Indira Gandhi Delhi Technical University for Women

(Established by Govt. of Delhi vide Act 09 of 2012)

(Formerly Indira Gandhi Institute of Technology)

Kashmere Gate, Delhi - 110006

LABORATORY FILE
for
Web Technologies

MCA 207

Submitted by:

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MCA, 3rd Sem
02004092019

Submitted to:

Ms. Ankita Singh

Date: 04-09-2020
LAB 5 WORK

Ques 10: Write a JavaScript code that illustrates the use of different native objects (Number, String, Maths, Date)

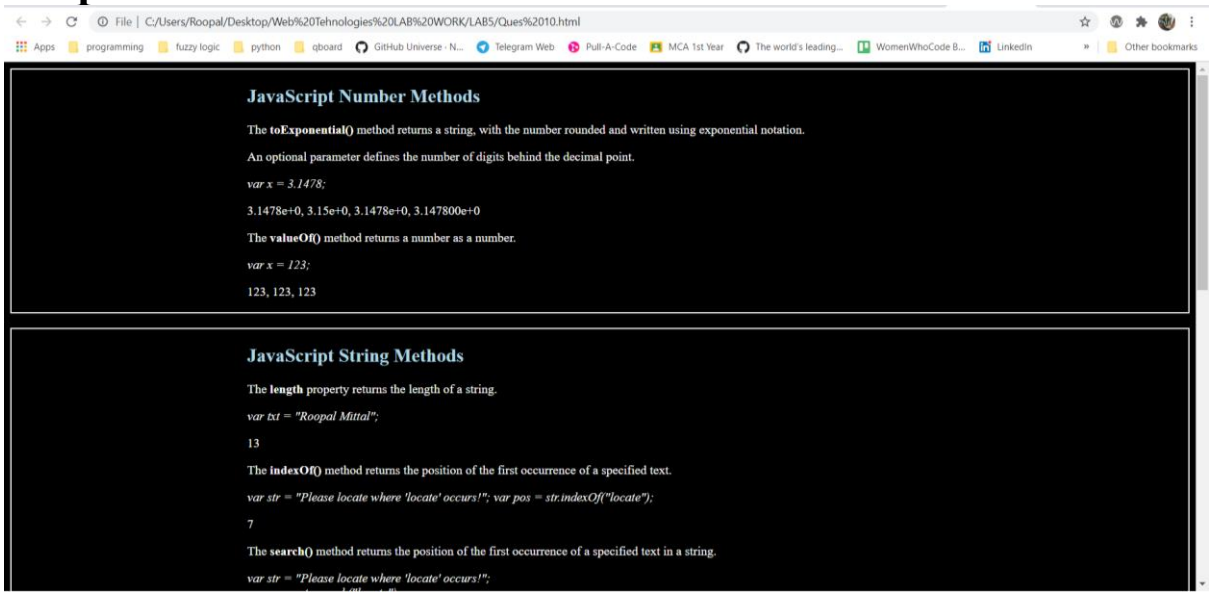
HTML + JS Code:

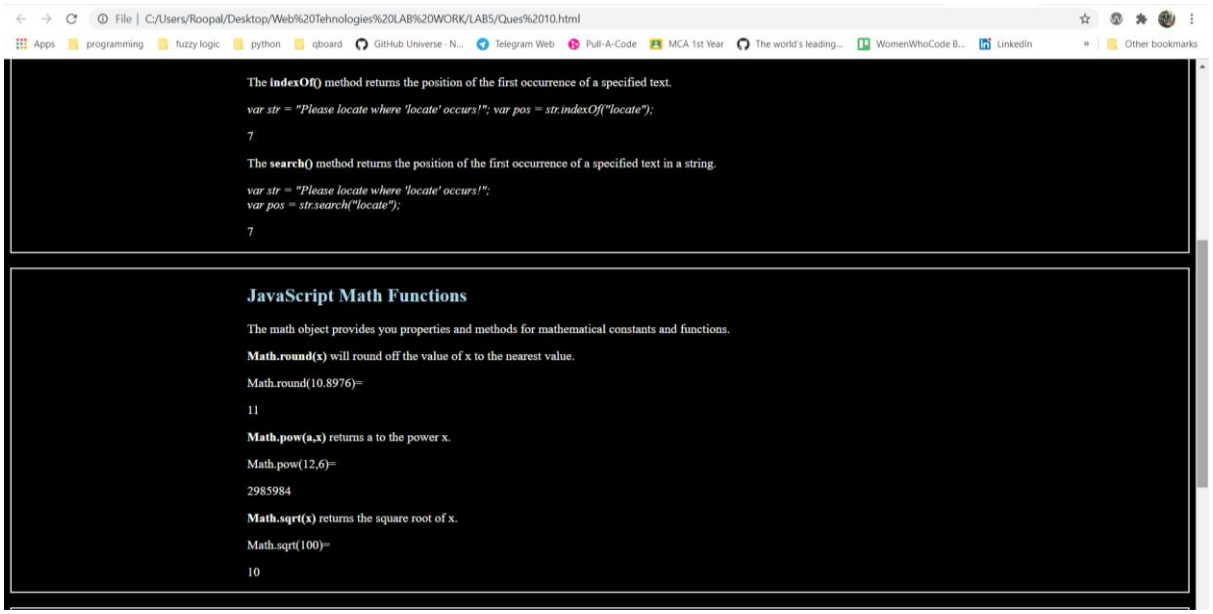
```
<html>
<head>
	<title>JavaScript Native Objects</title>
	<style>
	h2{
	color: LightBlue;
	}
	div{
	border: 2px solid;
	padding-left: 300px;
	padding-right: 300px;

	}
	</style>
</head>
<body bgcolor=black text=white>

<div>
<h2>JavaScript Number Methods</h2>
<p>The <b>toExponential()</b> method returns a string, with the number rounded and written using exponential notation.</p>
<p>An optional parameter defines the number of digits behind the decimal point.</p>
<i> var x = 3.1478;</i>
<p id="expo"></p>

<p>The <b>valueOf()</b> method returns a number as a number.</p>
<i>var x = 123;</i>
<p id="valueof"></p>
</div>

<br>
<div>
<h2>JavaScript String Methods</h2>
<p>The <b>length</b> property returns the length of a string.</p>
<i>var txt = "Roopal Mittal";</i>
<p id="length"></p>

<p>The <b>indexOf()</b> method returns the position of the first occurrence of a specified text.</p>
<i> var str = "Please locate where 'locate' occurs!";</i>
```

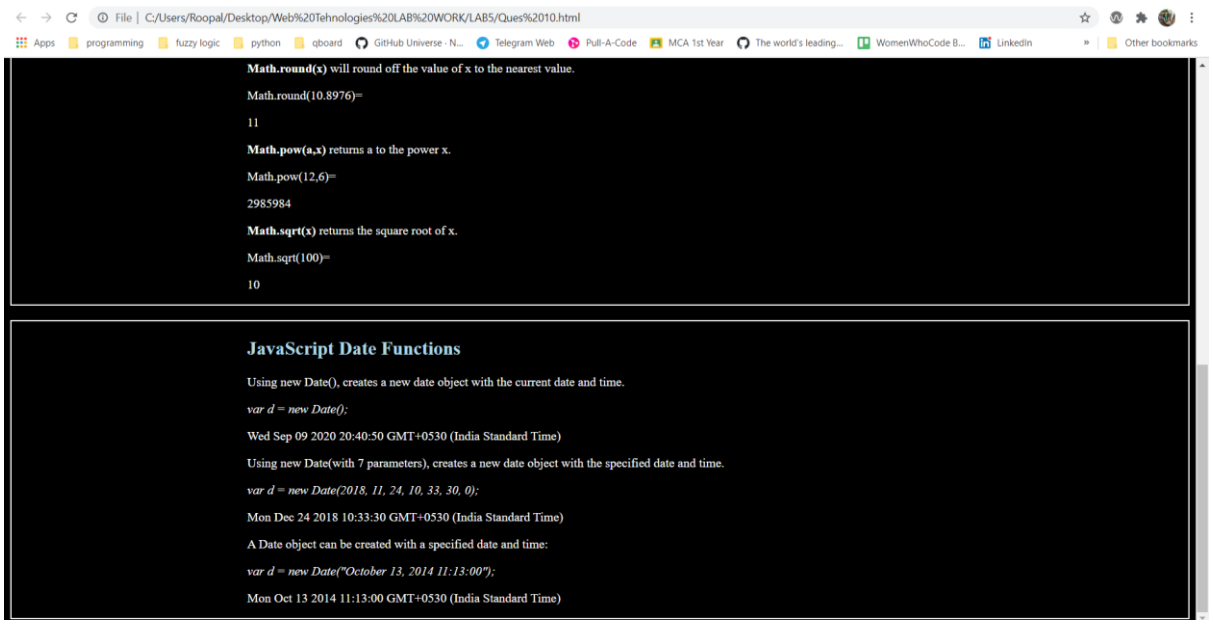
```
<i>  var pos = str.indexOf("locate");</i>
<p id="index"></p>

<p>The <b>search()</b> method returns the position of the first occurrence of a
specified text in a string.</p>
<i>var str = "Please locate where 'locate' occurs!";</i><br>
<i>  var pos = str.search("locate");</i>
<p id="search"></p>
</div>
<br>

<div>
<h2>JavaScript Math Functions</h2>
The math object provides you properties and methods for mathematical constants
and functions.
<p><b>Math.round(x)</b> will round off the value of x to the nearest value.</p>
<p>Math.round(10.8976)=</p>
<p id="round"></p>

<p><b>Math.pow(a,x)</b> returns a to the power x.</p>
<p>Math.pow(12,6)=</p>
<p id="power"></p>

<p><b>Math.sqrt(x)</b> returns the square root of x.</p>
<p>Math.sqrt(100)=</p>
<p id="sqrt"></p>
</div>
<br>

<div>
<h2>JavaScript Date Functions</h2>
<p>Using new Date(), creates a new date object with the current date and time.</p>
<i>var d = new Date();</i>
<p id="date"></p>

<p>Using new Date(with 7 parameters), creates a new date object with the specified
date and time.</p>
<i>var d = new Date(2018, 11, 24, 10, 33, 30, 0);</i>
<p id="date1"></p>

<p>A Date object can be created with a specified date and time:</p>
<i>var d = new Date("October 13, 2014 11:13:00");</i>
<p id="date2"></p>

</div>
<script>
document.getElementById("round").innerHTML = Math.round(10.8976);

document.getElementById("power").innerHTML = Math.pow(12,6);

document.getElementById("sqrt").innerHTML = Math.sqrt(100);
```

```
var x = 3.1478;
document.getElementById("expo").innerHTML =x.toExponential() + ", " +
x.toExponential(2) + ", " + x.toExponential(4) + ", " + x.toExponential(6);

var x = 123;
document.getElementById("valueof").innerHTML = x.valueOf() + ", "
+(123).valueOf() + ", " +(100 + 23).valueOf();

var txt = "Roopal Mittal";
document.getElementById("length").innerHTML = txt.length;

var str = "Please locate where 'locate' occurs!";
var pos = str.indexOf("locate");
document.getElementById("index").innerHTML = pos;

var str = "Please locate where 'locate' occurs!";
var pos = str.search("locate");
document.getElementById("search").innerHTML = pos;

var d = new Date();
document.getElementById("date").innerHTML = d;

var d = new Date(2018, 11, 24, 10, 33, 30, 0);
document.getElementById("date1").innerHTML = d;

var d = new Date("October 13, 2014 11:13:00");
document.getElementById("date2").innerHTML = d;
</script>
</body>
</html>
```

Output:




File | C:/Users/Roopal/Desktop/Web%20Tehnologies%20LAB%20WORK/LAB5/Ques%2010.html
Apps
programming
fuzzy logic
python
qboard
GitHub Universe - N...
Telegram Web
Pull-A-Code
MCA 1st Year
The world's leading...
WomenWhoCode B...
LinkedIn
Other bookmarks
The indexOf() method returns the position of the first occurrence of a specified text.
var str = "Please locate where 'locate' occurs!"; var pos = str.indexOf("locate");
7
The search() method returns the position of the first occurrence of a specified text in a string.
var str = "Please locate where 'locate' occurs!";
var pos = str.search("locate");
7
JavaScript Math Functions
The math object provides you properties and methods for mathematical constants and functions.
Math.round(x) will round off the value of x to the nearest value.
Math.round(10.8976)=
11
Math.pow(a,x) returns a to the power x.
Math.pow(12,6)=
2985984
Math.sqrt(x) returns the square root of x.
Math.sqrt(100)=
10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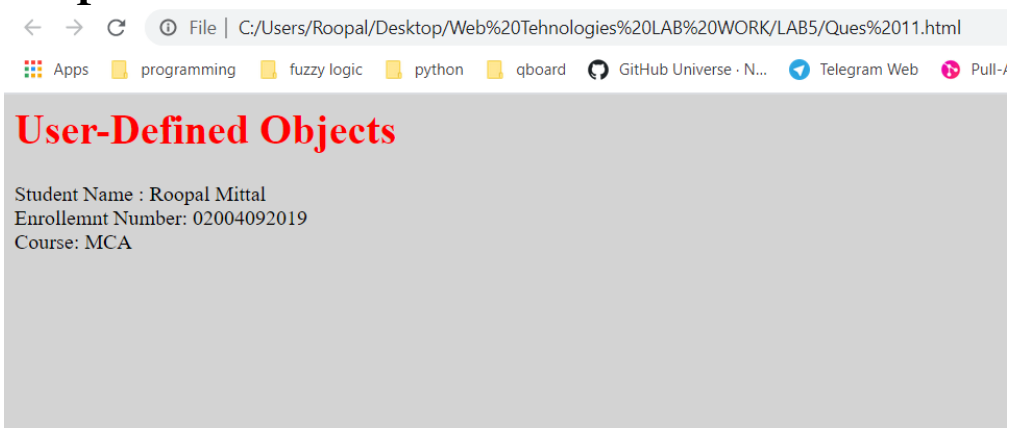
Math.sqrt(100)=
10
JavaScript Date Functions
Using new Date(), creates a new date object with the current date and time.
var d = new Date();
Wed Sep 09 2020 20:40:50 GMT+0530 (India Standard Time)
Using new Date(with 7 parameters), creates a new date object with the specified date and time.
var d = new Date(2018, 11, 24, 10, 33, 30, 0);
Mon Dec 24 2018 10:33:30 GMT+0530 (India Standard Time)
A Date object can be created with a specified date and time:
var d = new Date("October 13, 2014 11:13:00");
Mon Oct 13 2014 11:13:00 GMT+0530 (India Standard Time)

Ques 11: Write a Java Script code to illustrate how to create user-defined objects.

HTML + JS Code:

```
<html>
<head>
	<title>User-defined objects</title>
	<style>
	h1{
	color: Red;
	}
	</style>
	<script type = "text/javascript">
	var student = new Object();   // Create the object
	student.name = "Roopal Mittal";
	student.number  = "02004092019";
	student.course = "MCA";
	</script>
</head>

<body bgcolor="LightGray">

	<h1><b> User-Defined Objects</b></h1>
	<script type = "text/javascript">
	document.write("Student Name : " + student.name + "<br>");
	document.write("Enrollemnt Number: " + student.number + "<br>");
	document.write("Course: " + student.course + "<br>");
	</script>

</body>
</html>
```

Output:

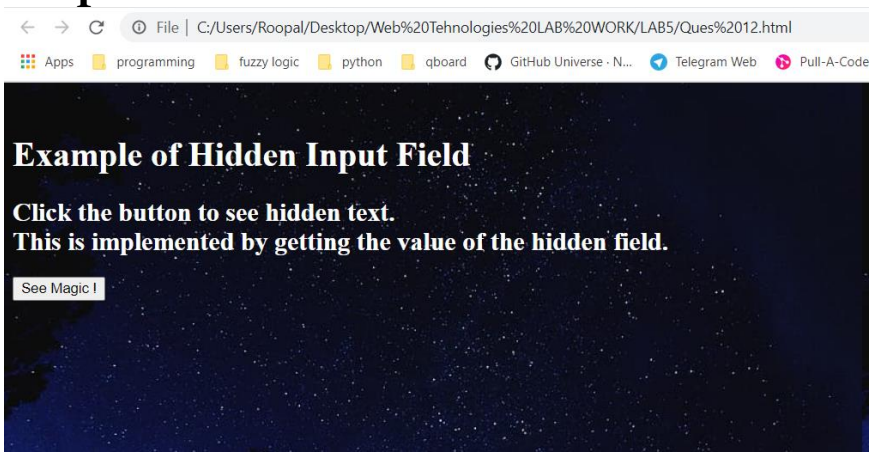


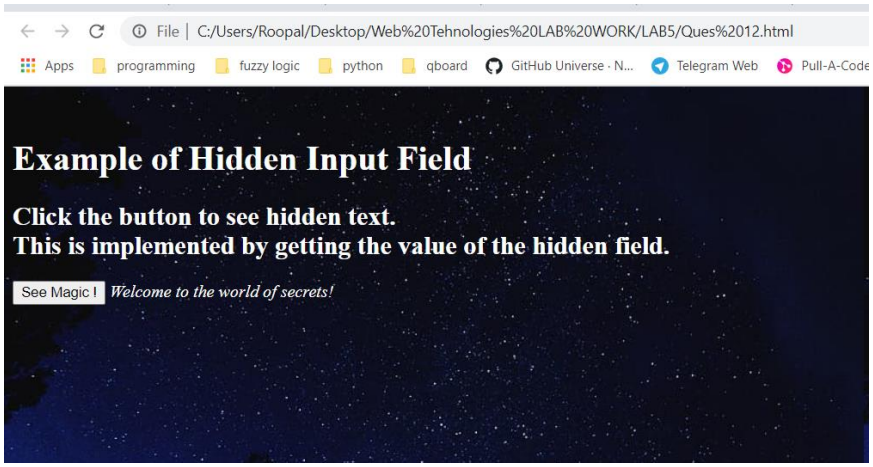
Ques 12: Write a JavaScript code to illustrate the use of Hidden field.

HTML + JS Code:

```
<html>
<head>
	<title>Hidden Elements</title>

	<style>
	body
	{
	background-image: url(bg2.jpg);
	}
	</style>

</head>
<body>

	<br>
	<h1 style="color: white;">Example of Hidden Input Field</h1>

	<input type="hidden" id="myInput" value=" Welcome to the world of
	secrets!">

	<h2 style="color: white;">Click the button to see hidden text.
	<br>This is implemented by getting the value of the hidden field.</h2>

	<button onclick="yourName()">See Magic !</button>

	<i id="magic" style="color: white;"></i>

	<script>
	function yourName() {
	var x = document.getElementById("myInput").value;
	document.getElementById("magic").innerHTML = x;
	}
	</script>

</body>
</html>
```

Output:





Ques 13: Write a JavaScript code to perform the following using Cookies:

- **Create Cookie**
- **Read Cookie**
- **Delete Cookie**

HTML Code:

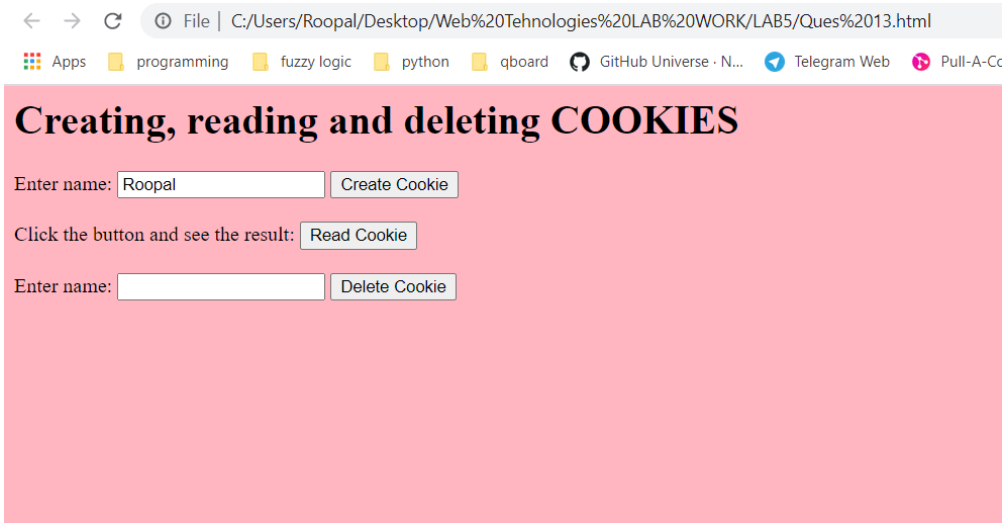
```
<html>
<head>
        <title>Cookies</title>
        <script src="Ques 13.js"></script>
</head>

<body bgcolor="LightPink">

        <b><h1>Creating, reading and deleting COOKIES</h1></b>
        <form name = "myform" action = "">
        Enter name: <input type = "text" name = "customer"/>
```

```
        <input type = "button" value = "Create Cookie" onclick = "WriteCookie();"/>
        <br><br>
        Click the button and see the result:
        <input type = "button" value = "Read Cookie" onclick = "ReadCookie()"/>

        <br><br>
        Enter name: <input type = "text" name = "customer"/>
        <input type = "button" value = "Delete Cookie" onclick = "DeleteCookie()"/>

        </form>

</body>
</html>
```

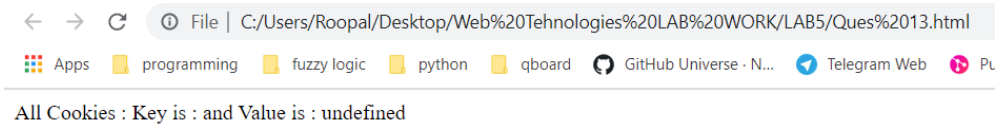
JS Code:

```
function WriteCookie() {
        if( document.myform.customer.value == "" ) {
        alert("Enter some value!");
        return;
        }
        cookievalue = escape(document.myform.customer.value) + ";";
        document.cookie = "name=" + cookievalue;
        document.write ("Setting Cookies : " + "name=" + cookievalue );
}
function ReadCookie() {
        var allcookies = document.cookie;
        document.write ("All Cookies : " + allcookies );

        // Get all the cookies pairs in an array
        cookiearray = allcookies.split(';');

        // Now take key value pair out of this array
        for(var i=0; i<cookiearray.length; i++) {
        name = cookiearray[i].split('=')[0];
        value = cookiearray[i].split('=')[1];
        document.write ("Key is : " + name + " and Value is : " + value);
        }
}
function DeleteCookie() {
        var now = new Date();
        now.setMonth( now.getMonth() - 1 );
        cookievalue = escape(document.myform.customer.value) + ";"

        document.cookie = "name=" + cookievalue;
        document.cookie = "expires=" + now.toUTCString() + ";"
        document.write("Deleting Cookies : " + "name=" + cookievalue );
}
```

Output:



On click Read Cookie



Ques 14: Perform following validations using JavaScript:

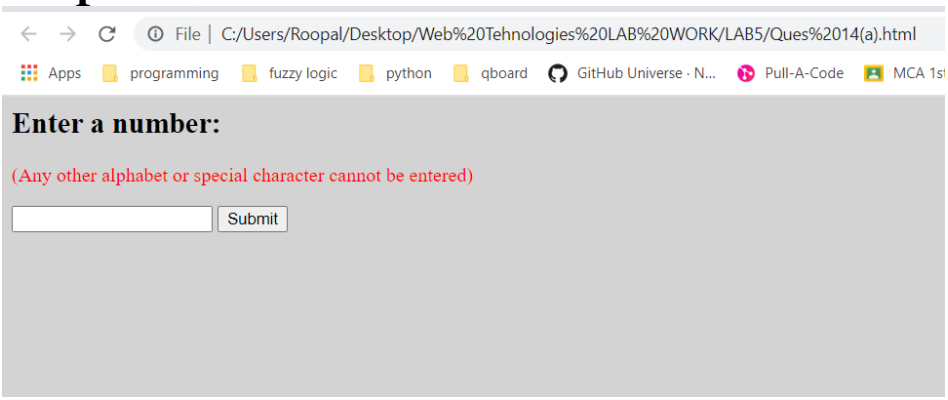
a) Validate the numeric input of data on a text box.

HTML + JS Code:

```
<html>
<head>
    <title>
    Number validation using javascript
    </title>
    <style>
    p{color: Red;}
    </style>
</head>
<body bgcolor="LightGray">

    <h2>Enter a number: </h2>
    <p>(Any other alphabet or special character cannot be entered)</p>
    <input type="text" id="tbNumbers" value=""
            onkeypress="javascript:return isNum(event)"/>
    <button type="submit">Submit</button>

</body>
<script>
    function isNum(event){
```

```
        var key = (event.which)? event.which : event.key
        if(key != 46 && key > 31 && (key < 48 || key >57))
            return false;
        return true;
    }
</script>
</html>
```

Output:



b) If any field is empty then an alert message should get displayed.

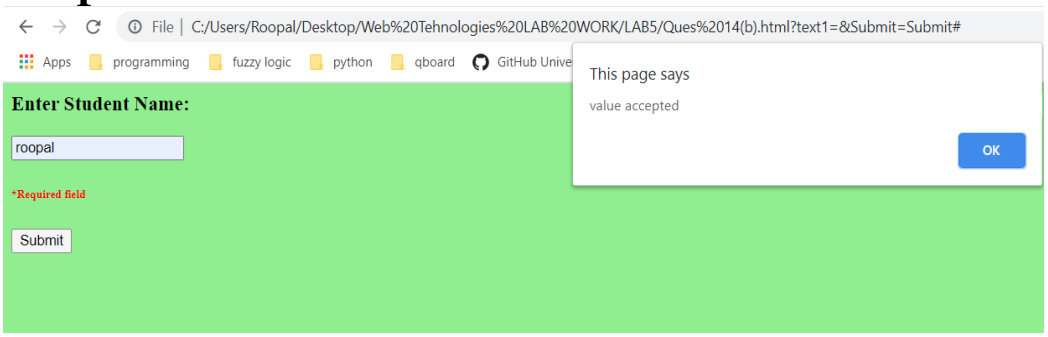
HTML Code:

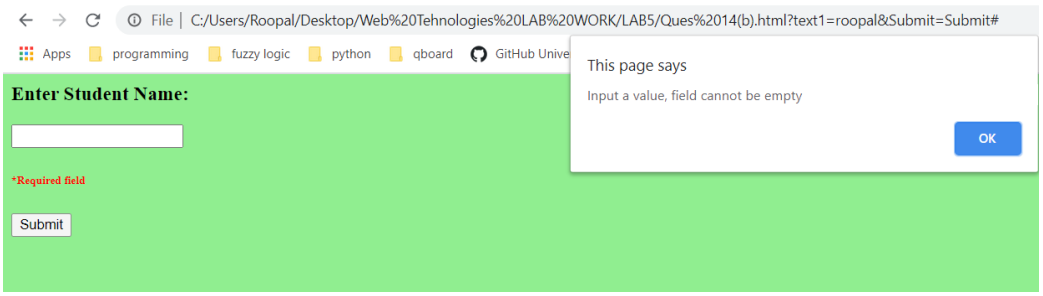
```
<html>
<head>

    <title>Checking non empty field</title>
    <script src="Ques14(b).js"></script>
    <style>
    h6{color:Red;}
    </style>

</head>
<body bgcolor= "LightGreen">

    <h3>Enter Student Name:</h3>
    <form name="form1" action="#" onsubmit="required()">
    <input type='text' name ='text1'/>
    <h6>*Required field</h6>
    <input type="submit" name="Submit" value="Submit"/>
    </form>

</body>
</html>
```

JS Code:

```
function required()
{
    var emp = document.forms["form1"]["text1"].value;
    if(emp == ""){
            alert("Input a value, field cannot be empty");
            return false;
    }
    else{
            alert("value accepted");
            return true;
    }
}
```

Output:





c) Date format validations.

HTML Code:

```
<html>
<head>
        <title>
        JavaScript form validation - checking date
        </title>
        <script src="Ques14(c).js"></script>
</head>
<body bgcolor="#FAF165" onload='document.form1.text1.focus()'>
        <h2>Input a valid date<br>
```

```
            [dd/mm/yyyy or dd-mm-yyyy format]</h2>
            <form name="form1" action="#">
            <input type='text' name='text1'/>
            <input type="submit" name="submit" value="Submit"
            onclick="validatedate(document.form1.text1)"/>
            </form>
</body>
</html>
```

JS Code:

```
function validatedate(inputText)
{
            var dateformat = /^(0?[1-9]|[12][0-9]|3[01])[\/\-](0?[1-
            9]|1[012])[\/\-]\d{4}$/;
            // Match the date format through regular expression
            if(inputText.value.match(dateformat))
            {
            document.form1.text1.focus();
            //Test which seperator is used '/' or '-'
            var opera1 = inputText.value.split('/');
            var opera2 = inputText.value.split('-');
            lopera1 = opera1.length;
            lopera2 = opera2.length;
            // Extract the string into month, date and year
            if (lopera1>1)
            {
            var pdate = inputText.value.split('/');
            }
            else if (lopera2>1)
            {
            var pdate = inputText.value.split('-');
            }
            var dd = parseInt(pdate[0]);
            var mm  = parseInt(pdate[1]);
            var yy = parseInt(pdate[2]);
            // Create list of days of a month [assume there is no leap year by
            default]
            var ListofDays = [31,28,31,30,31,30,31,31,30,31,30,31];
            if (mm==1 || mm>2)
            {
            if (dd>ListofDays[mm-1])
            {
            alert('Invalid date format!');
            return false;
            }
            }
            if (mm==2)
            {
            var lyear = false;
```

```
            if ( (!(yy % 4) && yy % 100) || !(yy % 400))
            {
            lyear = true;
            }
            if ((lyear==false) && (dd>=29))
            {
            alert('Invalid date format!');
            return false;
            }
            if ((lyear==true) && (dd>29))
            {
            alert('Invalid date format!');
            return false;
            }
            }
            }
            else
            {
            alert("Invalid date format!");
            document.form1.text1.focus();
            return false;
            }
 }
```

Output:

d) E-mail format validations.

HTML Code:

```
<html>
<head>
            <title>JavaScript form validation - checking email</title>
            <script src="Ques14(d).js"></script>
</head>
<body bgcolor="#E4FE8C" onload='document.form1.text1.focus()'>
            <h2>Enter E-mail and Submit</h2>
            <form name="form1" action="#">
```

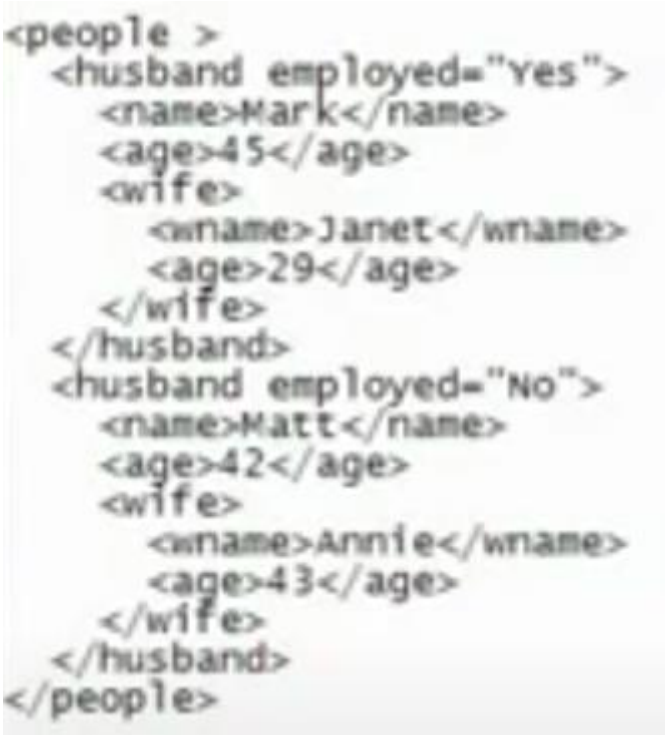
```
            <input type='text' name='text1'/></li>
            <input type="submit" name="submit" value="Submit"
            onclick="ValidateEmail(document.form1.text1)"/>
            </form>
</body>
</html>
```

JS Code:

```
function ValidateEmail(inputText)
{
    var mailformat = /^\w+([\.-]?\w+)*@\w+([\.-]?\w+)*(\.\w{2,3})+$/;
    if(inputText.value.match(mailformat))
    {
    document.form1.text1.focus();
    return true;
    }
    else
    {
    alert("You have entered an invalid email address!");
    document.form1.text1.focus();
    return false;
}
}
```

Output:

Ques 15: Create an XML document as shown below and add CSS for styling and DTD for validation.



XML Code:

```
<?xml version="1.0" encoding="UTF-8"?>
<?xml-stylesheet type="text/css" href="document.css"?>
<!DOCTYPE note SYSTEM "document.dtd">
<people>

 <husband employed="Yes">
  <name>Mark</name>
  <age>45</age>
  <wife>
     <wname> Janet</wname>
     <age>29</age>
  </wife>
 </husband>

 <husband employed="No">
  <name>Matt</name>
  <age>42</age>
  <wife>
     <wname>Annie</wname>
     <age>43</age>
  </wife>
 </husband>

</people>
```

CSS Code:

```
husband
{
   font-family: sans-serif;
   color: hotpink;
   background-color: black;
}
name
{
   color: red;
}

wife
{
   color: aqua
}
```

DTD Code:

```
<!DOCTYPE people
[
<!ELEMENT people (husband, name, age, wife)>
<!ELEMENT husband (#PCDATA)>
<!ELEMENT name (#PCDATA)>
<!ELEMENT age (#PCDATA)>
<!ELEMENT wife (wname, age)>
<!ELEMENT wname (#PCDATA)>
<!ELEMENT age (#PCDATA)>
]>
```