Nrupathunga University, Bengaluru
Department of Computer Science
Bachelor of Computer Application – IV SEMESTER

Animation Lab

(USING HTML 5.0 & CSS)

Part A:

1) Write a HTML/5 program to demonstrate the use of Font family, font variant, font style, and font size.

```
<!DOCTYPE html>
<html>
<head>
<style>
body {background-color: powderblue;}
h1   {color: blue;font-family: "Times New Roman",Times, serif;}
p    {color: red;font-family: "Lucida Console", "Courier New", monospace; font-size: 15px}
p.small {font-variant: small-caps;}
p.a {
  font-style: normal;
}

p.b {
  font-style: italic;
}

p.c {
  font-style: oblique;
}
</style>
</head>
<body>

<h1>HTML and CSS</h1>
<p>HTML (the Hypertext Markup Language) and CSS (Cascading Style Sheets) are two of the core technologies for building Web pages. HTML provides the structure of the page, CSS the (visual and aural) layout, for a variety of devices. Along with graphics and scripting, HTML and CSS are the basis of building Web pages and Web Applications.</p>

<h1>What is HTML?</h1>

<p class="small">
HTML is the language for describing the structure of Web pages.</p>

<h1>What is CSS?</h1>
```

```
<p class="a">CSS is the language for describing the presentation of Web pages, including colors, layout, and fonts. It allows one to adapt the presentation to different types of devices, such as large screens, small screens, or printers.</p>

<p class="b">CSS is independent of HTML and can be used with any XML-based markup language. The separation of HTML from CSS makes it easier to maintain sites, share style sheets across pages, and tailor pages to different environments.</p>

<p class="c">This is referred to as the separation of structure (or: content) from presentation.</p>

</body>
</html>
```

2) Write a HTML/5 program to display random contents using list properties:
   a) Ordered list b) Unordered list

```
<html>
<head>
<title> Order List tag </title>
</head>
<body>
<h3 align="center" style="color : red">To illustrate ORDER list tags</h3>
<hr COLOR="RED">
<h4>Numbered list:</h4>
<ol>
<li>Apples</li>
<li>Bananas</li>
<li>Lemons</li>
<li>Oranges</li>
</ol>

<h4>Uppercase Letters list:</h4>

<ol type="A">
<li>Apples</li>
<li>Bananas</li>
<li>Lemons</li>
<li>Oranges</li>
</ol>
```

```
<h4>Lowercase letters list:</h4>

<ol type="a">

<li>Apples</li>
<li>Bananas</li>
<li>Lemons</li>
<li>Oranges</li>
</ol>

<h4>Roman numbers list:</h4>

<ol type="I">
<li>Apples</li>
<li>Bananas</li>
<li>Lemons</li>
<li>Oranges</li>
</ol>

<h4>Lowercase Roman numbers list:</h4>

<ol type="i">

<li>Apples</li>
<li>Bananas</li>
<li>Lemons</li>
<li>Oranges</li>
</ol>
</body>
</html>
```

3) Write a HTML/5 program to create gradient using CSS.

```
<!DOCTYPE html>
<html>
<head>
<style>
#grad1 {
  height: 200px;
  background-color: red; /* For browsers that do not support gradients */
  background-image: linear-gradient(to right, red , yellow);
}
```

```
#grad2 {
  height: 200px;
  background-color: red; /* For browsers that do not support gradients */
  background-image: linear-gradient(to bottom right, red, yellow);
}
#grad3 {
  background-image: linear-gradient(180deg, red, yellow);
}
</style>
</head>
<body>
<div id="grad1">
First Division of Webpage
<h1>Linear Gradient - Left to Right</h1>
<p>This linear gradient starts red at the left, transitioning to yellow (to the right):</p>
</div>
<div id="grad2">
Second Division of Webpage
<h1>Linear Gradient - Diagonal</h1>
<p>This linear gradient starts red at top left, transitioning to yellow (at bottom right):</p>
</div>
<div id="grad3">
Second Division of Webpage
<h1>Linear Gradient - 180 deg straight line</h1>
<p>instead of 180 degree, you can try 0, 90, -90 to get the gradation in different angles</p>
</div>
</body>
</html>
```

4) Write a HTML/5 code to demonstrate following CSS animation properties:
   a) Delay b) Direction c) Duration

```
<!DOCTYPE html>
<html>
<head>
<style>
div.delay-0 {
  animation-name: move;
  animation-delay: 0s;
  animation-duration: 3s;
```

```
  animation-fill-mode: forwards;
animation-direction: normal;

}

div.delay-1500 {
  animation-name: move;
  animation-delay: 1500ms;
  animation-duration: 3s;
  animation-fill-mode: forwards;
animation-direction: reverse;

}

div.delay-5 {
  animation-name: move;
  animation-delay: 5s;
  animation-duration: 3s;
  animation-fill-mode: forwards;
animation-direction: alternate;

}

div.delay-neg-500 {
  animation-name: move;
  animation-delay: -500ms;
  animation-duration: 3s;
  animation-fill-mode: forwards;
animation-direction: alternate-reverse;
}

@keyframes move {
  from { left: 0px; }
  to { left: 400px; }
}

div {
  width: 50px;
  height: 50px;
  background-color: orange;
  border-radius: 25px;
  position: relative;
}
```

```
</style>
</head>
<body>
<h1>Animation - Delay Direction and Duration</h1>

<p>animation-delay: 0s; (default)</p>
Animation delay of 0 seconds and the direction is normal
<div class="delay-0"></div>
<p>animation-delay: 1500ms;</p>
Animation delay of 1500 seconds and the direction is reverse
<div class="delay-1500"></div>

<p>animation-delay: 5s;</p>
Animation delay of 5 seconds and the direction alternates between normal and reverse starting forwards
<div class="delay-5"></div>
<p>animation-delay: -500ms;</p>
Animation delay of -500 seconds and the direction alternates starting backwards
<div class="delay-neg-500"></div>
</body>
</html>
```

5) Write a HTML/5 program to demonstrate keyframes

```
<!DOCTYPE html>
<html>
<head>
<style>
div {
  width: 100px;
  height: 100px;
  background: red;
  position: relative;
  animation: mymove 5s infinite;
}

@keyframes mymove {
  from {top: 0px;}
  to {top: 200px;}
}
</style>
</head>
```

```
<body>
<h1>The @keyframes Rule</h1>
<div></div>
</body>
</html>
```

6) Write a HTML/5 code to demonstrate CSS transition and transformation.

Transition

```
<!DOCTYPE html>
<html>
<head>
<style>
div {
  width: 100px;
  height: 100px;
  background: red;
  transition-property: width;
  transition-duration: 5s;
  transition-timing-function: linear;
}

div:hover {
  width: 300px;
}
</style>
</head>
<body>

<h1>The transition-duration Property</h1>

<p>Hover over the div element below, to see the transition effect (the transition effect will lasts for 5 seconds):</p>

<div></div>

</body>
</html>
```

Transformation

```
<!DOCTYPE html>
```

```
<html>
<head>
<style>
div.a {
  width: 150px;
  height: 80px;
  background-color: green;
  -ms-transform: rotate(20deg); /* IE 9 */
  transform: rotate(20deg);
}

div.b {
  width: 150px;
  height: 80px;
  background-color: yellow;
  -ms-transform: skewY(20deg); /* IE 9 */
  transform: skewY(20deg);
}

div.c {
  width: 150px;
  height: 80px;
  background-color: blue;
  -ms-transform: scaleY(1.5); /* IE 9 */
  transform: scaleY(1.5);
}
</style>
</head>
<body>

<h1>The transform Property</h1>

<h2>transform: rotate(20deg):</h2>
<div class="a">Animation!</div>
<br>

<h2>transform: skewY(20deg):</h2>
<div class="b">HTML!</div>
<br>

<h2>transform: scaleY(1.5):</h2>
<div class="c">CSS!</div>
```

```
</body>
</html>
```

For exam (program illustrating both transition and tansformation)

```
<!DOCTYPE html>
<html>
<head>
<style>
div {
  width: 100px;
  height: 100px;
  background: red;
  transition-property: width;
  transition-duration: 5s;
  transition-timing-function: linear;
  transform : rotate(20deg);
}

div:hover {
  width: 300px;
}
</style>
</head>
<body>

<h1>The transition-duration Property</h1>

<p>Hover over the div element below, to see the transition effect (the transition effect will lasts for 5 seconds):</p>

<div></div>

</body>
</html>
```


7) Write a HTML/5 program to turn on/off a light bulb using JavaScript. Make use of .gif image and buttons.

(download and store two png images of a light bulb – one that is ON and one that is OFF)

```
<!DOCTYPE html>
<html>
<body>
<head>
```

```
<style>
button { padding:10px; margin:60px; background-color:orange; }
</style>
</head>
<script>
function light(value)
	{
	var pic;
		if(value == 0)
		{
			pic="of.png";
		}
		else
		{
			pic="on.png";
		}
		document.getElementById('bulb').src=pic;
	}
</script>


<img id="bulb" src="of.png">

<br>
<button onclick="light(1)">Turn ON</button>
<button onclick="light(0)">Turn OF</button>
</body>
</html>
```