

# **National Institute of Technology, Tiruchirappalli**



**Department of Computer Applications**

## **Web Technology and its Applications *Assignment***

Submitted to:

Dr. Balaji Banothu

Submitted by:

Akriti Upadhyay

205120007

MCA – 2<sup>nd</sup> Year

# 1. Write a Javascript to merge two arrays and sort them as numbers, in descending order.

```
<!DOCTYPE html>

<html lang="en">

<head>

    <title>Merge Arrays</title>

</head>

<style>

    body{

        margin: 40px;

        background-color: blanchedalmond;

    }

    #submit-button{

        padding: 5px;

    }

</style>

<body>

    <h1>Merge two Arrays</h1>

    <form action="#" onsubmit="return merge()">

        <label for="a1">Array 1: </label>

        <input type="text" id="a1">

        <br><br>

        <label for="a2">Array 2: </label>

        <input type="text" id="a2">

        <br><br>
```

```
<input type="submit" id="submit-button" value="Merge arrays">

<br><br>

<label for="ans">Merged Array: </label><br><br>

<textarea name="ans" id="ans" cols="60" rows="10"></textarea>

</form>

</body>

<script>

    function merge(){

        const a1 = document.getElementById("a1").value.split(",");

        const a2 = document.getElementById("a2").value.split(",");

        let result = document.getElementById("ans");

        result.innerHTML = "";

        for(let i=0; i<a1.length; i++)

            a1[i] = parseInt(a1[i]);

        for(let i=0; i<a2.length; i++)

            a2[i] = parseInt(a2[i]);

        // merging a1 and a2

        let merged = a1.concat(a2);

        //sorting a1 and a2

        merged.sort((a, b) => {

            return b-a;

        })

        for(let i=0; i<merged.length; i++) {

            // last element printed without comma

            if(i==merged.length-1)
```

```

        result.innerHTML += `${merged[i]}`;

    else

        result.innerHTML += `${merged[i]}, `;

    }

    return false;

}

</script>

</html>

```

**2. Write an HTML page with Javascript that takes a number from one text field in the range 0-999 and display it in other text field in words. If the number is out of range ,it should show “out of range” and if it is not a number ,it should show “not a number” message in the result box.**

```

<!DOCTYPE html>

<html lang="en">

```

```
<head>

    <title>Document</title>

</head>

<style>

    body{

        margin: 40px;

        background-color: blanchedalmond;

    }

    #submit-button{

        padding: 5px;

    }

    #output{

        background-color: white;

        padding: 10px;

        border-radius: 2rem;

    }

</style>

<body>

    <h1>Convert Number to Words</h1>

    <label for="number">Enter a number: </label><br>

    <input type="text" id="number">

    <br><br>

    <input type="submit" id="submit-button" value="Submit">

    <br><br>

    <h4>Result: </h4>
```

```
<span id="output"></span>

</body>

<script>

    function toWords(num) {

        if(num<0 || num>999) {

            output.innerHTML = "Number out of Range";

        }

        else{

            const ones = ['Zero','One','Two','Three','Four','Five','Six','Seven','Eight','Nine'];

            const twos = ['Ten','Eleven','Twelve','Thirteen','Fourteen','Fifteen','Sixteen','Seventeen','Eighteen','Nineteen'];

            const tens = ['', 'Ten', 'Twenty', 'Thirty', 'Forty', 'Fifty', 'Sixty', 'Seventy', 'Eighty', 'Ninety'];

            let str = new String(num);

            let digits = str.split("");

            const rev = digits.reverse();

            let totalDigits = rev.length;

            let words = [];

            let j=0;

            for(let i=0; i<totalDigits; i++){

                switch(i){

                    // Ones digit

                    case 0:
```

```

// for multiple of ten (10, 20, 30,...) or nums
from 11-19

    if((rev[i]==0) || rev[i+1]==1)

        words[j] = '';

    else{

        words[j] = ones[rev[i]] + " ";

    }

    console.log(words[j]);

    break;

// Tens digit

case 1:

    if(rev[i]==0)

        words[j] = '';

    else if(rev[i]==1)

        words[j] = twos[rev[i-1]] + " ";

    else

        words[j] = tens[rev[i]] + " ";

    break;

// Hundreth's digit

case 2:

    if(rev[i]==0)

        words[j] = '';

    else if((rev[i-1]==0 || rev[i-2]==0))

        words[j] = ones[rev[i]] + " Hundred ";

    else

```

```
        words[j] = ones[rev[i]] + " Hundred and ";

        break;

    default:

        break;

    }

    j++;

}

words.reverse();

let finalOutput = '';

for(let i=0; i<totalDigits; i++)

    finalOutput += words[i];

output.innerHTML = finalOutput;

}

}

let num = document.getElementById('number').value;

let submit = document.getElementById('submit-button');

let output = document.getElementById('output');

if(isNaN(num)){

    output.innerHTML = "Not a Number";

}

else{

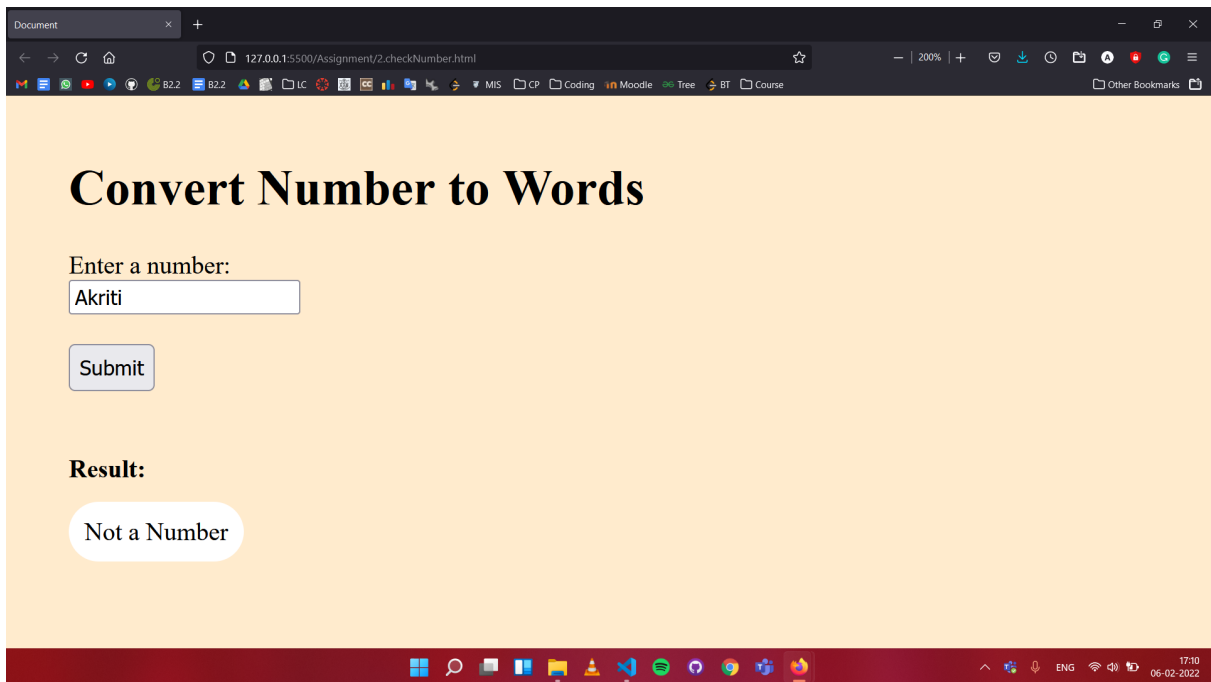
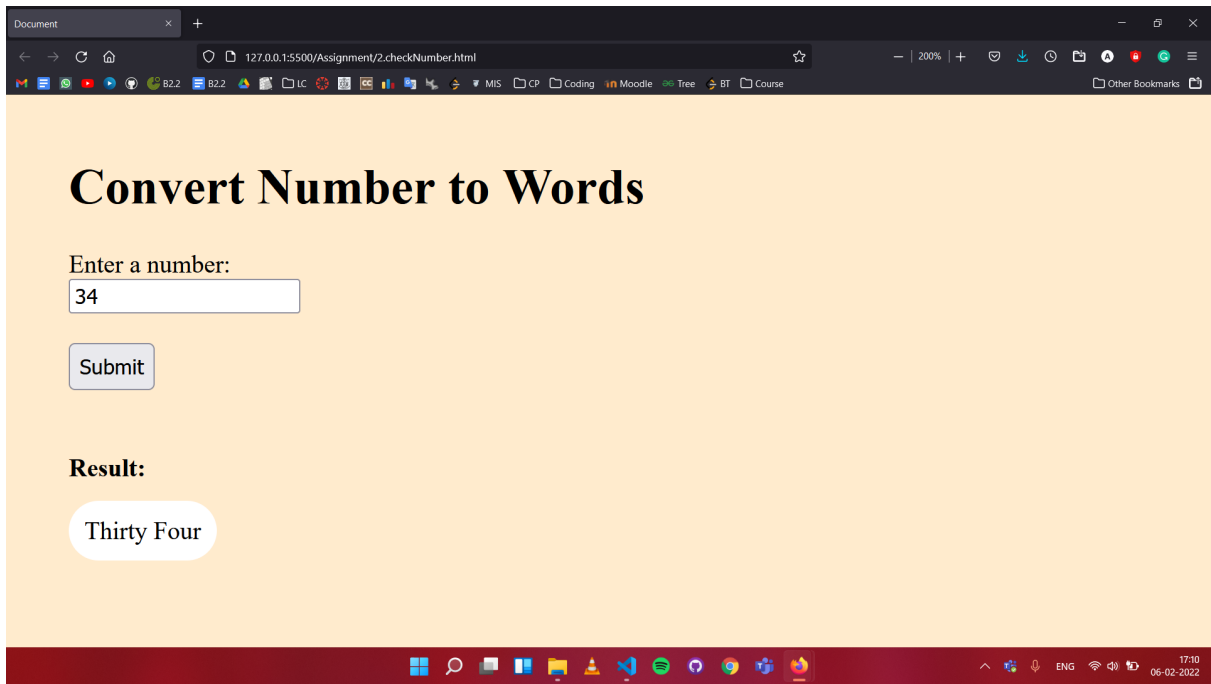
    submit.addEventListener("click", toWords(parseInt(num)));

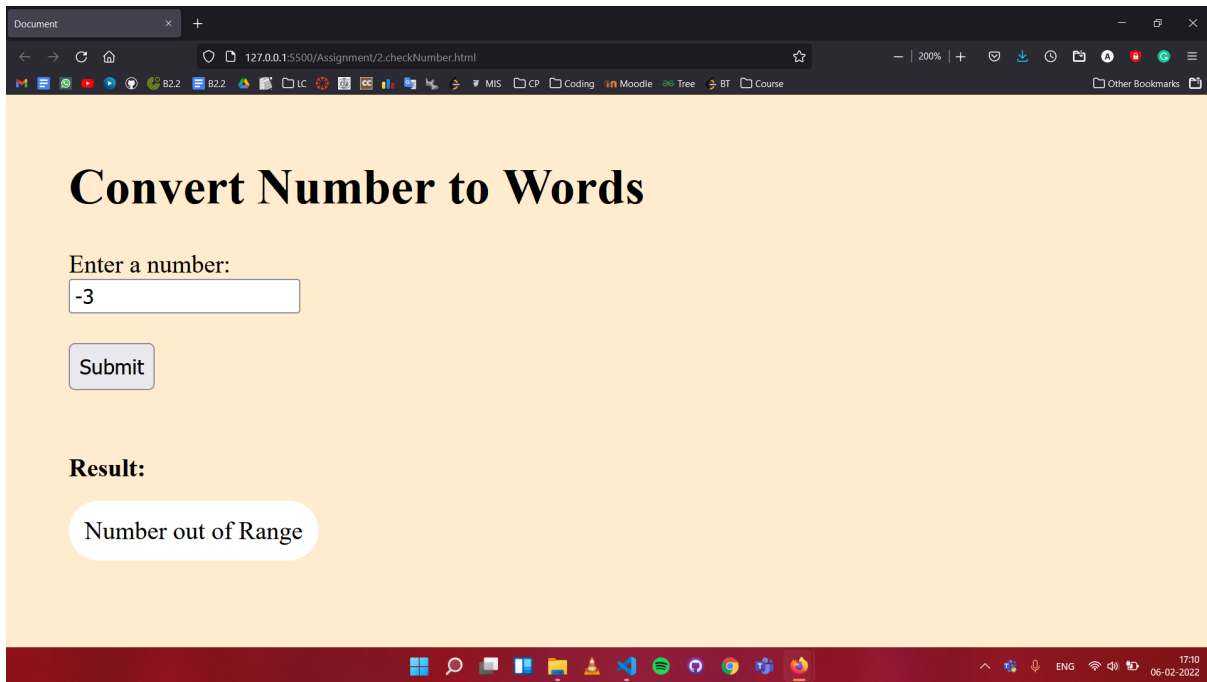
}

</script>

</html>
```







**3. Write an HTML page that has one input, which can take multi-line text and a submit button. Once the user clicks the submit button, it should show the number of characters, lines and words in the text entered using an alert message. Words are separated with white space and lines are separated with new line character.**

```
<!DOCTYPE html>

<html lang="en">

<head>

    <title>Document</title>

</head>

<style>

    body{

        margin: 40px;

        background-color: blanchedalmond;

    }

    #submit-button{
```

```
padding: 5px;

}

</style>

<body>

  <h1>Multi-line Text Operations:</h1>

  <label for="text">Enter some text: </label><br>

  <textarea name="text" id="text" cols="30" rows="10"></textarea>

  <br><br>

  <input type="submit" id="submit-button" value="Submit">

  <br><br>

</body>

<script>

  function getInfo(text){

    let totalChars = 0;

    for(let i=0; i<text.length; i++)

      if(text[i]!=" " && text[i]!='\n')

        totalChars++;

    console.log(totalChars);

    const lines = text.split('\n');

    let totalLines = lines.length;

    const words = text.split(/[ \s,]+/);

    let totalWords = words.length;
```

```
        window.alert(`Hence in the text:\n\nNumber of characters =
${totalChars}\nNumber of lines = ${totalLines}\nNumber of words =
${totalWords}`);

    }

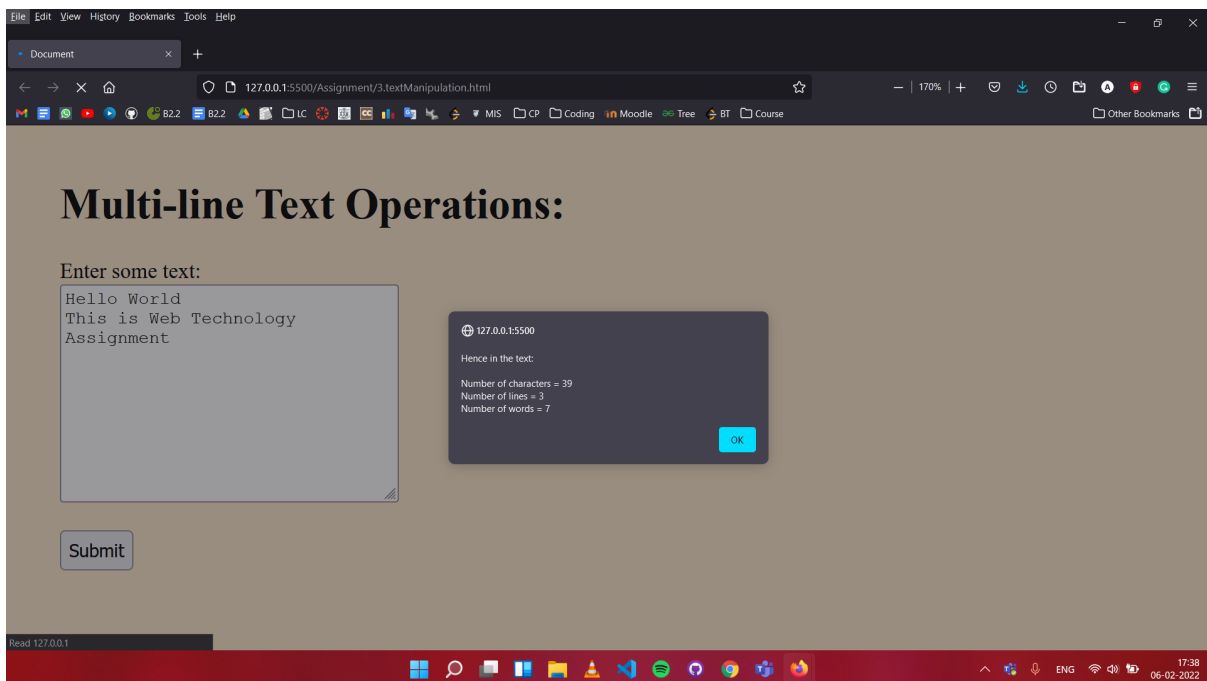
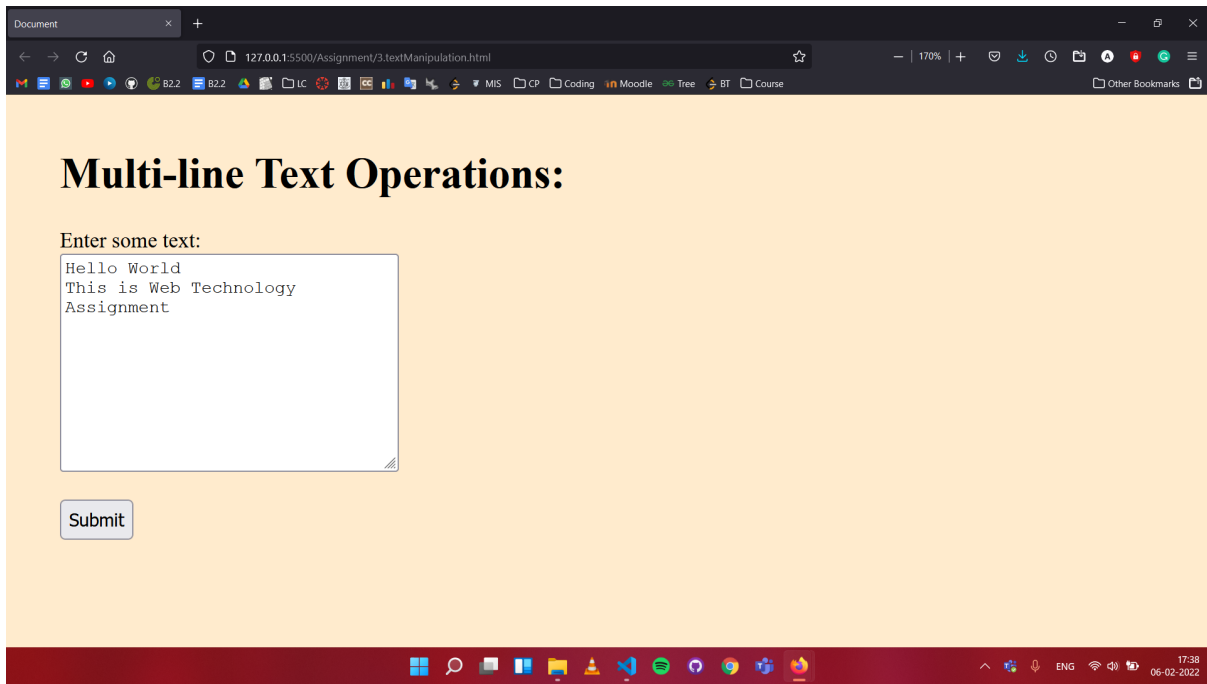
    let text = document.getElementById('text').value;

    let submit = document.getElementById('submit-button');

    submit.addEventListener("click", getInfo(text));

</script>

</html>
```



**4. Write an HTML page that contains a selection box with a list of 5 countries. In the above page when the user selects a country, its capital should be printed next to the list, and add CSS to customise the properties of the font of the capital.**

```
<!DOCTYPE html>

<html lang="en">
```

```
<head>

  <title>Document</title>

</head>

<style>

  body{

    margin: 40px;

    background-color: blanchedalmond;

  }

  #submit-button{

    padding: 5px;

  }

  #output{

    background-color: white;

    padding: 10px;

    border-radius: 2rem;

    font-family:'Lucida Sans', 'Lucida Sans Regular', 'Lucida Grande', 'Lucida Sans Unicode', Geneva, Verdana, sans-serif;

    font-size: large;

    font-weight: bold;

    color: blue;

  }

  h3:first-of-type{

    margin-bottom: -10px;

  }

</style>
```

```
<body>

  <h1>Countries and their Capitals:</h1>

  <h3><label for="country">Select a Country: </label></h3><br>

  <select name="select" id="country">

    <option value="default" selected>--Select--</option>

    <option value="india">India</option>

    <option value="germany">Germany</option>

    <option value="russia">Russia</option>

    <option value="china">China</option>

    <option value="france">France</option>

  </select>

  <br><br>

  <h3>Capital: </h3>

  <span id="output"></span>

</body>

<script>

  function getCapital(country){

    let capitals = {

      'default': '',

      'india': 'New Delhi',

      'germany': 'Berlin',

      'russia': 'Moscow',

      'china': 'Beijing',

      'france': 'Paris'

    }

  }
```

```
    const capital = capitals[country];

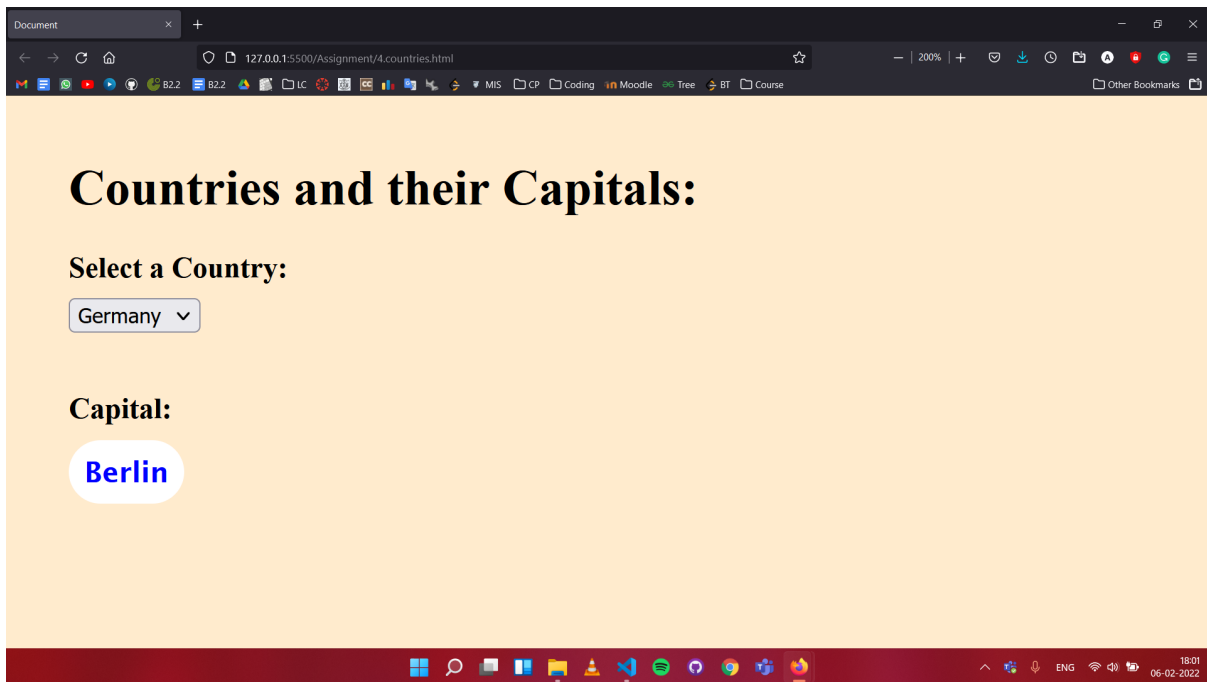
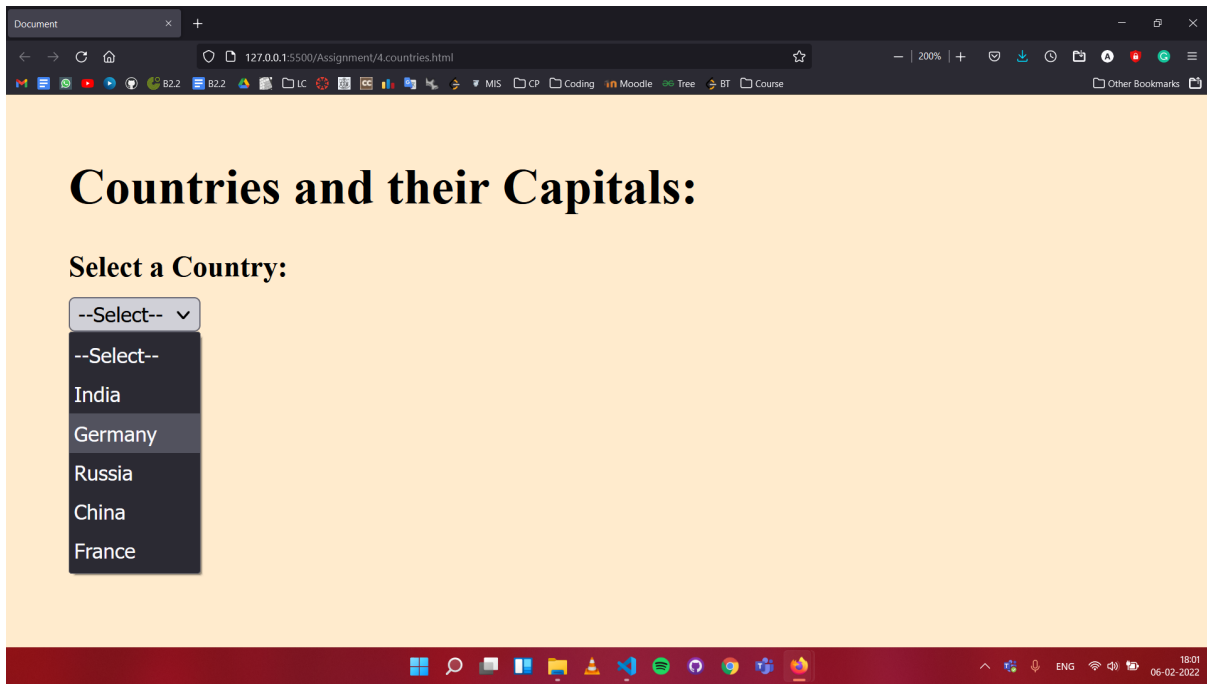
    document.getElementById('output').innerHTML = capital;
}

let country = document.getElementById('country').value;

console.log(country);

getCapital(country);
</script>
</html>
```





---

**5. Write JavaScript to validate the following fields of the Registration page.**

- 1. First Name (Name should contain alphabets and the length should not be less than 6 characters).**
- 2. Password (Password should not be less than 6 characters length).**

**3. E-mail id (should not contain any invalid and must follow the standard pattern name@domain.com)**

**4. Mobile Number (Phone number should contain 10 digits only).**

**5. Last Name and Address (should not be Empty).**

```
<!DOCTYPE html>

<html lang="en">

<head>

  <style>

    body{

      margin: 40px;

      background-color: blanchedalmond;

      display: flex;

      justify-content: center;

    }

    h1{

      background-color: yellow;

      padding: 20px;

      border-radius: 2rem;

    }

    .input-field{

      border-radius: 1rem;

      padding: 10px;

      margin-top: 5px;

    }

    label{
```



```
<input class="input-field" type="text"
placeholder="Enter Lastname " name="lname"

id="lname">

<br>

<br>

<label for="address"><b>Address : </b></label><br>

<input class="input-field" type="text"
placeholder="Enter Address" name="address"

id="address" onchange="return validateAdd() "

required>

<br>

<br>

<label for="address"><b>Phone Number : </b></label><br>

<input class="input-field" type="text"
placeholder="Enter Phone Number" name="pno"

id="pno" onchange="return validatePno() "

required>

<br>

<br>

<label for="email"><b>Email : </b></label><br>

<input class="input-field" type="text"
placeholder="Enter Email" name="email" id="email"

onchange="return validateEmail() "

required>

<br>

<br>

<label for="psw"><b>Password : </b></label><br>
```

```

        <input class="input-field" type="password"
placeholder="*****" name="psw" id="psw"

        onchange="return validatePwd()"

        required>

        <br>

        <br>

        <label for="psw-repeat"><b>Re-enter Password :
</b></label><br>

        <input class="input-field" type="password"
placeholder="*****" name="psw-repeat"

        id="psw-repeat"

        onchange="return confirmPwd()"

        required>

        <br>

        <br>

        <button type="Submit" id=btn onclick="return
validate()">Register</button>

        <button type="reset" id=btn>Clear</button>

    </form>

</div>

</div>

<script>

    function isAlpha(str) {

        return /^[a-zA-Z]+$/.test(str);

    }

    function isNumber(str) {

```

```
        return /^[0-9]+$/.test(str);
    }

    function validatePno() {

        var pno = document.getElementById("pno").value;

        if (pno.length != 10)

            alert("Phone Number should be of only 10 digits!");

        else if (!isNumber(pno))

            alert("Enter a valid Phone number");

        return false;

    }

    function validateName() {

        var fname = document.getElementById("fname").value;

        var lname = document.getElementById("lname").value;

        console.log("hello");

        if (!isAlpha(fname))

            alert("First name should contain only alphabets!");

        else if (fname.length < 6)

            alert("First name length should be more than 5");

        else if (lname == "")

            alert("Can't leave Last name empty!");

        else

            return true;

        return false;

    }

    function validateAdd() {
```

```

        var address = document.getElementById("address").value;

        if (address == "")

            alert("Can't leave address empty!");

            return false;

    }

    function validateEmail() {

        var email = document.getElementById("email").value;

        if
(/^\w+([\.-]?\w+)*@\w+([\.-]?\w+)*(\.\w{2,3})+$/).test(email))

            return true;

            alert("You have entered an invalid email address!");

            return false;

    }

    function validatePwd() {

        var paswd =
/^(?=.*[0-9])(?=.*[!@#$%^&*])[a-zA-Z0-9!@#$%^&*]{7,15}$/;

        var pwd = document.getElementById("psw").value;

        if (pwd.length < 6)

            alert("Password must be of atleast 6 characters.");

            else if (!pwd.match(paswd))

                alert("Password should contain special characters,
digit,letters");

                return false;

    }

    function confirmPwd() {

        var pwd = document.getElementById("psw").value;

```

```
        var cwd = document.getElementById("psw-repeat").value;

        if (pwd != cwd)

            alert("Password doesn't match!");

            return false;

    }

    function validate() {

        alert("You are successfully registered!");

        return true;

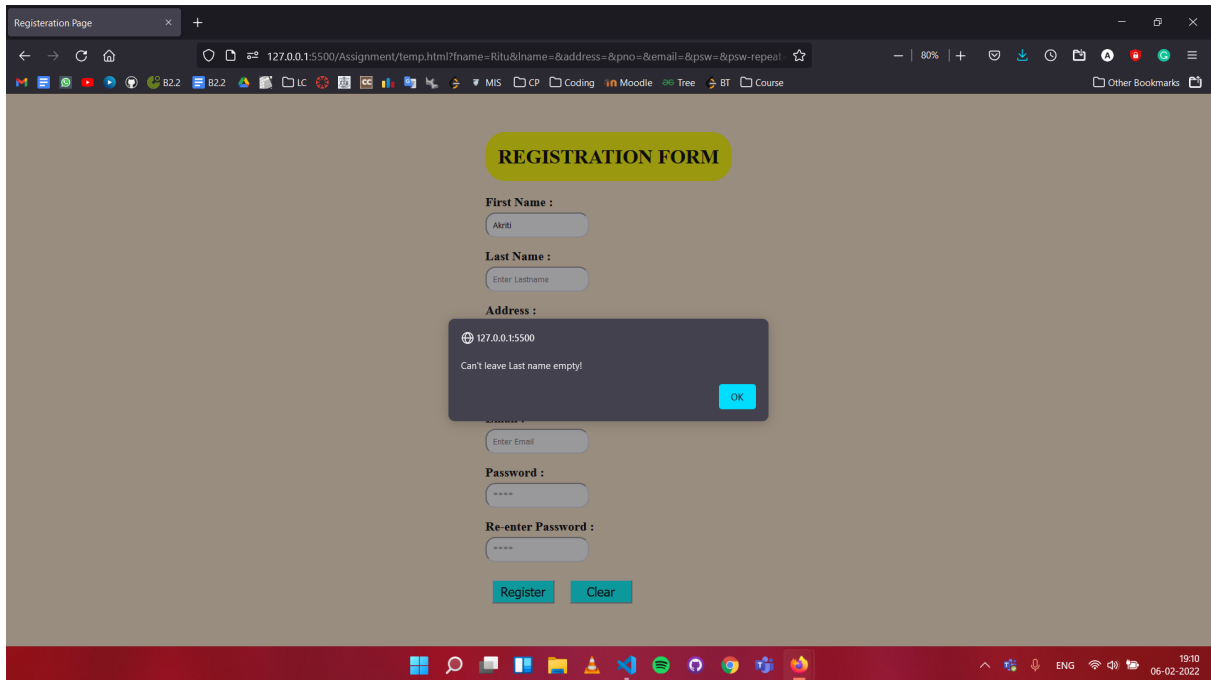
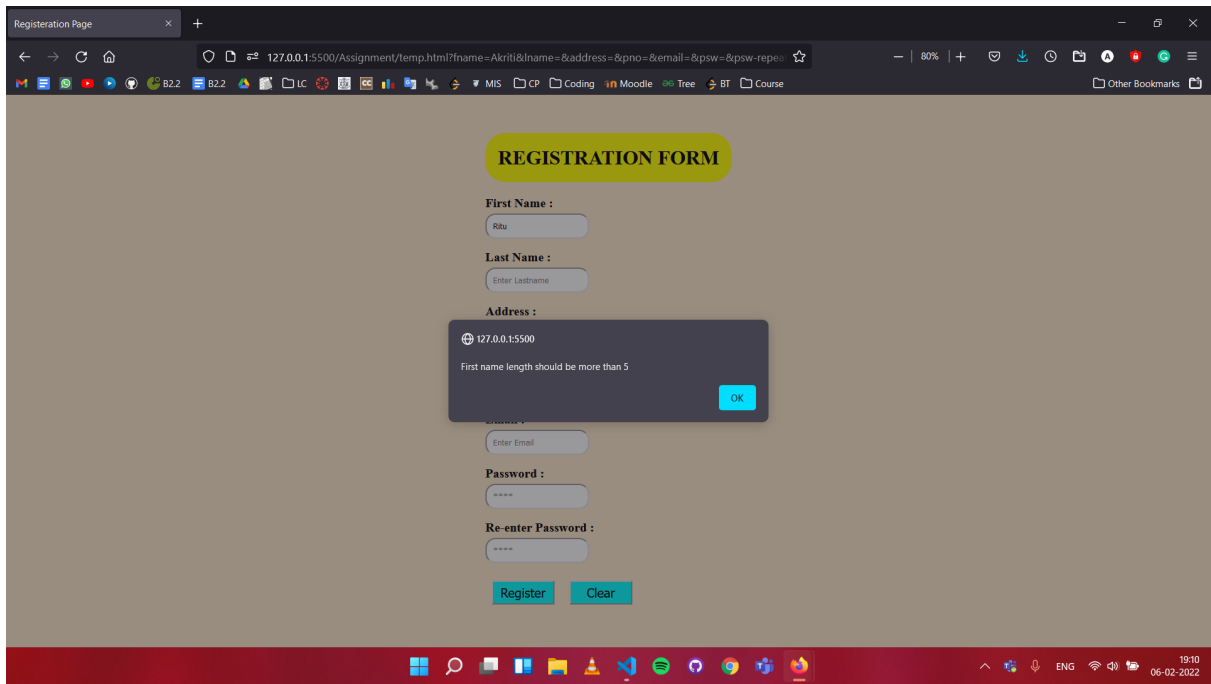
    }

</script>

</body>

</html>
```





Registration Page

127.0.0.1:5500/Assignment/temp.html?fname=Akriti&lname=Upadhyay&address=&pno=&email=&psw=&repsw=

## REGISTRATION FORM

**First Name :**

**Last Name :**

**Address :**  
  

Please fill out this field.

**Email :**

**Password :**

**Re-enter Password :**

Registration Page

127.0.0.1:5500/Assignment/temp.html?fname=Akriti&lname=Upadhyay&address=&pno=&email=&psw=&repsw=

## REGISTRATION FORM

**First Name :**

**Last Name :**

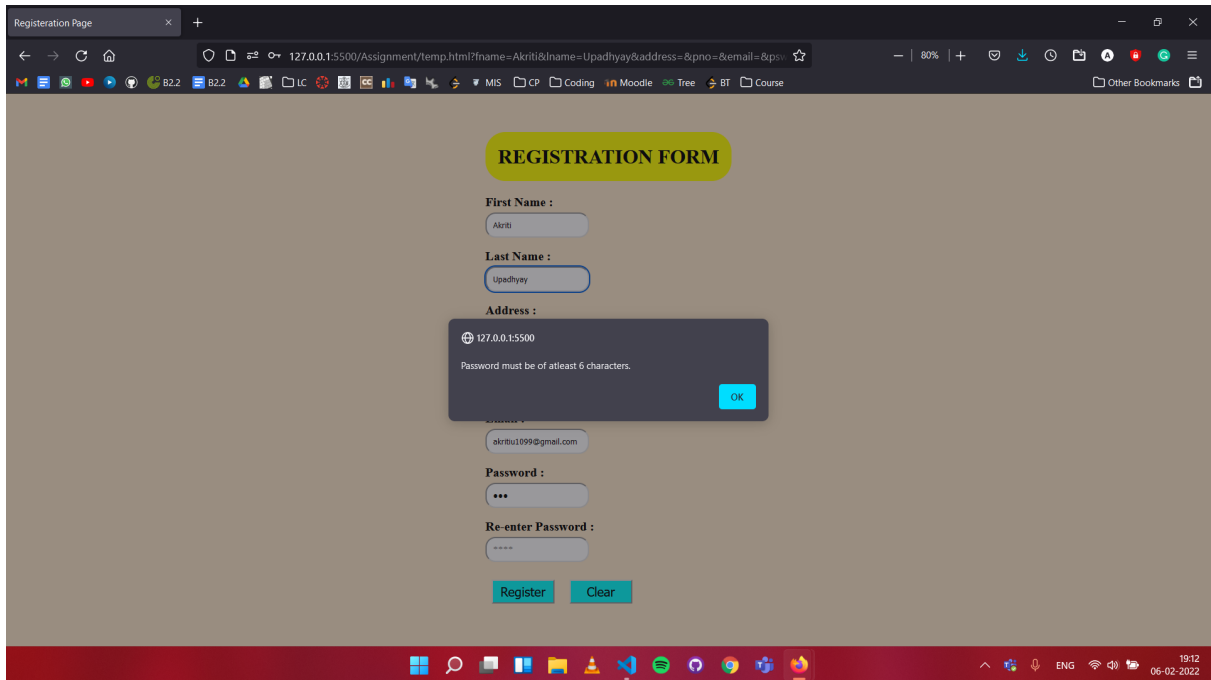
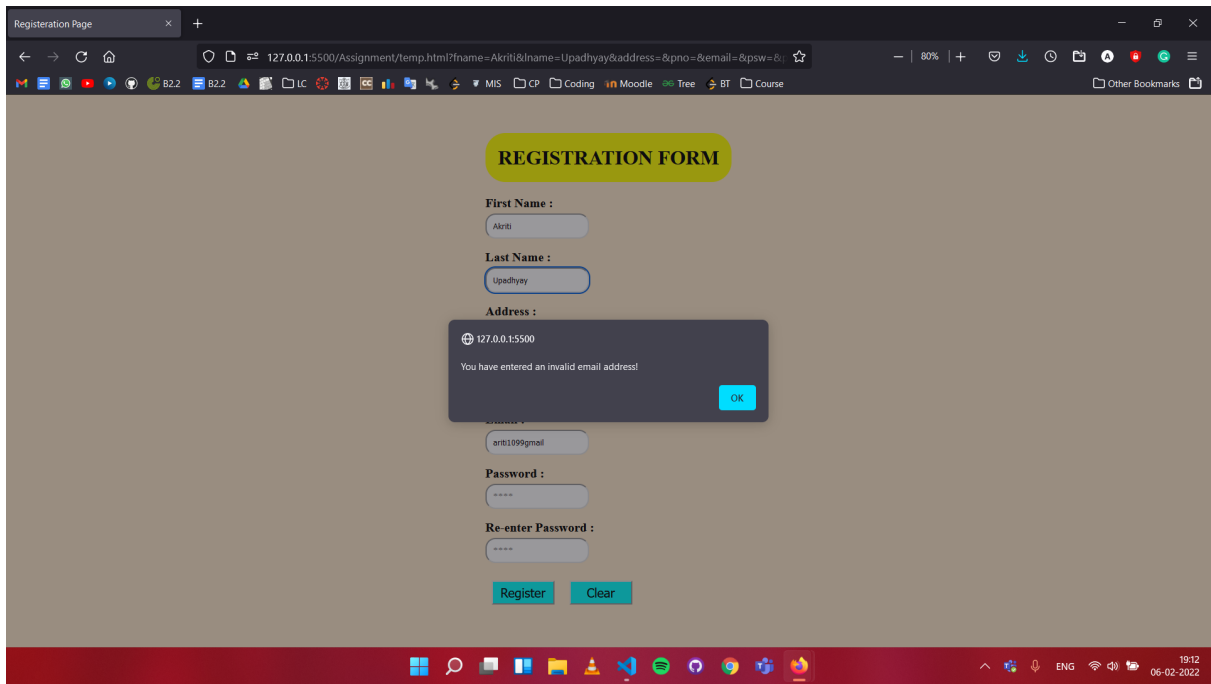
**Address :**  

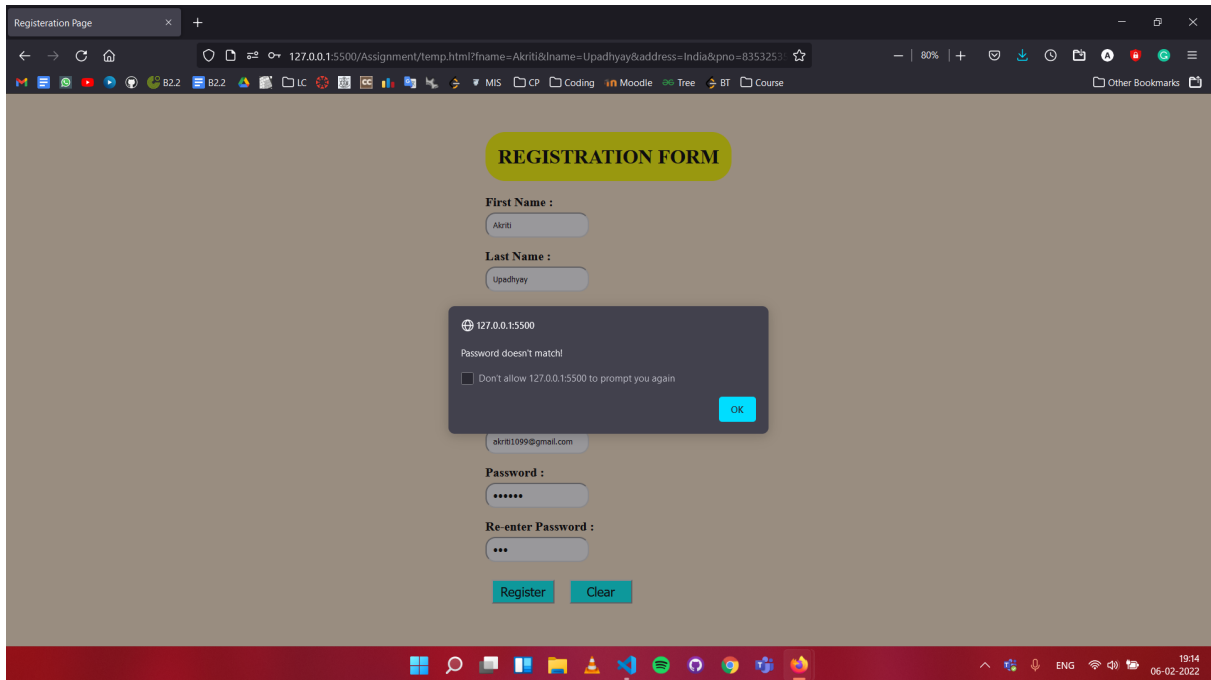
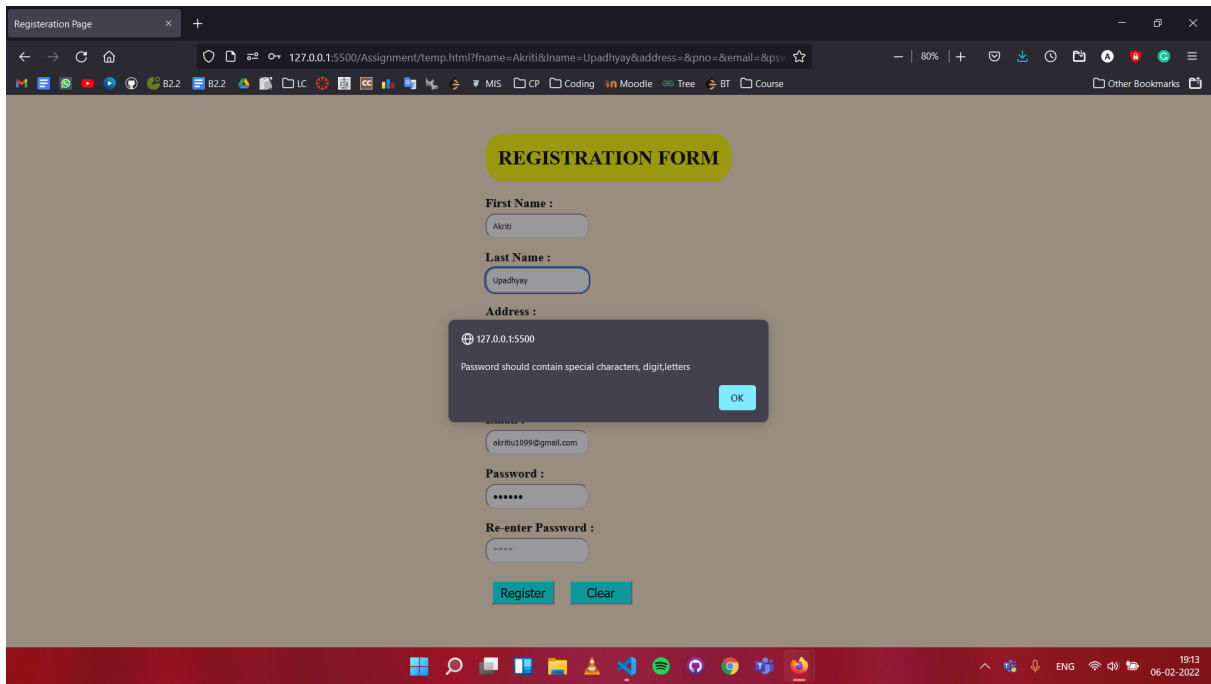
127.0.0.1:5500  
Phone Number should be of only 10 digits!

**Email :**

**Password :**

**Re-enter Password :**





X-X-X-X