Indian Institute of Information Technology

Sonepat

APPLICATION PROGRAMMING LAB FILE

NAME- TUSHAR UPADHAYAY

ROLL NO.- 11911050

BRANCH- CSE

PROGRAM 1

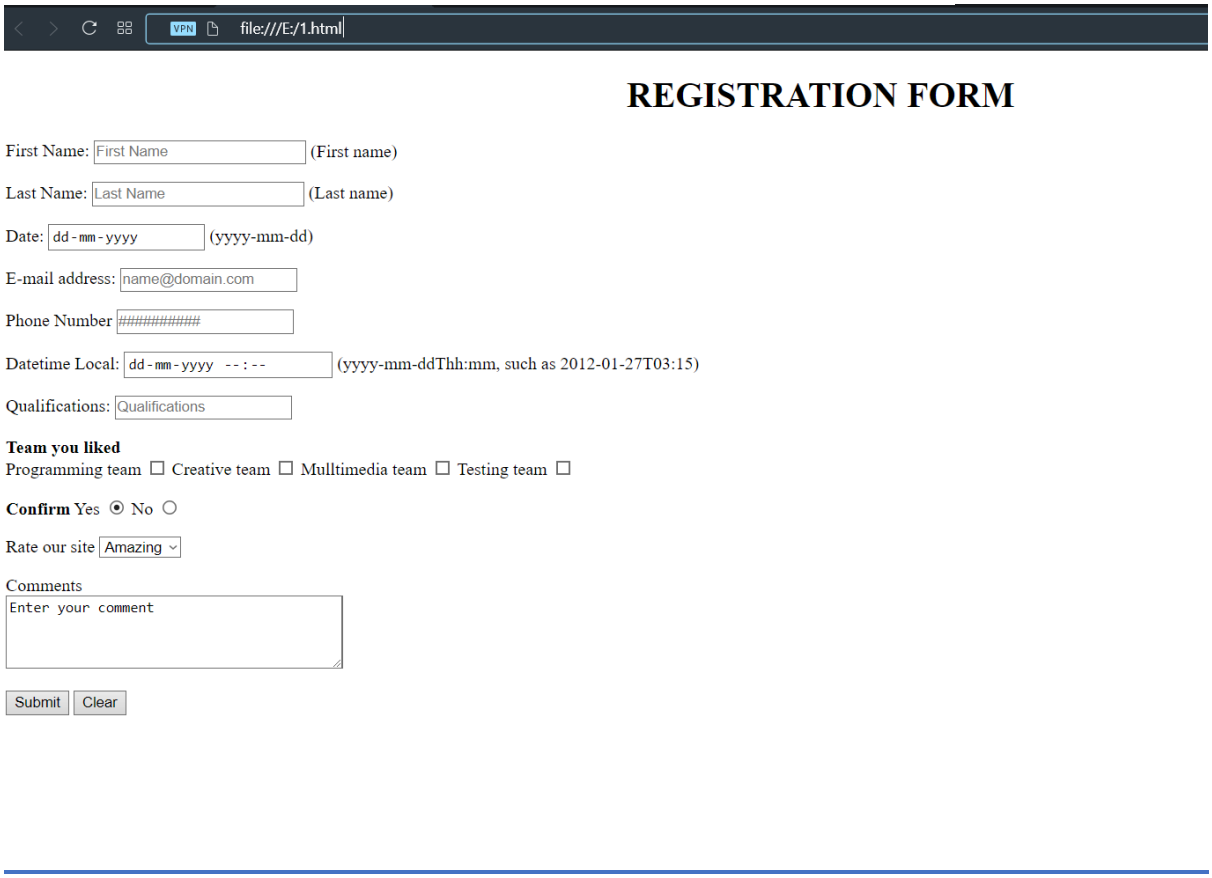
```
<!DOCTYPE  html>
<html lang="en" dir="ltr">
<head>
<meta charset="utf-8">
<title>Register</title>
</head>
<body>
<center><h1>REGISTRATION FORM</h1></center>
<h5><time></time></h5>
<feildset>
<form action="meta.html" method="post" autocomplete="on">
<!--hidden input type contains hidden information that will also be processed in action browser-->
<input type="hidden" name="recipient" value="">

<input type="hidden" name="subject" value="">

<input type="hidden" name="redirect" value="">


<!--input type text inserts a text feild to be input by user-->


<p><feildset><label>First Name:
<input type="text" placeholder="First Name" id="firstname"name="name" size="25" maxlength="30">
</label>(First name)</feildset></p>


<p><label>Last Name:
<input type="text" placeholder="Last Name" id="lastname"name="name" size="25" maxlength="30">
</label>(Last name)</p>
<p>
<label>Date:
<input type="date"/>
(yyyy-mm-dd)
</label>
```

```
</p>
<p><label>E-mail address:
<input type="email" name="details"
placeholder="name@domain.com" required></label>
</p>
<p><label>Phone Number
<input type="tel" name="details"
placeholder="##########" pattern="\d{10}"
required></label>
</p>
<p>
<label>Datetime Local:
<input type="datetime-local"/>
(yyyy-mm-ddThh:mm, such as 2012-01-27T03:15)
</label>
</p>
<p>
<label for="txtList">Qualifications:
<input type="text" id="txtList"
placeholder="Qualifications" list="Qualifications">
<datalist id="Qualifications">
<option value="Matric">
<option value="High School">
<option value="UG">
<option value="PG">
</datalist>
</label>
</p>
<p>
<strong>Team you liked</strong><br>
<label>Programming team
<input type="checkbox" name="teamselection"
value="programming">
</label>
<label>Creative team
<input type="checkbox" name="teamselection"
value="creative">
</label>
<label>Mulltimedia team
<input type="checkbox" name="teamselection"
value="multimedia">
</label>
<label>Testing team
```

```
<input type="checkbox" name="teamselection"
value="testing">
</label>
</p>
<p>
<strong>Confirm</strong>
<label>Yes
<input type="radio" name="confirmation" value="yes"
checked>
</label>
<label>No
<input type="radio" name="confirmation" value="no">
<!--name class must be same in a given paragraph-->
</label>
</p>
<p>
<label>Rate our site
<select name="rating">
<option selected>Amazing</option>
<option>10</option>
<option>9</option>
<option>8</option>
<option>7</option>
<option>6</option>
<option>5</option>
<option>4</option>
<option>3</option>
<option>2</option>
<option>1</option>
<option>Awful</option>
</select>
</label>
</p>
<p>
<label>
Comments<br>
<textarea name="comments" rows="4" cols="40">Enter
your comment</textarea>
</label>
</p>
<p>
<input type="submit" value="Submit">
<input type="reset" value="Clear">
```

```
</p>
</form>
</feildset>
</body>
</html>
```

OUTPUT:



PROGRAM-2

```
<html>
    <head>
        <title>Hello World!!</title>
        <style type ="text/css">
            #h1 {
                text-decoration-color: rgb(57, 99, 238);
            }
            #h2 {
                text-emphasis-color: rgb(84, 119, 226);
                position: relative;
                left: 2000px;
            }
            body {
                margin: 0px 0px 0px 0px;
                background-color: black;
                color: aliceblue ;
            }
            #frame {
                padding-top: 50px;
                padding-right: 10px;
            }
            #earth {
                border-radius: 300px;
                float: center;
                padding-left: 10px;
            }
```

```
#whole {
background-color: gray;
border-radius: 12px;
margin: 0px 100px 0px 100px;
padding-left: 10px;
padding-bottom: 10px;
padding-right: 10px;
padding-top: 50px;

}
#about-earth {
	text-align: center;
	text-size-adjust:150%;
}
#ribon {
	position: fixed;
	background-color: lightslategray;
	border-radius: 20px;
	margin-left: auto;
	margin-right: auto;
	width: 100%;
	text-align: center;
	font-size: large;
}
#button {
	border-radius: 10px;
	font-family: 'Franklin Gothic Medium', 'Arial Narrow', Arial, sans-serif;
```

```
                font-weight: 200;
                background-color: dodgerblue;
                height: 7%;
                width: 7%;
            }
            #button:hover {
                background-color: darkblue;
                color: antiquewhite;
            }
            #moon {
                text-decoration: none;
            }
            #moon:hover {
                color:darkblue;
                text-decoration: underline;
                text-transform: uppercase ;
            }
        </style>
    </head>
    <body>
        <div id="ribon"><p>Welcome to the 1<sup>st</sup> website . Please suggest changes &#123Only Those that I can change&#125</p></div>
        <div id="whole"><p id="h1"><h1 align="center">Hello World!!</h1></p>
        <p id="h2"><h2 align="center">A few facts about world we live in</h2></p>
        <iframe id="frame" width="560" height="315" src="https://www.youtube.com/embed/FG0fTKAqZ5g" frameborder="0" allow="accelerometer; autoplay; encrypted-media; gyroscope; picture-in-picture" allowfullscreen align="right"></iframe>
```

<img id="earth" src="https://cdn.britannica.com/25/160325-050-EB1C8FB7/image-instruments-Earth-satellite-NASA-Suomi-National-2012.jpg" height="360" width="360">

Earth is a third planet from the Sun and is the largestof terrestial planets. Unlike the other planets in solar system that are named after classic deities the Earth's name comes from the

Anglo-Saxon word erda which means ground or soil. The earth was formed approximately 4.54 billion years ago and is only known planet to support life.

<hr>

<h2>About earth</h2>

Mass:5.972×10²⁴kg

Diameter at equater:12,756km

Satellites:The moon

<hr>

<h2>Top 3 earth facts</h2>

The earth rotation is gradually slowing.

A yeaar isn't exactly 365 days,and the earth doesn't take 24 hours to rotate.

70% of Earth's surface is water, and only one third of its fresh water is unfrozn.

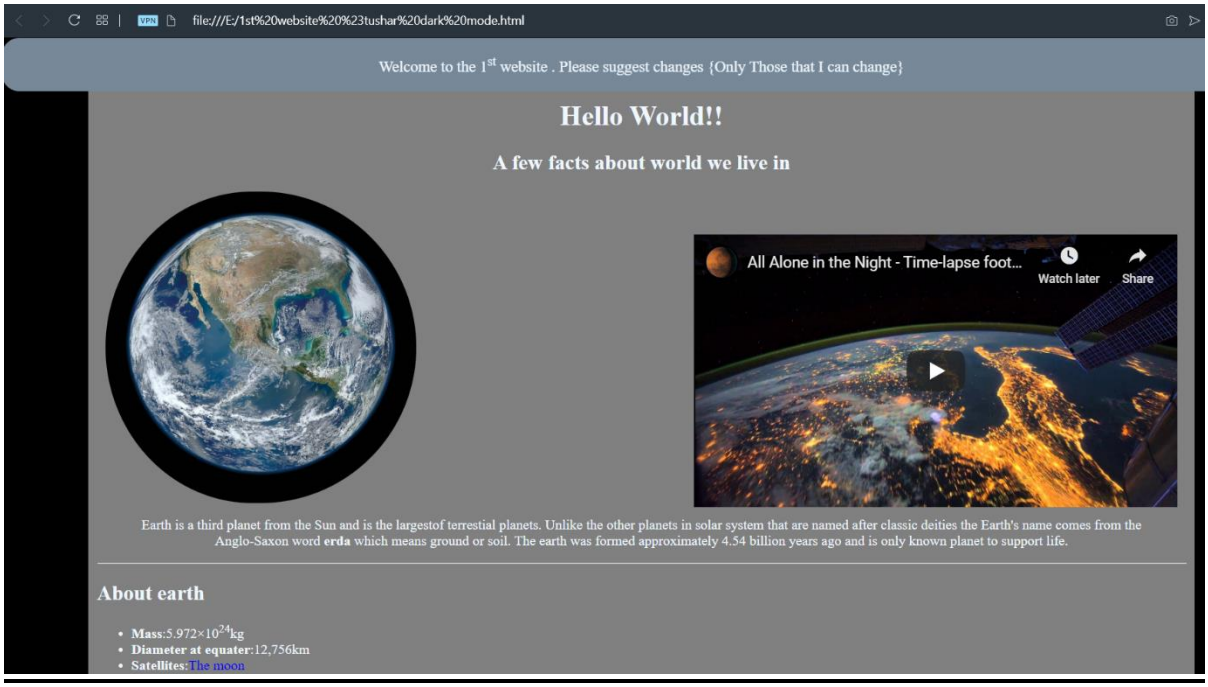
<hr>

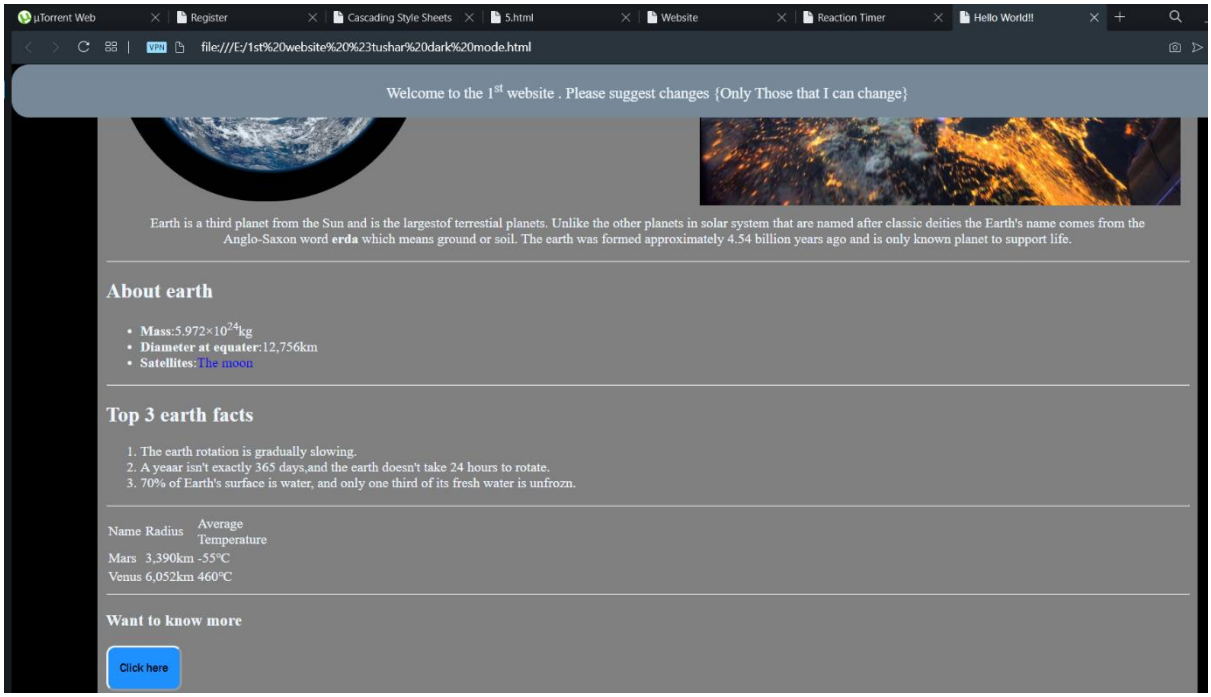
<table>

<tbody>

```
                <thead>
                    <tr>
                        <td>Name</td>
                        <td>Radius</td>
                        <td>Average<br>Temperature</td>
                    </tr>
                </thead>
                    <tr>
                        <td>Mars</td>
                        <td>3,390km</td>
                        <td>-55&#8451</td>
                    </tr>
                    <tr>
                        <td>Venus</td>
                        <td>6,052km</td>
                        <td>460&#8451</td>
                    </tr>
            </tbody>
        </table>
<hr>
<p><h3>Want to know more</h3></p>
<p><form action="https://www.livescience.com/19102-amazing-facts-earth.html">
            <input id="button" type="submit" value="Click here" target="_blank">
        </form></p></div>
        </body>
</html>
```

OUTPUT:


file:///E:/1st%20website%20%23tushar%20dark%20mode.html
Welcome to the 1st website . Please suggest changes {Only Those that I can change}
Hello World!!
A few facts about world we live in
All Alone in the Night - Time-lapse foot...
Watch later
Share
Earth is a third planet from the Sun and is the largestof terrestial planets. Unlike the other planets in solar system that are named after classic deities the Earth's name comes from the Anglo-Saxon word erda which means ground or soil. The earth was formed approximately 4.54 billion years ago and is only known planet to support life.
About earth
Mass:5.972×10^24kg
Diameter at equater:12,756km
Satellites:The moon


µTorrent Web
Register
Cascading Style Sheets
5.html
Website
Reaction Timer
Hello World!!
file:///E:/1st%20website%20%23tushar%20dark%20mode.html
Welcome to the 1st website . Please suggest changes {Only Those that I can change}
Earth is a third planet from the Sun and is the largestof terrestial planets. Unlike the other planets in solar system that are named after classic deities the Earth's name comes from the Anglo-Saxon word erda which means ground or soil. The earth was formed approximately 4.54 billion years ago and is only known planet to support life.
About earth
Mass:5.972×10^24kg
Diameter at equater:12,756km
Satellites:The moon
Top 3 earth facts
1. The earth rotation is gradually slowing.
2. A yeaar isn't exactly 365 days,and the earth doesn't take 24 hours to rotate.
3. 70% of Earth's surface is water, and only one third of its fresh water is unfrozn.
Name Radius Average Temperature
Mars 3,390km -55℃
Venus 6,052km 460℃
Want to know more
Click here

PROGRAM-3

```
<!DOCTYPE html>
<html lang="en" dir="ltr">
  <head>
    <meta charset="utf-8">
    <title>Cascading Style Sheets</title>
    <style media="screen" type="text/css">
      body
      {
        background-color: rgb(0,0,122,0.3);
        //background-image: url(img1.png);
      //  background-repeat: no-repeat;
      //  background-size: contain;
      }
      p
      {
        padding-top:10pt;
        paddind-bottom:10pt;
        text-indent: 1em;
      }
      em
      {
        font-weight : normal;
        color : #6F0F0F;
      }
      h1
      {
        font-family : tahoma,san-serif,helvetica;
        border-bottom:2px dotted blue;
      }
      p
      {
         font-size : 12pt;
         font-family : san-serif,arial;
      }
      .special
      {
        color : purple;
      }
      a
      {
        text-decoration:none;
```

```
      }
      a:hover
      {
        text-decoration: underline;
        font-weight:bold;
        color:green;
      }
      a:visited
      {
        color:hotpink;
      }
      a:active
      {
        background-color:rgba(126, 0, 0, 0.4);
      }
      li
      {
        margin-left: 40px;
      }
      aside
      {
        font-size: .8em;
        float:right;
      }
      table
      {
        border-collapse: collapse;
        border-style:outset;
      }
    </style>
  </head>
  <body>
    <h1 class="special"><center>Cascading Style
Sheets(CSS3)</center></h1>
    <a href="#W3C">Go to W3C</a>
    <h3>WHAT IS CSS3?</h3>
    <p>Formatting and presentation of any HTML
document is done by using cascading style
sheets(CSS3).</p>
    <p style="font-size: 18pt;">The th\ree way of
using CSS3 are : </p>
    <ul>
      <li>INLINE STYLING</li>
```

```
      <li>EMBEDDED STYLE SHEETS</li>
      <li>LINKING EXTERNAL STYLE
SHEETS</li>
    </ul>
    <p>This page is to demonstrate the use of
CSS3 in our HTML document. The CSS is used to
style your html doc. file as it can be used in three
ways by embedding it in your elememt tag the
second way is to use the style element tag in the
head of your HTML file and then calling the
following tag for styling the last method is to
create a seperate file of css and then linking it to
yur html doc. file using link tag and href attribute.
</p>
    <p>The process of linking external style sheets
to your HTML document is also known as
skinning.</p>
    <h3>Benefits of using CSS3</h3>
    <ol>
      <li>Improved control over formatting</li>
      <li>Improves site maintainability</li>
      <li>Improves page download speed</li>
      <li>Improves output flexibility</li>
    </ol>
    <h3 >CSS3 Properties</h3>
    <table border="1px" width="50%">
    <thead>
    <td>Property Type</td>
    <td>Property</td>
    </thead>
    <tr>
    <td rowspan="5">FONTS</td>
    <td>font-family</td>
    </tr>
    <tr>
    <td>font-size</td>
    </tr>
    <tr>
    <td>font-style</td>
    </tr>
    <tr>
    <td>font-weight</td>
    </tr>
```

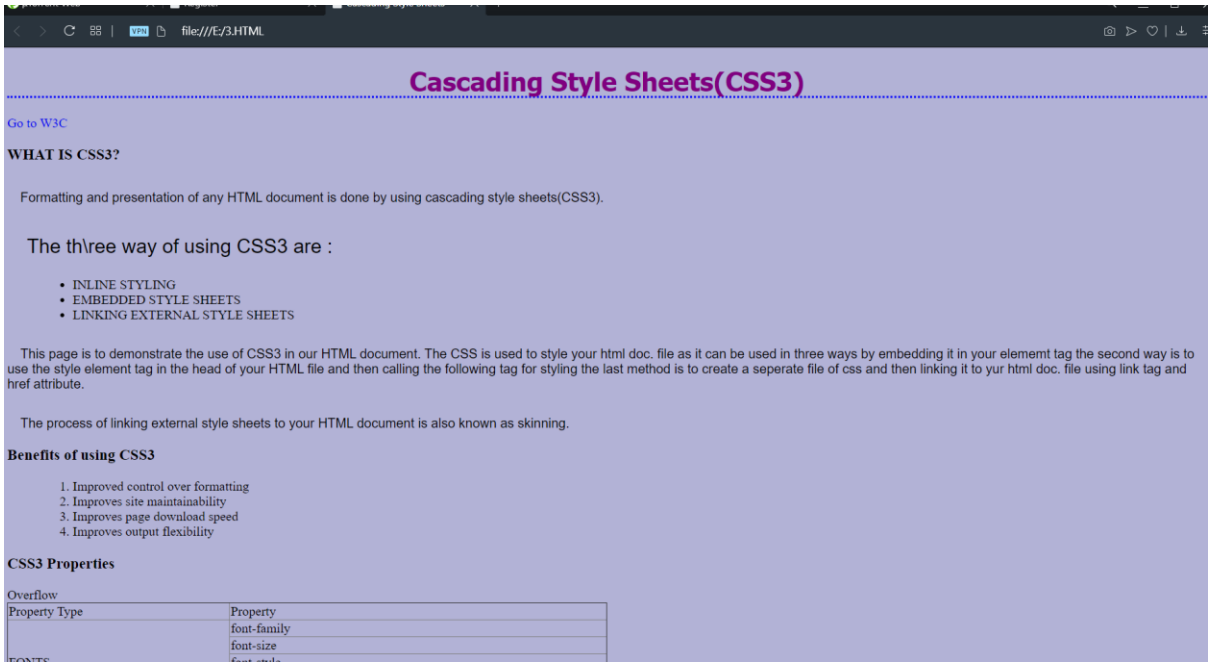
```
<tr>
<td>font-face</td>
</tr>
<tr>
<td rowspan="5">TEXT</td>
<td>letter-spacing</td>
</tr>
<tr>
<td>line-height</td>
</tr>
<tr>
<td>text-align</td>
</tr>
<tr>
<td>text-decoration</td>
</tr>
<tr>
<td>text-indent</td>
</tr>
<tr>
<td rowspan="5">COLOR AND
BACKGROUND</td>
<td>background-color</td>
</tr>
<tr>
<td>background-image</td>
</tr>
<tr>
<td>background-position</td>
</tr>
<tr>
<td>background-repeat</td>
</tr>
<tr>
<td>color</td>
</tr>
<tr>
<td rowspan="6">BORDERS</td>
<td>border-color</td>
</tr>
<tr>
<td>border-width</td>
</tr>
```

```
<tr>
<td>border-style</td>
</tr>
<tr>
<td>border-top</td>
</tr>
<tr>
<td>border-top-color</td>
</tr>
<tr>
<td>border-top-width</td>
</tr>
<tr>
<td rowspan="4">SPACING</td>
<td>padding</td>
</tr>
<tr>
<td>padding-top,padding-bottom,padding-
right,padding-left</td>
</tr>
<tr>
<td>margin</td>
</tr>
<tr>
<td>margin-top,margin-bottom,margin-
left,margin-right</td>
</tr>
<tr>
<td rowspan="5">SIZING</td>
<td>max-height</td>
</tr>
<tr>
<td>max-width</td>
</tr>
<tr>
<td>min-height</td>
</tr>
<tr>
<td>min-width</td>
</tr>
<tr>
<td>width</td>
</tr>
```

<tr>
<td rowspan="5">LAYOUTS</td>
<td>bottom,left,top and right</td>
</tr>
<tr>Overflow</tr>
<tr>
<td>position</td>
</tr>
<tr>
<td>visibility</td>
</tr>
<tr>
<td>z-index</td>
</tr>
<tr>
<td rowspan="3">LISTS</td>
<td>list-style</td>
</tr>
<tr>
<td>list-style-image</td>
</tr>
<tr>
<td>list-style-type</td>
</tr>
</table>
<h3>Applying style class</h3>
To apply style class to specify the special style to a particular paragraph over a html document containing several paragraph element in the html document user shall declare the class attribute in that particular html element and then call it later in the embedded style sheet by using period(.)class.
<details><summary>Psuedo Class</summary>
Psuedo class gives you access to information that's not declared in the document, such as whether the mouse hovering over an element or whether the user previously clicked(visited) a particular hyperlink
</details>
<h3>Measurement Unit in CSS</h3>
You can classify the measurement in CSS3 in the following type :

```
<ol>
  <li>Relative : A pixel is a relative-length measuement- it varies in size, based on screen resolution. Other relative length includes em(which, as a measurement means the font's uppercase M height-the most frequently used font measurement), ex(the font's x-height-usually set to a lowercase x's heigth) and percentage(e.g., font-size:50%)</li>
  <li>Absolute : They do not vary in size based on the system. These units are inches(in), centimeter(cm), millimeter(mm), point(pt; 1pt=1/72inches), and picas(pi; 1pc=12points)</li>
</ol>
<p>Whenever possible, use relative-length measurement. If you use absolute-length measurement, your document may not scale well on some client browsers(e.g., smartphones) </p>
    <aside id="W3C">
      To ensure that your style sheets work in various web browsers, test them on many web browsers, and use the <a href="http://www.google.com" target="_blank">W3C CSS validator.</a>
    </aside>
  </body>
</html>
```

OUTPUT:


file:///E:/3.HTML
Cascading Style Sheets(CSS3)
Go to W3C
WHAT IS CSS3?
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The th\ree way of using CSS3 are :
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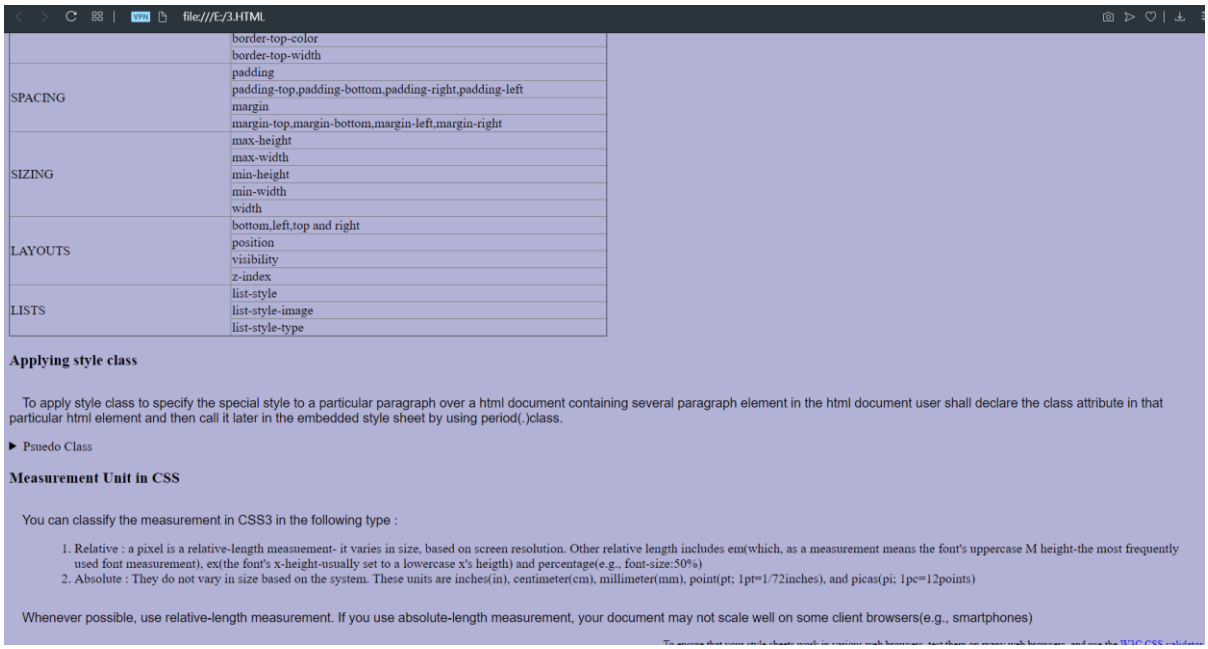
The process of linking external style sheets to your HTML document is also known as skinning.
Benefits of using CSS3
1. Improved control over formatting
2. Improves site maintainability
3. Improves page download speed
4. Improves output flexibility
CSS3 Properties
Overflow
Property Type
Property
font-family
font-size


file:///E:/3.HTML
border-top-color
border-top-width
SPACING
padding
padding-top,padding-bottom,padding-right,padding-left
margin
margin-top,margin-bottom,margin-left,margin-right
SIZING
max-height
max-width
min-height
min-width
width
LAYOUTS
bottom,left,top and right
position
visibility
z-index
LISTS
list-style
list-style-image
list-style-type
Applying style class
To apply style class to specify the special style to a particular paragraph over a html document containing several paragraph element in the html document user shall declare the class attribute in that particular html element and then call it later in the embedded style sheet by using period(.)class.
Psuedo Class
Measurement Unit in CSS
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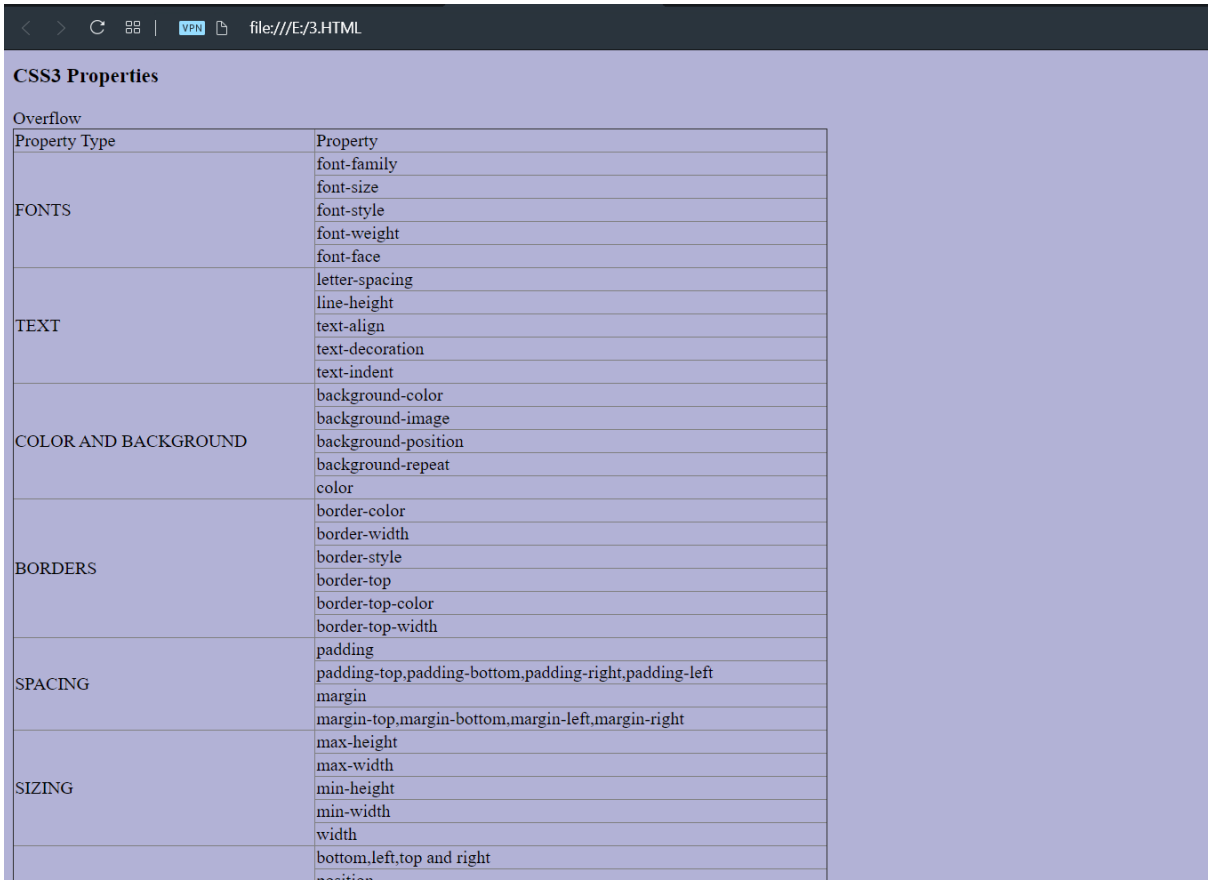
2. Absolute : They do not vary in size based on the system. These units are inches(in), centimeter(cm), millimeter(mm), point(pt; 1pt=1/72inches), and picas(pi; 1pc=12points)
Whenever possible, use relative-length measurement. If you use absolute-length measurement, your document may not scale well on some client browsers(e.g., smartphones)


file:///E:/3.HTML
CSS3 Properties
Overflow
Property Type
Property
FONTS
font-family
font-size
font-style
font-weight
font-face
TEXT
letter-spacing
line-height
text-align
text-decoration
text-indent
COLOR AND BACKGROUND
background-color
background-image
background-position
background-repeat
color
BORDERS
border-color
border-width
border-style
border-top
border-top-color
border-top-width
SPACING
padding
padding-top,padding-bottom,padding-right,padding-left
margin
margin-top,margin-bottom,margin-left,margin-right
SIZING
max-height
max-width
min-height
min-width
width
bottom,left,top and right

PROGRAM-4

Procedure:-

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")
2. Now **unzip** the downloaded file into a directory of our choice.

Step 2

Check the installed directory to ensure it contains the following sub-directories:
a.bin folder
b. logs folder
c. webapps folder
d. work folder
e. temp folder
f. conf folder
g. lib folder

Step 3

Create Environment variable JAVA_HOME.

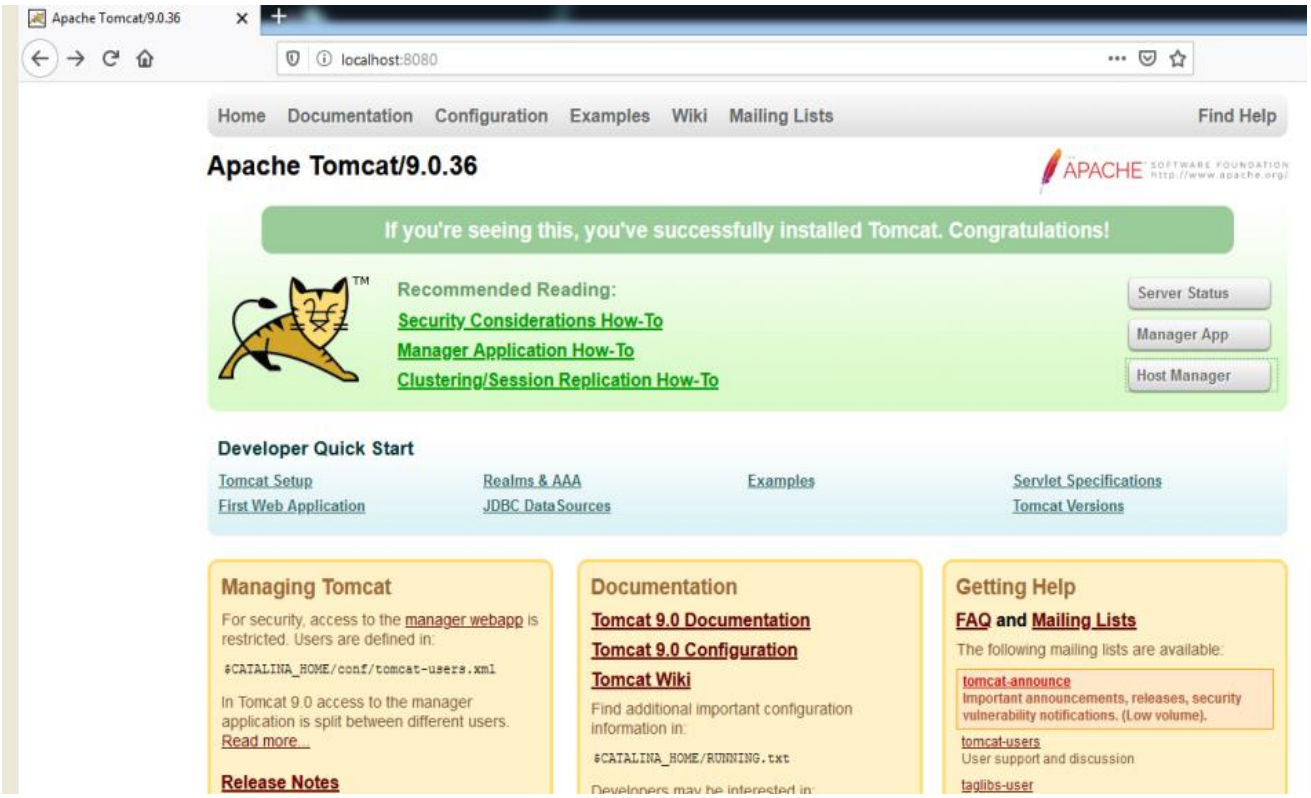
Configure Tomcat Server
The configuration files of the Apache Tomcat Server are located in the "conf" sub-directory of our
Tomcat installed directory, for example "E:\myserver\tomcat7.0.40\conf". There are 4 configuration
XML files:
1. context.xml file
2. tomcat-users.xml file

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:
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. We can change it according to our need.
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
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
Step 5(**a**) **Start Server**
Step 5(**b**) **Access the Server**
Open a browser then enter the URL "http://localhost:8080" to access the Tomcat server's welcome
page.

Output-


Apache Tomcat/9.0.36
localhost:8080
Home
Documentation
Configuration
Examples
Wiki
Mailing Lists
Find Help
Apache Tomcat/9.0.36
APACHE SOFTWARE FOUNDATION http://www.apache.org/
If you're seeing this, you've successfully installed Tomcat. Congratulations!
Recommended Reading:
Security Considerations How-To
Manager Application How-To
Clustering/Session Replication How-To
Server Status
Manager App
Host Manager
Developer Quick Start
Tomcat Setup
First Web Application
Realms & AAA
JDBC DataSources
Examples
Servlet Specifications
Tomcat Versions
Managing Tomcat
For security, access to the manager webapp is restricted. Users are defined in:
$CATALINA_HOME/conf/tomcat-users.xml
In Tomcat 9.0 access to the manager application is split between different users.
Read more...
Release Notes
Documentation
Tomcat 9.0 Documentation
Tomcat 9.0 Configuration
Tomcat Wiki
Find additional important configuration information in:
$CATALINA_HOME/RUNNING.txt
Getting Help
FAQ and Mailing Lists
The following mailing lists are available:
tomcat-announce
Important announcements, releases, security vulnerability notifications. (Low volume).
tomcat-users
User support and discussion
taglibs-user

PROGRAM-5

```
<?xml version="1.0" encoding="UTF-8"?>
```

Advantages of web.xml files

- The first benefit of the xml is we can write it in our won markup language. There is a no restricted to limited sets of tags. By defining our own tag we can create a markup language in terms of specific problem.
- Searching the data is easy and efficient.

```
<?xml version="1.0" encoding="UTF-8"?>
<note>
  <to>Paras</to><br>
  <from>Tushar</from><br>
  <heading>Reminder</heading><br>
  <body>Have a great day!</body>
</note>
```

OUTPUT:

Paras
Tushar
Reminder
Have a great day!

PROGRAM-6

```
<html>
        <head>
          <meta charset="UTF-8">
          <meta name="viewport" content="width=device-width, initial-
        scale=1.0">
          <title>Website</title>
        </head>
        <body>
        <?php


        $name = $email = $gender = $comment = $website = "";


        if ($_SERVER["REQUEST_METHOD"] == "POST") {
          $name = test_input($_POST["name"]);
          $email = test_input($_POST["email"]);
          $website = test_input($_POST["website"]);
          $comment = test_input($_POST["comment"]);
          $gender = test_input($_POST["gender"]);
        }


        function test_input($data) {
          $data = trim($data);
          $data = stripslashes($data);
          $data = htmlspecialchars($data);
          return $data;
        }
        ?>


        <h2>PHP Form Validation Example</h2>
        <form method="post" action="<?php echo
        htmlspecialchars($_SERVER["PHP_SELF"]);?>">
          Name: <input type="text" name="name">
          <br><br>
          E-mail: <input type="text" name="email">
          <br><br>
          Website: <input type="text" name="website">
          <br><br>
```

```
  Comment: <textarea name="comment" rows="5"
cols="40"></textarea>
  <br><br>
  Gender:
  <input type="radio" name="gender" value="female">Female
  <input type="radio" name="gender" value="male">Male
  <input type="radio" name="gender" value="other">Other
  <br><br>
  <input type="submit" name="submit" value="Submit">
</form>


<?php
echo "<h2>Check Your Entry:</h2>";
echo $name;
echo "<br>";
echo $email;
echo "<br>";
echo $website;
echo "<br>";
echo $comment;
echo "<br>";
echo $gender;
?>
          </body>
          </html>
```

OUTPUT:


VPN
file:///E:/6.html
PHP Form Validation Example
"> Name:
E-mail:
Website:
Comment:
Gender: Female Male Other
Submit

PROGRAM-7

```
<html>
<head>
<title>Reaction Timer</title>
<style type="text/css">
body {
font-family: sans-serif;
}
#shape {
width: 200px;
height: 200px;
background-color: red;
display: none;
position: relative;
}
.bold {
font-weight: bold;
}
</style>
</head>
<body>
<h1>Test Your Reactions!</h1>
<p>Click on the boxes and circles as quickly as you can!</p>
<p class="bold">Your time: <span
id="timeTaken"></span></p>
<div id="shape"></div>
```

```
<script type="text/javascript">
var start = new Date().getTime();
function getRandomColor() {
var letters = '0123456789ABCDEF'.split('');

var color = '#';

for (var i = 0; i < 6; i++ ) {

color += letters[Math.floor(Math.random() * 16)];

}

return color;

}

function makeShapeAppear() {

var top = Math.random() * 400;

var left = Math.random() * 400;

var width = (Math.random() * 200) + 100;

if (Math.random() > 0.5) {
```

```
document.getElementById("shape").style.borderRadius = "50%";

} else {

document.getElementById("shape").style.borderRadius = "0";

}

document.getElementById("shape").style.backgroundColor =
getRandomColor();

document.getElementById("shape").style.width = width + "px";
document.getElementById("shape").style.height = width + "px";

document.getElementById("shape").style.top = top + "px";
document.getElementById("shape").style.left = left + "px";

document.getElementById("shape").style.display = "block";

start = new Date().getTime();

}

function appearAfterDelay() {

setTimeout(makeShapeAppear, Math.random() * 2000);

}
```

```
appearAfterDelay();

document.getElementById("shape").onclick = function() {

document.getElementById("shape").style.display = "none";

var end = new Date().getTime();

var timeTaken = (end - start) / 1000;

document.getElementById("timeTaken").innerHTML = timeTaken + "s";
appearAfterDelay();
}
</script>
</body>
</html>
```

OUTPUT:


file:///E:/7.html
Test Your Reactions!
Click on the boxes and circles as quickly as you can!
Your time: 1.146s

PROGRAM-8

(i) PYTHON PROGRAM TO ADD TO NUMBERS

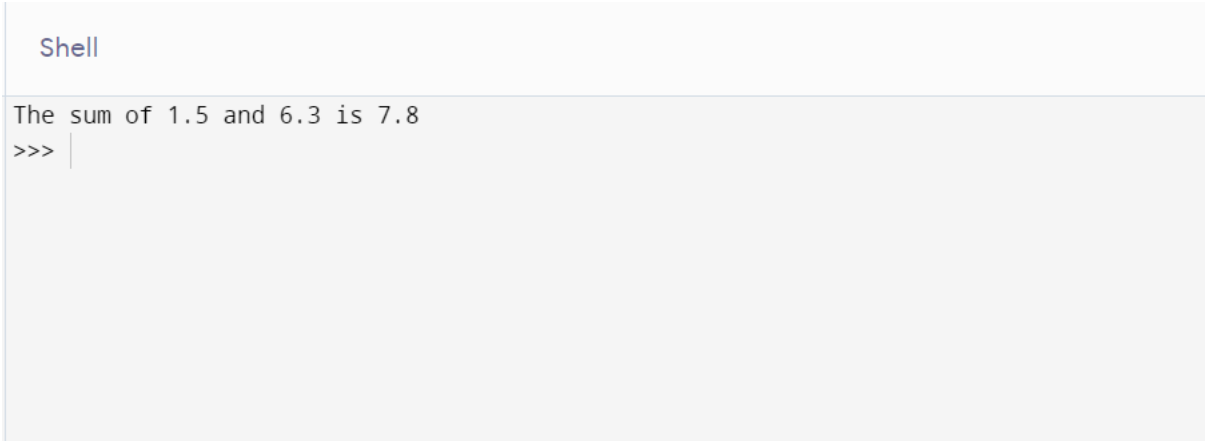
Num1= 1.5

Num2= 6.3

Sum= num1 +num2

Print(‘ sum of {0} and {1} is {2}’.format(num1,num2,sum))

OUTPUT:



(ii) PYTHON PROGRAM TO CHECK NUMBER IS ODD OR EVEN

```
Num = int(input(“enter a number:”))
If( num%2==0:
    Print (“{0} is even”.format(num))
Else:
     Print(“{0} is odd”.format(num))
```

OUTPUT:

(iii) PYTHON PROGRAM TO CHECK WHETHER A STRING IS PALINDROME OR NOT

```
My_str = ‘mom’
My_str = my_str.casefold()
    Rev_str = reversed(my_str)
    If list (my_str) == list(rev_str):
        Print(“the string is palindrome”
    Else:
        Print (“the string is not a palindrome”)
```

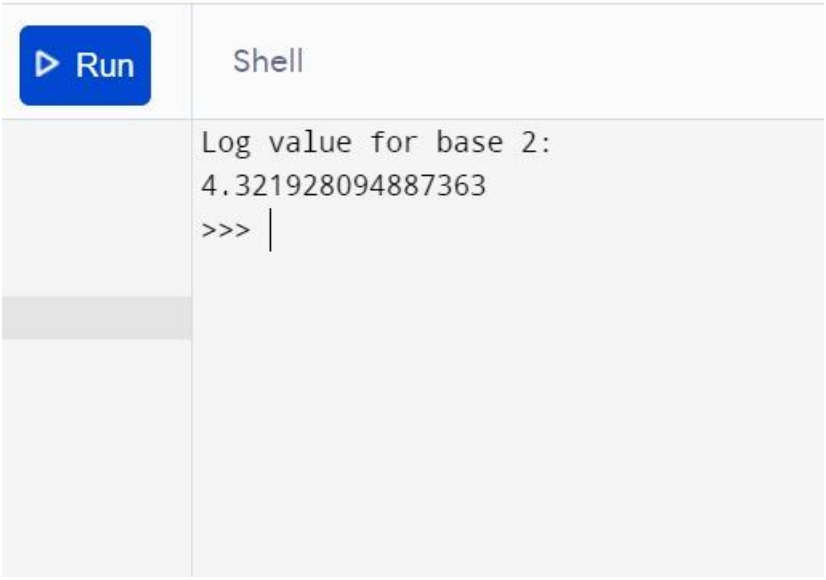
OUTPUT:

PROGRAM -9

(i) USE PYTHON TO CREATE PROGRAMS FOR SCIENTIFIC COMPUTATIONS:

```
import math

print ("Log value for base 2: ")
print (math.log2(20))
```



(ii)USING PYTHON TO CALCULATE SCIENTIFIC COMPUTATIONS:

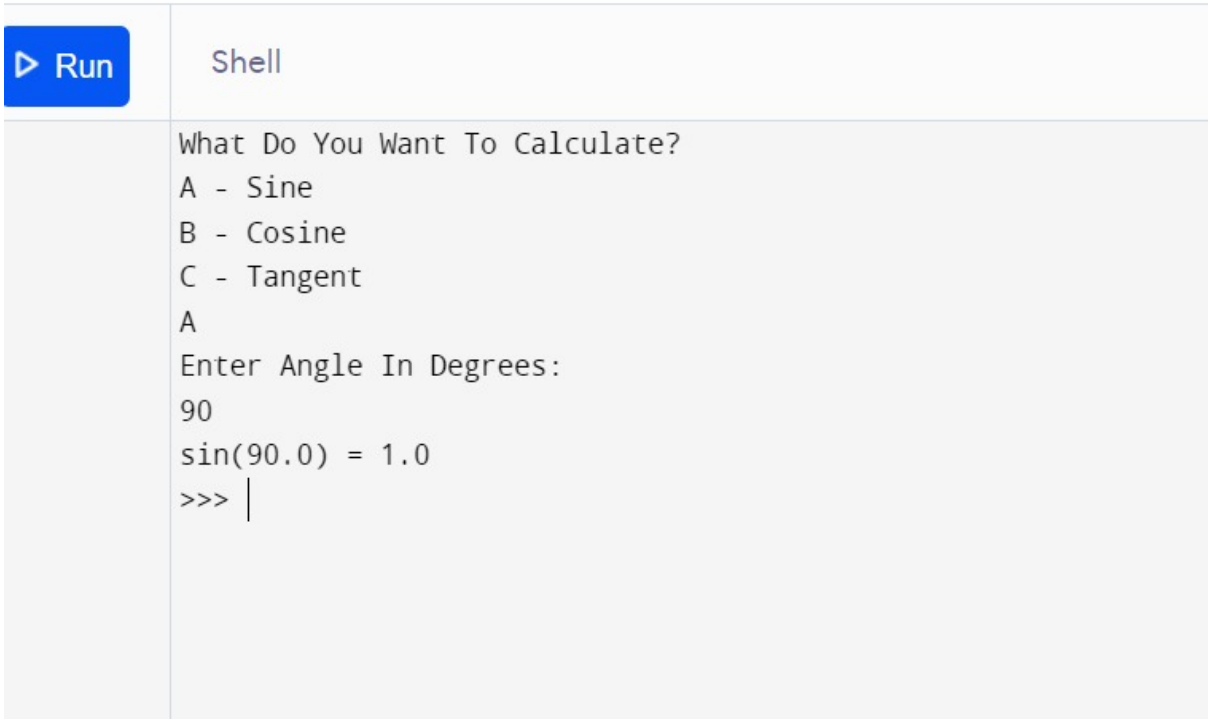
```
import math

print("What Do You Want To Calculate?")
print("A - Sine")
print("B - Cosine")
print("C - Tangent")
t = input()
print("Enter Angle In Degrees: ")
ang = float(input())
pi = math.acos(-1)
if t == "A" or t == "a":
    print("sin(" + str(ang) + ") = " + str(math.sin(ang*pi/180)))

elif t == "B" or t == "b":
    print("cos(" + str(ang) + ") = " + str(math.cos(ang*pi/180)))

elif t == "C" or t == "c":
print("tan(" + str(ang) + ") = " + str(math.tan(ang*pi/180)))
```

OUTPUT:


Run
Shell
What Do You Want To Calculate?
A - Sine
B - Cosine
C - Tangent
A
Enter Angle In Degrees:
90
sin(90.0) = 1.0
>>>