptor is 'web-app'; its elements are shown in the table below. There are no required elements, but you should always have at least a 'display-name' element for identification. As of the Servlet specification version 2.4, the elements nested directly under the web-app element may be listed in any order. In cases where more than one of the same element is used and it is unclear which element takes precedence, the servlet container will use them in the order they are listed in the web.xml file.

The table below contains the elements and what they represent.

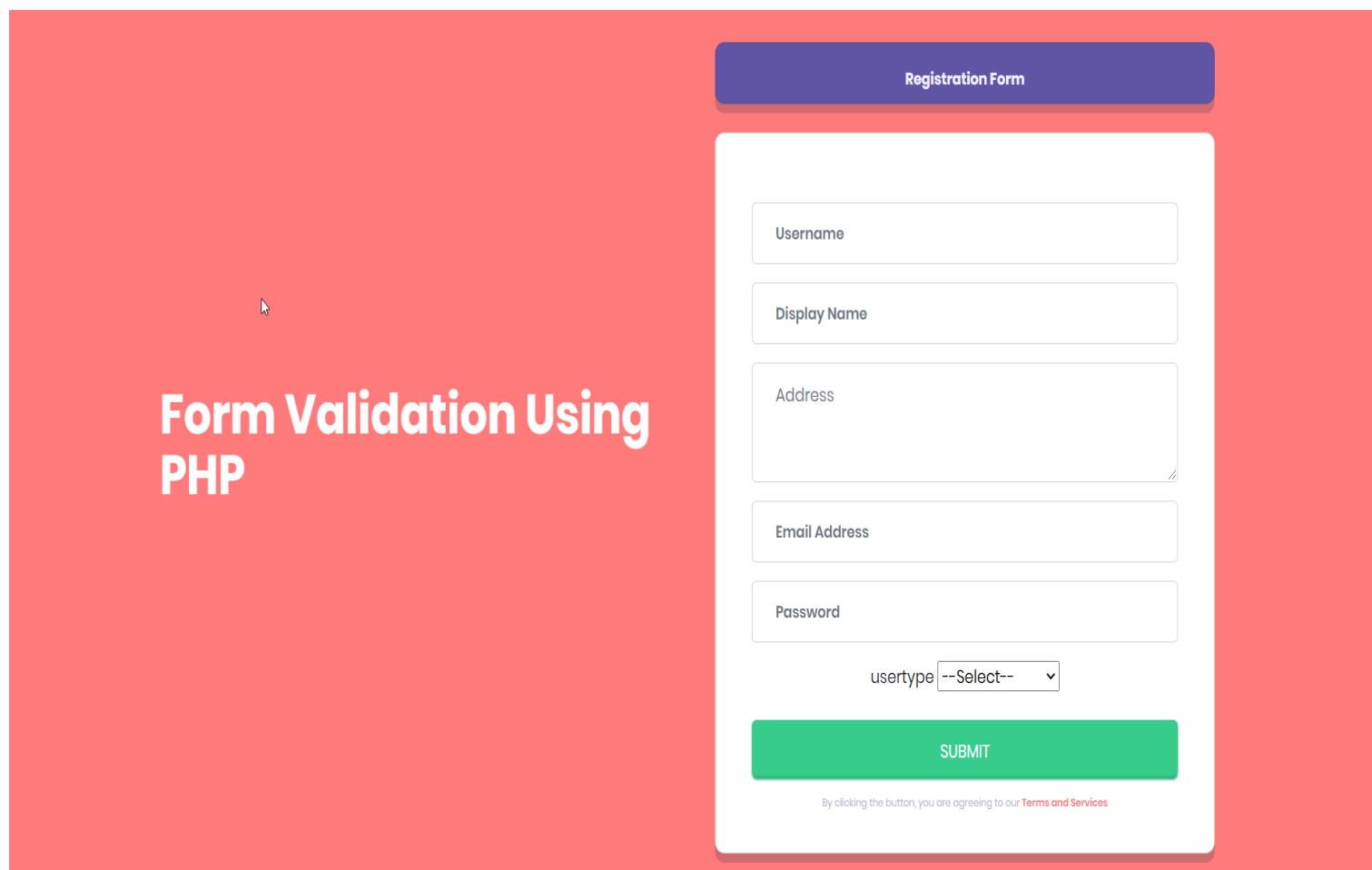
Element	Meaning
display-name	A name for the web-app in the GUI admin tools
description	A description for the web application

context-params	Context parameters whose values do not change very often
servlet	Servlet definitions for the servlets that make up our web application
session-config	Defines the default session timeout for our application

Experiment 6 :

Creating websites using php.

Outputs:-



The screenshot displays a web page with a red background. On the left, the text "Form Validation Using PHP" is written in white. On the right, there is a "Registration Form" with a purple header. The form contains several input fields: "Username", "Display Name", "Address", "Email Address", and "Password". Below these fields is a dropdown menu labeled "usertype" with "--Select--" as the selected option. A green "SUBMIT" button is at the bottom of the form. Below the button, a small line of text reads: "By clicking the button, you are agreeing to our [Terms and Services](#)".

Form Validation Using PHP

Registration Form

Username

Display Name

Address

Email Address

Password

usertype --Select--

SUBMIT

By clicking the button, you are agreeing to our [Terms and Services](#)

Source Code:

1. HTML & PHP CODE:

```
<?php
if(count($_POST)>0) {
/* Validation to ensure all fields are non-empty */
foreach($_POST as $key=>$value) {
if(empty($_POST[$key])) {
$message = ucwords($key) . " field is required";
break;
}
}

/* Validation about the right format of user email */
if(!isset($message)) {
if (!filter_var($_POST["userEmail"], FILTER_VALIDATE_EMAIL)) {
$message = "Invalid UserEmail";
}
}

if(!isset($message)) {
$message = "You have registered successfully!";
unset($_POST);
}

}
?>

<html>
<head>
    <title>REGISTRATION FORM</title>
    <!-- STYLES -->
    <link rel="stylesheet" href="https://maxcdn.bootstrapcdn.com/bootstrap/4.0.0/css/bootstrap.min.css"
integrity="sha384-
Gn5384xqQ1aoWXA+058RXPxPg6fy4IWvTNh0E263XmFcJISAwIGgFAW/dAiS6JXm"
crossorigin="anonymous">
    <link
href="https://fonts.googleapis.com/css2?family=Poppins:wght@400;500;600;700&display=swap"
rel="stylesheet">
    <link rel="stylesheet" href="style.css">

</head>

<body>
    <div class="flex-container">

        <section class="column-1">
            <h1>Form Validation Using PHP</h1>
```

```
<p></p>
</section>
```

```
<section class="column-2">
```

```
<p class="card"><span><strong>Registration Form</strong></span></p>
```

```
<div class="card">
```

```
<form name="frmRegistration" method="post" action="">
```

```
<div class="message"><?php if(isset($message)) echo $message; ?> </div>
```

```
<div class="form-group">
```

```
<input class="form-control" type="text" placeholder="Username"
name="userName" value="<?php if(isset($_POST['userName'])) echo $_POST['userName']; ?>"
</div>
```

```
<div class="form-group">
```

```
<input class="form-control" type="text" name="displayName"
value="<?php if(isset($_POST['displayName'])) echo $_POST['displayName']; ?>" placeholder="Display
Name">
```

```
</div>
```

```
<div class="form-group">
```

```
<textarea class="form-control" placeholder="Address" type="text" rows="3"
cols="17" name="userAddress"><?php if(isset($_POST['userAddress'])) echo $_POST['userAddress'];
?></textarea>
```

```
</div>
```

```
<div class="form-group">
```

```
<input class="form-control" type="text" name="userEmail"
value="<?php if(isset($_POST['userEmail'])) echo $_POST['userEmail']; ?>" placeholder="Email
Address">
```

```
</div>
```

```
<div class="form-group">
```

```
<input class="form-control" type="password" name="password"
value="<?php if(isset($_POST['password'])) echo $_POST['password']; ?>" placeholder="Password">
```

```
</div>
```

```
<div class="form-group">
```

```
<table>usertype</table>
```

```
<select name="usertype" >
```

```
<option value="">--Select--</option>
```

```
<option value="Member" <?php if(isset($_POST['usertype']) &&
```

```
$_POST['usertype']=="Member") { ?>selected<?php } ?>>Member</option>
```

```
<option value="Premium User" <?php if(isset($_POST['usertype']) &&
```

```
$_POST['usertype']=="Premium User") { ?>selected<?php } ?>>Premium User</option>
```

```
</select>
```

```
</div>
```

```
<div class="form-group">
```

```
<button class="form-control" type="submit" id="submit-btn"
name="submit" value="Submit">
```

```

                                <span>SUBMIT</span>
                            </button>
                        </div>
                    <small>By clicking the button, you are agreeing to our <a
href="#">Terms and Services</a></small>
                </form>
            </div>

        </section>

    </div>
</body>

</html>

```

2. CSS CODE:

```

:root {
  --red: hsl(0, 100%, 74%);
  --blue: hsl(248, 32%, 49%);
  --green: hsl(154, 59%, 51%);
  --dark-blue: hsl(249, 10%, 26%) ;
  --grayish-blue: hsl(246, 25%, 77%);
  --dull-white: hsl(249, 100%, 97%);
  --wrong-input: hsl(0, 79%, 69%);
  --shadow: hsla(249, 10%, 26%, 0.247);
  --btn-shadow: hsl(154, 55%, 45%);
  --btn-hover: hsl(160, 74%, 60%);
}
body, * {
  font-family: 'Poppins', sans-serif !important;
}
body {
  background: url("images/bg-intro-desktop.png"), var(--red);
  background-size: 100%;
}

.message {
  color: rgb(74, 45, 119);
  font-weight: bold;
  text-align: center;
  width: 100%;
  padding: 10;
}

.flex-container {
  display: flex;

```

```

    flex-direction: row;
    align-items: center;
    padding-top: 90px;
    padding-left: 11%; padding-right: 8%;
}

/***** COLUMN-1 *****/
.column-1 {
    flex-basis: 50%;
    align-self: auto;
    text-align: left;
    padding-right: 15px;
}
.column-1 h1 {
    font-size: 3rem;
    font-weight: 700;
    line-height: 1.1;
    color: white;
}
.column-1 p {
    margin-top: 25px;
    font-size: 1em;
    font-weight: 400;
    color: var(--dull-white);
}

/***** COLUMN-2 *****/
.column-2 {
    flex-basis: 45%;
    text-align: center;
}

.card { /* Bootstrap Card */
    padding: 40px 40px 20px;
    margin-bottom: 20px;
    border-radius: 10px;
    box-shadow: 0 8px var(--shadow);
}

p.card { /* Purchase Plan Background */
    display: block;
    padding: 20px 10px 10px;
    font-size: 0.9em;
    font-weight: 600;
    background: var(--blue);
    box-shadow: 0 8px var(--shadow);
    color: white;
}
p > span { font-weight: 400; color: var(--dull-white);}

div.card { /* Form Background */
    margin-top: 25px;
}

```

```
.form-control { /* Input Boxes & Submit Button */
  padding: 15px 25px;
  border-radius: 5px;
}
.form-control:focus {
  box-shadow: none;
}
```

```
input {
  font-size: 0.9em !important;
  font-weight: 600;
}
input:focus {
  border: 1px solid black !important;
}
```

```
#submit-btn {
  margin-top: 25px;
  padding: 15px 10px 10px;
  background: var(--green);
  color: white;
  box-shadow: 0 3px 2px var(--btn-shadow);
  border: none;
}
#submit-btn:hover {
  background: var(--btn-hover);
  cursor: pointer;
}
```

```
/* Terms & Conditions */
small {
  font-size: 0.6em;
  color: var(--grayish-blue);
}
small > a {
  font-weight: 600;
  color: var(--red);
}
small > a:hover {
  color: var(--red);
  text-decoration: none;
}
```

```
/* ***** EVENT-BASED APPLICATIONS ***** */
/* PRESS ANIMTION */
@keyframes press {
  50% { transform: translateY(2px); opacity: 0 }
  100% { transform: translateY(2px); opacity: 1 }
}
.animate {
  animation: press 0.3s -0.02s ease-in-out;
}
```

```

/* IN CASE INPUT IS WRONG */
input + small {
  display: none; /* Will apply in script */
  text-align: right;
  font-style: oblique 10deg;
  font-weight: 500;
  color: var(--wrong-input);
  margin-top: 5px;
}
.invalid-input {
  border: 2px solid var(--wrong-input) !important;
  color: var(--wrong-input);
  background: url("images/icon-error.svg") no-repeat center right 20px;
}

```

```

/***** MOBILE SITE *****/
@media screen and (max-width: 800px){
  body {
    background: url("images/bg-intro-desktop.png"), var(--red);
  }
  .flex-container {
    display: flex;
    flex-direction: column;
    align-items: center;
    padding-top: 90px;
    padding-left: 8%; padding-right: 8%;
  }
  /***** COLUMN-1 *****/
  .column-1 {
    flex-basis: 50%;
    align-self: auto;
    text-align: center;
    padding-right: 15px;
  }
}

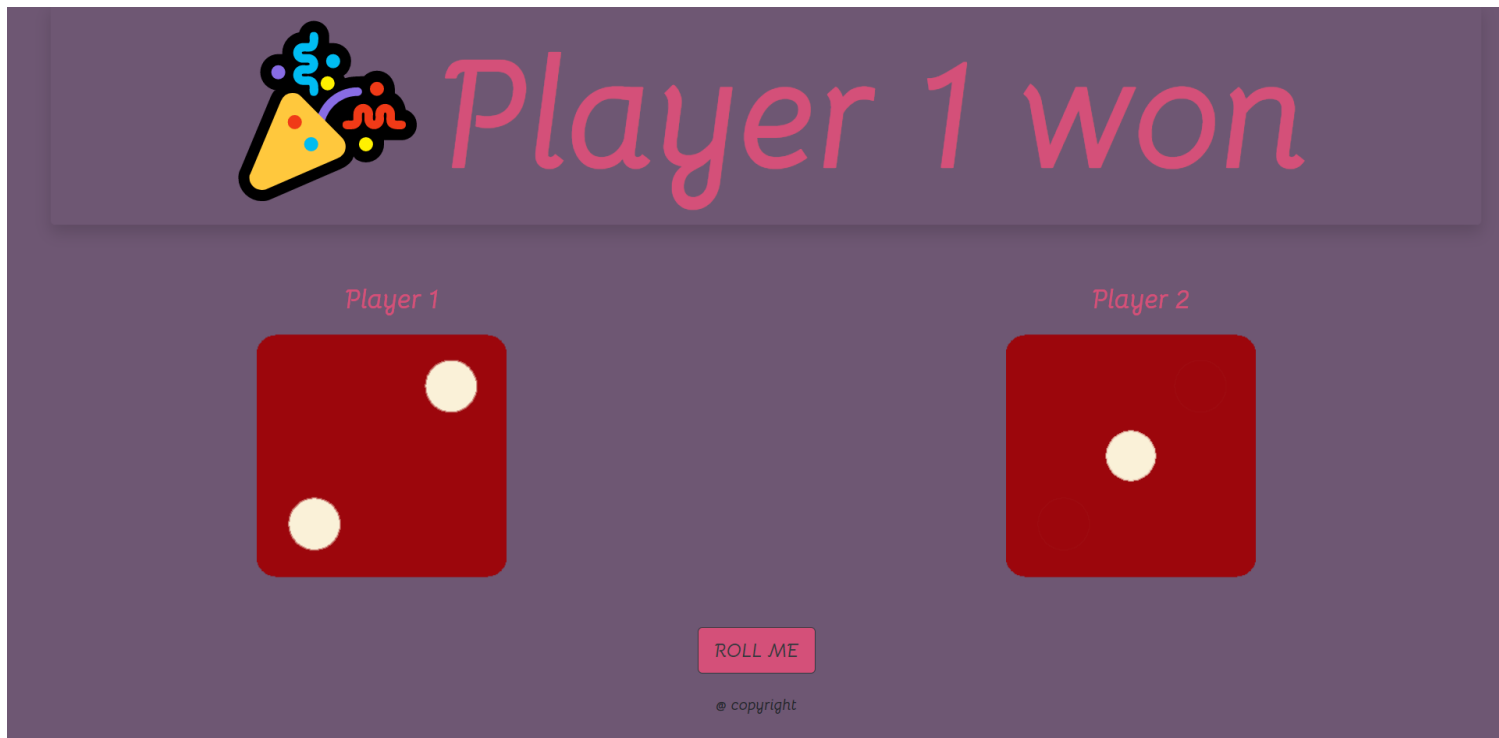
```

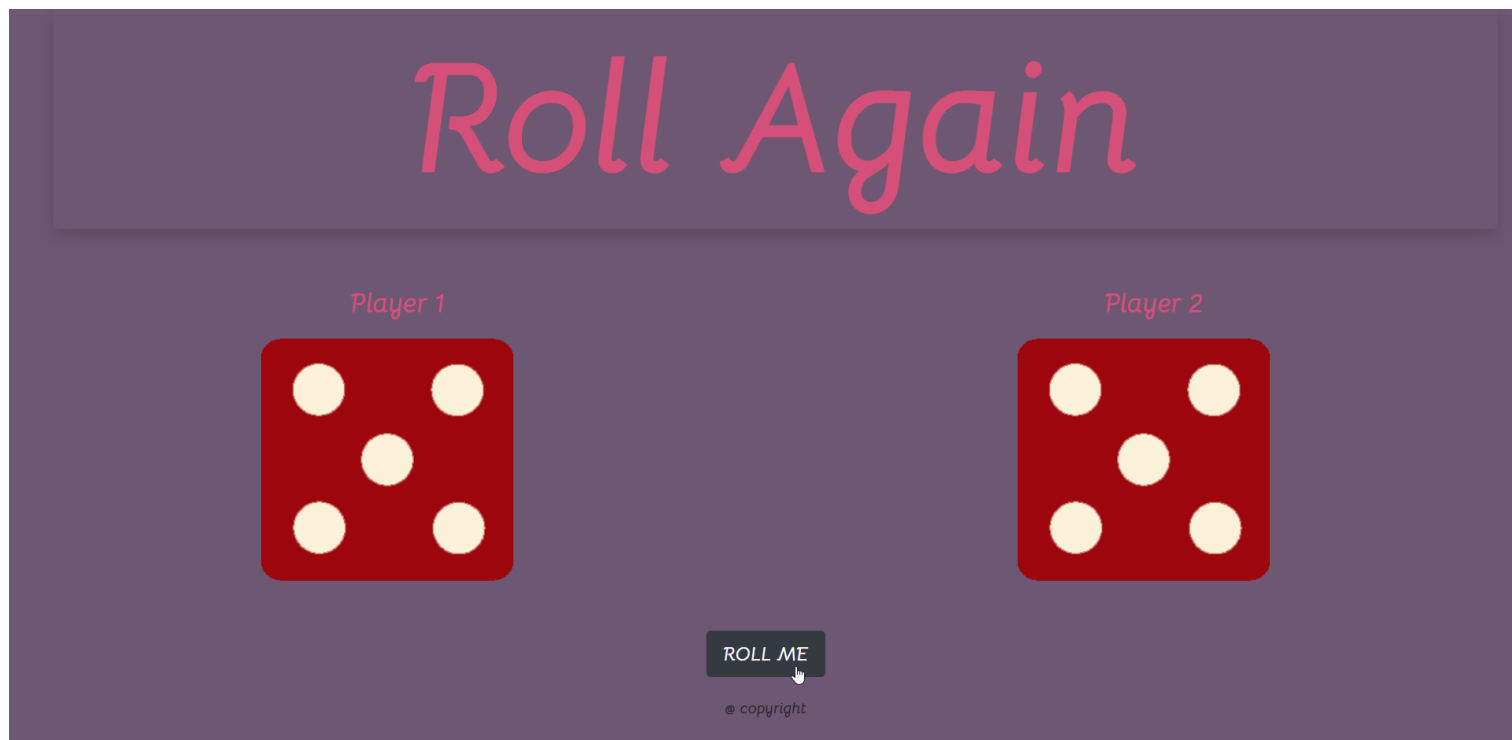
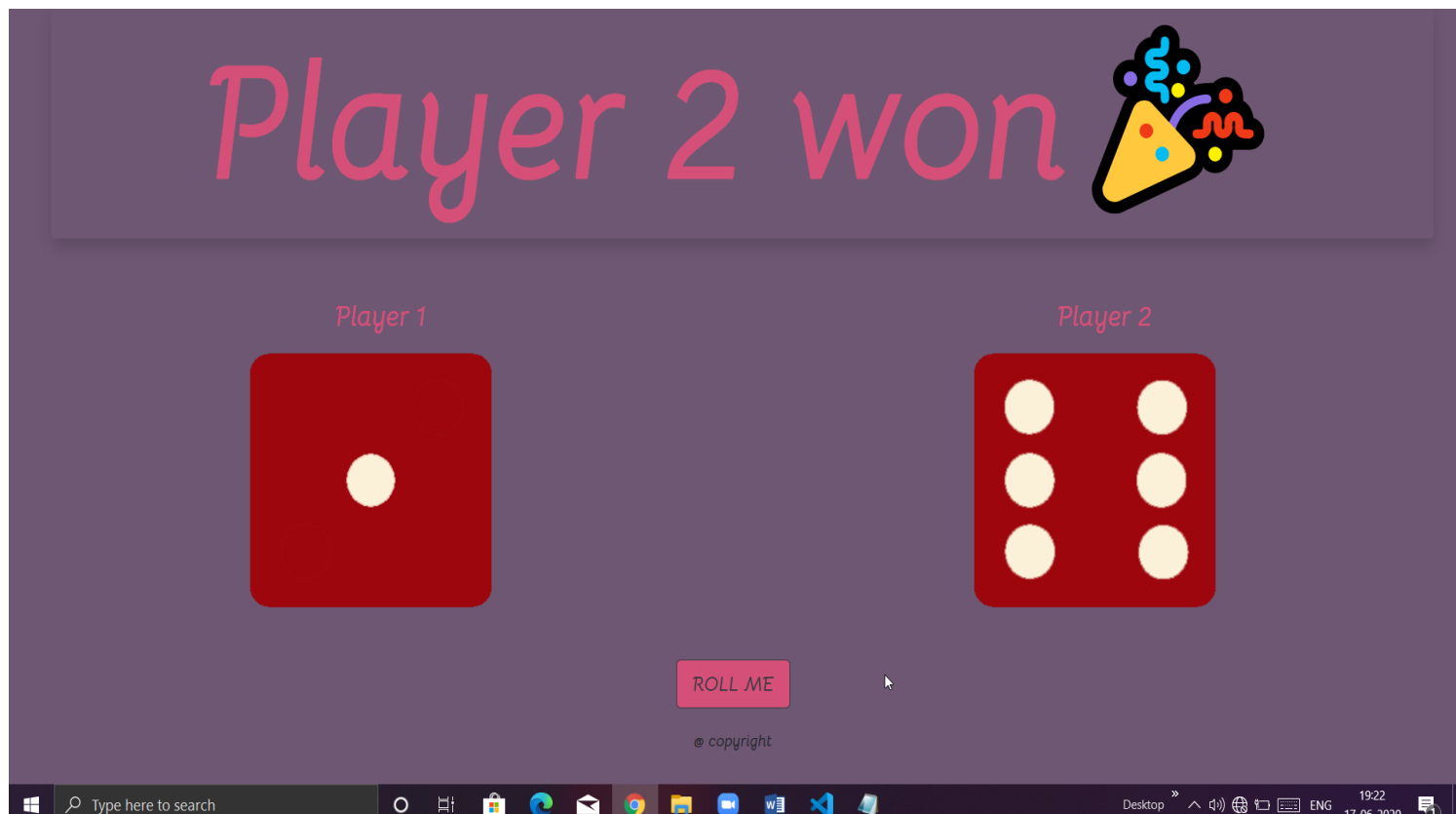
Experiment 7 :

Understanding Javascript.

1 THE DICE GAME:-

Outputs:-





1. CSS CODE:

1. HTML CODE:

```
<!DOCTYPE html>
<html lang="en" dir="ltr">
  <head>
    <meta charset="utf-8" />
    <title>ONLY FOR FUN</title>
    <link
      rel="stylesheet"
      href="https://stackpath.bootstrapcdn.com/bootstrap/4.5.0/css/bootstrap.min.css"
      integrity="sha384-9alt2nRpC12Uk9gS9baDI411NQApFmC26EwAOH8WgZl5MYyxFfc+NcPb1dKGj7Sk"
      crossorigin="anonymous"
    />
    <link rel="stylesheet" href="styles.css" />
    <script
      src="https://code.jquery.com/jquery-3.5.1.slim.min.js"
      integrity="sha384-DfXdz2htPH0lsSSs5nCTpuj/zy4C+OGpamoFVy38MVBnE+IbbVYUew+OrCXaRkfj"
      crossorigin="anonymous"
    ></script>
    <script
      src="https://cdn.jsdelivr.net/npm/popper.js@1.16.0/dist/umd/popper.min.js"
      integrity="sha384-Q6E9RHvblyZFJoft+2mJbHaEWldlvI9IOYy5n3zV9zzTtm13UksdQRVvoxMfooAo"
      crossorigin="anonymous"
    ></script>
    <script
      src="https://stackpath.bootstrapcdn.com/bootstrap/4.5.0/js/bootstrap.min.js"
      integrity="sha384-OgVRvuATP1z7JjHLkuOU7Xw704+h835Lr+6QL9UvYjZE3lpu6Tp75j7Bh/kR0JKI"
      crossorigin="anonymous"
    ></script>
    <link
      href="https://fonts.googleapis.com/css2?family=Bellota:ital,wght@1,700&display=swap"
      rel="stylesheet"
    />
  </head>
  <body>
    <div class="container-fluid">
      <h1 class="shadow p-3 mb-5 rounded">The Rolling Dice</h1>
      <div class="row">
        <div class="col-lg-6 col-md-12 dice1">
          <h3>Player 1</h3>
          
        </div>
        <div class="col-lg-6 col-md-12 dice2">
          <h3>Player 2</h3>
          
        </div>
      </div>
      <div class="button">
        <form action="index.html">
          <button class="btn btn-lg btn-outline-dark font">ROLL ME</button>
        </form>
      </div>
    </div>
  </body>
</html>
```

```
</div>  
<footer>@ copyright</footer>  
<script src="index.js"></script>  
</body>  
</html>
```

2. CSS CODE:

```
body{
  text-align: center;
  font-family: 'Bellota', cursive;
  background-color: #6e5773;
}

h1{
  font-size: 10rem;
  margin: 0px 10px 10px 30px;
  padding: 25px 10px;
  color: #d45079;
  font-weight: 900;
}

h3{
  margin: 5px 10px 10px 30px;
  padding: 5px 10px;
  color: #d45079;
  font-weight: 900;
}

.button{
  padding: 45px 20px 20px 20px;
}

.font{
  font-weight: bold;
  background-color: #d45079;
}
```

3. JAVA SCRIPT CODE:

```
var a=Math.random()*6;
var b=Math.random()*6;
var x=Math.floor(a+1);
var y=Math.floor(b+1);
console.log(x);
console.log(y);
if(x===1)
{
document.querySelector(".dice1 img").setAttribute("src","images/dice1.png");
}
else if(x===2)
{
document.querySelector(".dice1 img").setAttribute("src","images/dice2.png");
}
else if(x===3)
{
document.querySelector(".dice1 img").setAttribute("src","images/dice3.png");
}
else if(x===4)
{
document.querySelector(".dice1 img").setAttribute("src","images/dice4.png");
}
else if(x===5)
{
document.querySelector(".dice1 img").setAttribute("src","images/dice5.png");
}
else
{
document.querySelector(".dice1 img").setAttribute("src","images/dice6.png");
}

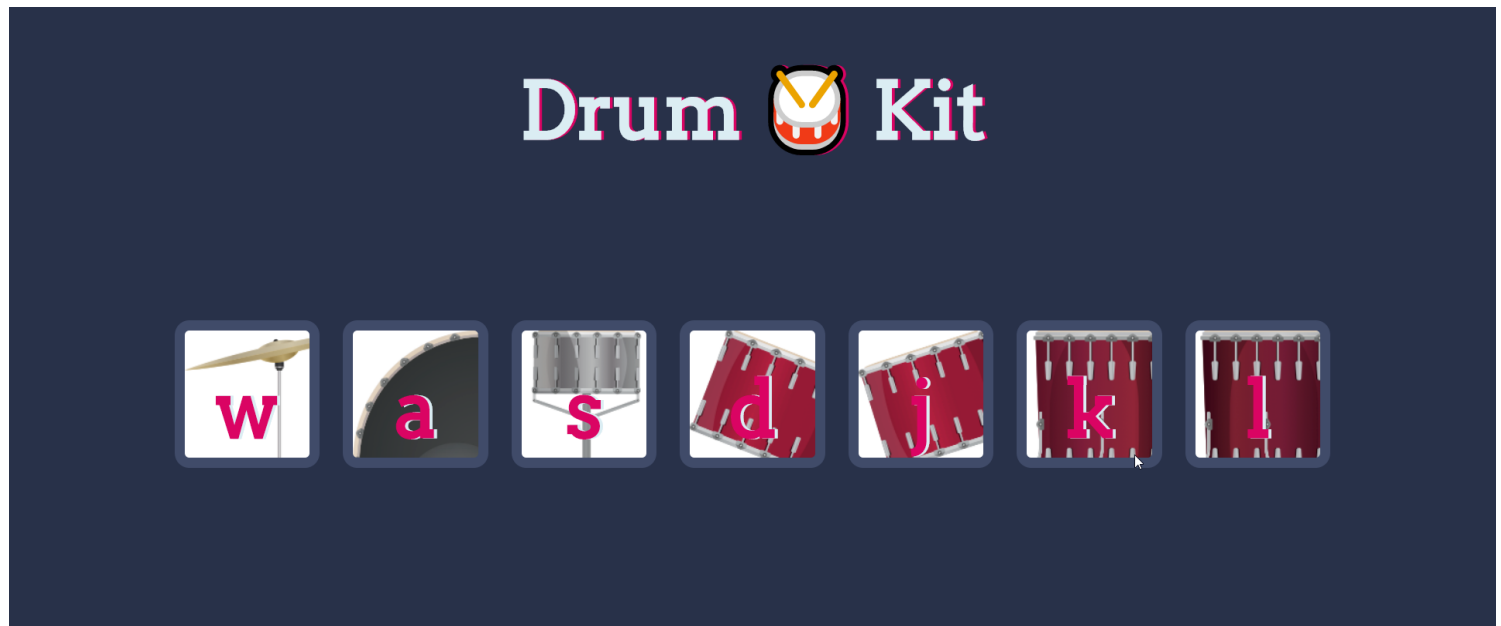
if(y===1)
{
document.querySelector(".dice2 img").setAttribute("src","images/dice1.png");
}
else if(y===2)
{
document.querySelector(".dice2 img").setAttribute("src","images/dice2.png");
}
else if(y===3)
{
document.querySelector(".dice2 img").setAttribute("src","images/dice3.png");
}
else if(y===4)
{
document.querySelector(".dice2 img").setAttribute("src","images/dice4.png");
}
else if(y===5)
{
```

```
document.querySelector(".dice2 img").setAttribute("src", "images/dice5.png");
}
else
{
document.querySelector(".dice2 img").setAttribute("src", "images/dice6.png");
}

if(x>y)
{
    document.querySelector("h1").innerText="🎲 Player 1 won";
}
else if(x===y){
    document.querySelector("h1").innerText="Roll Again";
}
else{
    document.querySelector("h1").innerText="Player 2 won🎲";
}
```

2 THE DRUM KIT:

OUTPUT:-



Source Code:-

1. HTML CODE:

```
<!DOCTYPE html>
<html lang="en" dir="ltr">

<head>
  <meta charset="utf-8">
  <title>Drum Kit</title>
  <link rel="stylesheet" href="styles.css">
  <link href="https://fonts.googleapis.com/css?family=Arvo" rel="stylesheet">
</head>

<body>

  <h1 id="title">Drum 🥁 Kit</h1>
  <div class="set">
    <button class="w drum">w</button>
    <button class="a drum">a</button>
    <button class="s drum">s</button>
    <button class="d drum">d</button>
    <button class="j drum">j</button>
    <button class="k drum">k</button>
    <button class="l drum">l</button>
  </div>

  <footer>
    Made with ❤️ in india.
  </footer>
  <script src="index.js"></script>
</body>

</html>
```


2. CSS CODE:

```
body {
  text-align: center;
  background-color: #283149;
}

h1 {
  font-size: 5rem;
  color: #DBEDF3;
  font-family: "Arvo", cursive;
  text-shadow: 3px 0 #DA0463;
}

footer {
  color: #DBEDF3;
  font-family: sans-serif;
}

.w {
  background-image: url("images/crash.png") ;
}

.a {
  background-image: url("images/kick.png") ;
}

.s {
  background-image: url("images/snare.png") ;
}

.d {
  background-image: url("images/tom1.png") ;
}

.j {
  background-image: url("images/tom2.png") ;
}

.k {
  background-image: url("images/tom3.png") ;
}

.l {
```

```
background-image: url("images/tom4.png") ;
background-color: transparent;
}

.set {
margin: 10% auto;
}

.game-over {
background-color: red;
opacity: 0.8;
}

.pressed {
box-shadow: 0 3px 4px 0 #DBEDF3;
opacity: 0.5;
}

.red {
color: red;
}

.drum {
outline: none;
border: 10px solid #404B69;
font-size: 5rem;
font-family: 'Arvo', cursive;
line-height: 2;
font-weight: 900;
color: #DA0463;
text-shadow: 3px 0 #DBEDF3;
border-radius: 15px;
display: inline-block;
width: 150px;
height: 150px;
text-align: center;
margin: 10px;
background-color: white;
}
```

3. JAVA SCRIPT CODE:

```

var i;
for(i=0;i<7;i++){
document.querySelectorAll("button")[i].addEventListener("click",function()
{
    var htmlValue =this.innerHTML;
    makeAnimation(htmlValue);
    switch(htmlValue){
        case "w": var audio1= new Audio('sounds/crash.mp3');
            audio1.play();
            break;

        case "a": var audio2= new Audio('sounds/kick-bass.mp3');
            audio2.play();
            break;

        case "s": var audio3= new Audio('sounds/snare.mp3');
            audio3.play();
            break;

        case "d": var audio4= new Audio('sounds/tom-1.mp3');
            audio4.play();
            break;

        case "j": var audio5= new Audio('sounds/tom-2.mp3');
            audio5.play();
            break;

        case "k": var audio6= new Audio('sounds/tom-3.mp3');
            audio6.play();
            break;

        case "l": var audio7= new Audio('sounds/tom-4.mp3');
            audio7.play();
            break;

        default: console.log("something wrong");
            break;
    }

});
}

document.addEventListener("keydown",function(event){

```

```

var htmlValue =event.key;
  makeAnimation(htmlValue);
switch(htmlValue){
  case "w": var audio1= new Audio('sounds/crash.mp3');
    audio1.play();
    break;

  case "a": var audio2= new Audio('sounds/kick-bass.mp3');
    audio2.play();
    break;

  case "s": var audio3= new Audio('sounds/snare.mp3');
    audio3.play();
    break;

  case "d": var audio4= new Audio('sounds/tom-1.mp3');
    audio4.play();
    break;

  case "j": var audio5= new Audio('sounds/tom-2.mp3');
    audio5.play();
    break;

  case "k": var audio6= new Audio('sounds/tom-3.mp3');
    audio6.play();
    break;

  case "l": var audio7= new Audio('sounds/tom-4.mp3');
    audio7.play();
    break;

  default: console.log("something wrong");
    break;
}});

```

```

function makeAnimation(keyPressed)
{
  var a = document.querySelector("." + keyPressed);
  a.classList.add("pressed");

  setTimeout(function(){
    a.classList.remove("pressed");
  },100);}

```

Experiment 8 :

Writing and Understanding Program in python. (using examples)

EXAMPLES:-

Question 1

Write code that asks the user to input a number between 1 and 5 inclusive. The code will take the integer value and print out the string value. So for example if the user inputs 2 the code will print two. Reject any input that is not a number in that range

Solution:-

```
user_input = int(input('Please enter an integer between 1-5:> '))
if user_input == 1:
    print('one')
elif user_input == 2:
    print('two')
elif user_input == 3:
    print('three')
elif user_input == 4:
    print('four')
elif user_input == 5:
    print('five')
else:
    print('Out of range')
```

OUTPUT:

```
In [2]: runfile('D:/udemy/[DesireCourse.Net] Udemy - The Complete Python Programmer Bootcamp 2020/05  
Conditionals/025 6.7-Conditionals-questions-solutions.py', wdir='D:/udemy/[DesireCourse.Net] Udemy -  
The Complete Python Programmer Bootcamp 2020/05 Conditionals')
```

Please enter an integer between 1-5:> 2

two