**Terna Engineering College**

**Computer Engineering Department**

**Program: Sem V**

**Course: Web Technology Laboratory (CSL504)**

**Faculty: Mrs. NAYANA VAITY**

LAB Manual

**PART A**

(PART A: TO BE REFFERED BY STUDENTS)

**Experiment No.04**

**A.1 Aim:**

**Design HTML form to accept input information from the user and validate it using JavaScript and HTML 5**

**A.2 Prerequisite:**

1. Knowledge of HTML

2. Knowledge of Client side scripting.

**A.3 Outcome:**

**After successful completion of this experiment students will be able to**

1. Design dynamic web page using HTML5 and JavaScript.
2. Apply the concept of client side validation and design dynamic web pages using JavaScript.

**A.4 Theory:**

* **Forms**
* HTML forms are used to create (rather primitive) GUIs on Web pages
* Usually the purpose is to ask the user for information or collect data from user
* The information is then sent back to the server
* The <form ***arguments***> ... </form>

The form arguments to form tell what to do with the user input

**1) name**

**2) Action**

3) **method="get”/”post”**

* A form is an area that can contain form elements

**syntax is:**

<form***arguments***>***...form elements...***</form>

**Example:**

**<html>**

**<body**>

<form  name=“loginform”    action=“welcome.html”  method=“get”>

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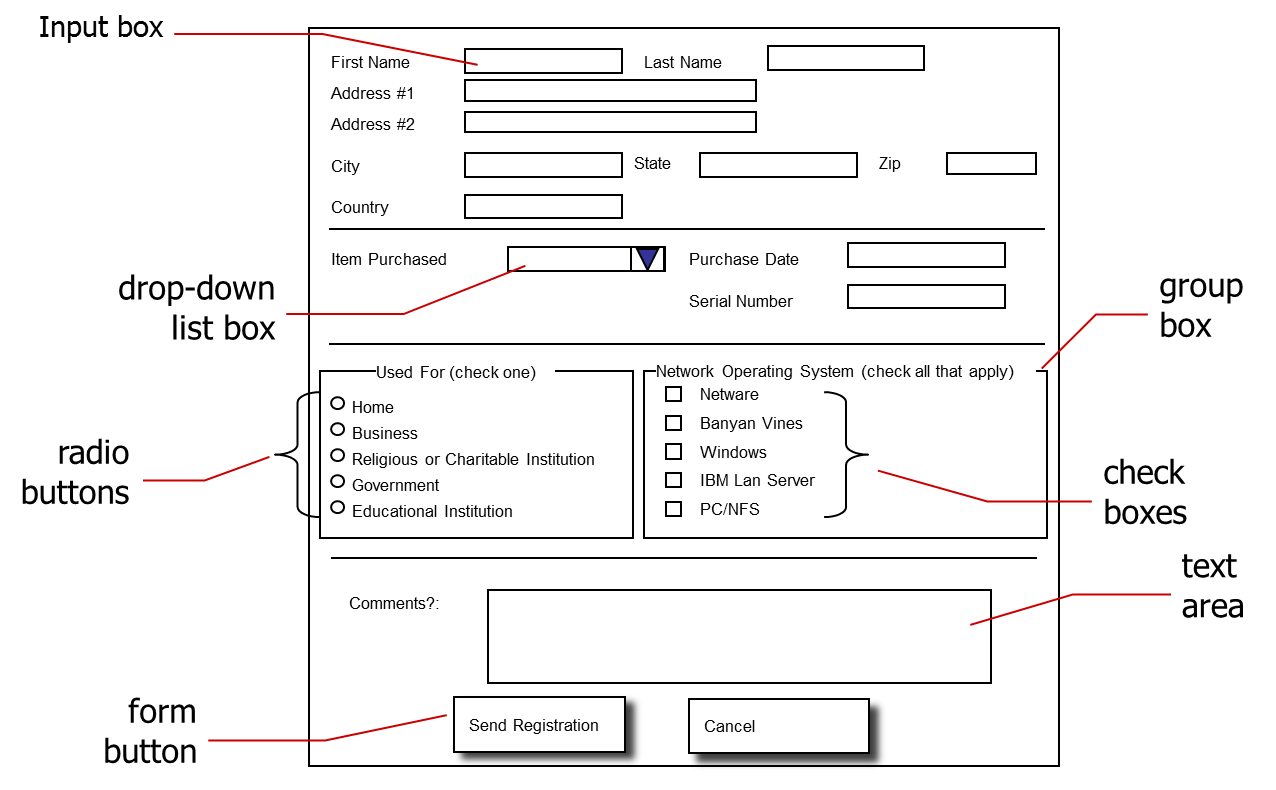
</form>

</body>

</html>

* **HTML Forms Input Types:**
* 

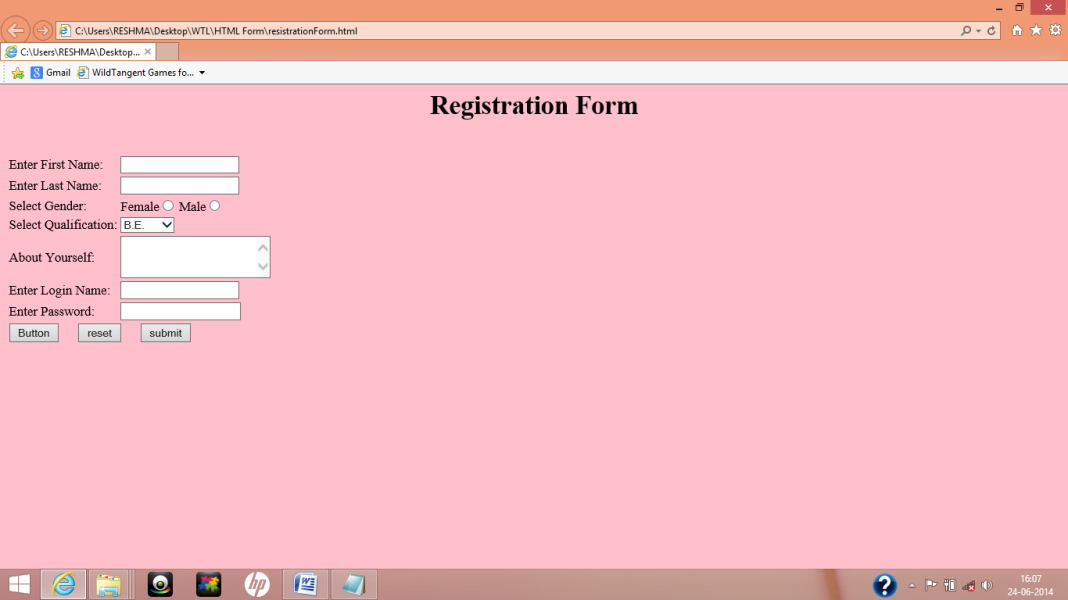
**Examples of HTML Forms:**



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**Example of HTML Form:**

**Output**

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**Source Code:**

**registrationForm.html**

<html>

<body  style="background-color:pink; color:black; text-align:center">

<h1 style="text-align:center; color:black">Registration Form</h1>

<br>

<form  name="registration"  action="welcome.html"  method="get">

<table>

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</table>

</form>

</body>

</html>

* **JavaScript**

**JavaScript is:**

* JavaScript is a lightweight, interpreted programming language
* Designed for creating network-centric applications
* Complementary to and integrated with Java
* Complementary to and integrated with HTML
* Open and cross-platform
* Client side scripting language

Client-side JavaScript is means that a web page need no longer be static HTML, but can include programs that interact with the user, control the browser, and dynamically create HTML content.

The JavaScript code is executed when the user submits the form, and only if all the entries are valid they would be submitted to the Web Server.

JavaScript can be used to trap user-initiated events such as button clicks, link navigation, and other actions that the user explicitly or implicitly initiates.

* + Advantages of JavaScript:

The merits of using JavaScript are:

* Less server interaction
* Immediate feedback to the visitors
* Increased interactivity
* Richer interfaces
  + JavaScript Syntax

<Script>

JavaScript Code      </scipt>

The script tag takes two important attributes:

* **Language:** This attribute specifies what scripting language you are using. Typically, its value will be *javascript*. Although recent versions of HTML (and XHTML, its successor) have phased out the use of this attribute.
* **Type:** This attribute is what is now recommended to indicate the scripting language in use and its value should be set to *"text/javascript"*.

So your JavaScript segment will look like:

**<script language="javascript" type="text/javascript">**

**JavaScript code**

**</script>**

* + JavaScript Placement in HTML File
* Script in <head>...</head> section.
* Script in <body>...</body> section.
* Script in and external file and then include in <head>...</head> section.

**Example:   hello.html**

<html>

<head>

<script type="text/javascript">

<!--

Function  sayHello() {

alert("Hello World")

}

//-->

</script>

</head>

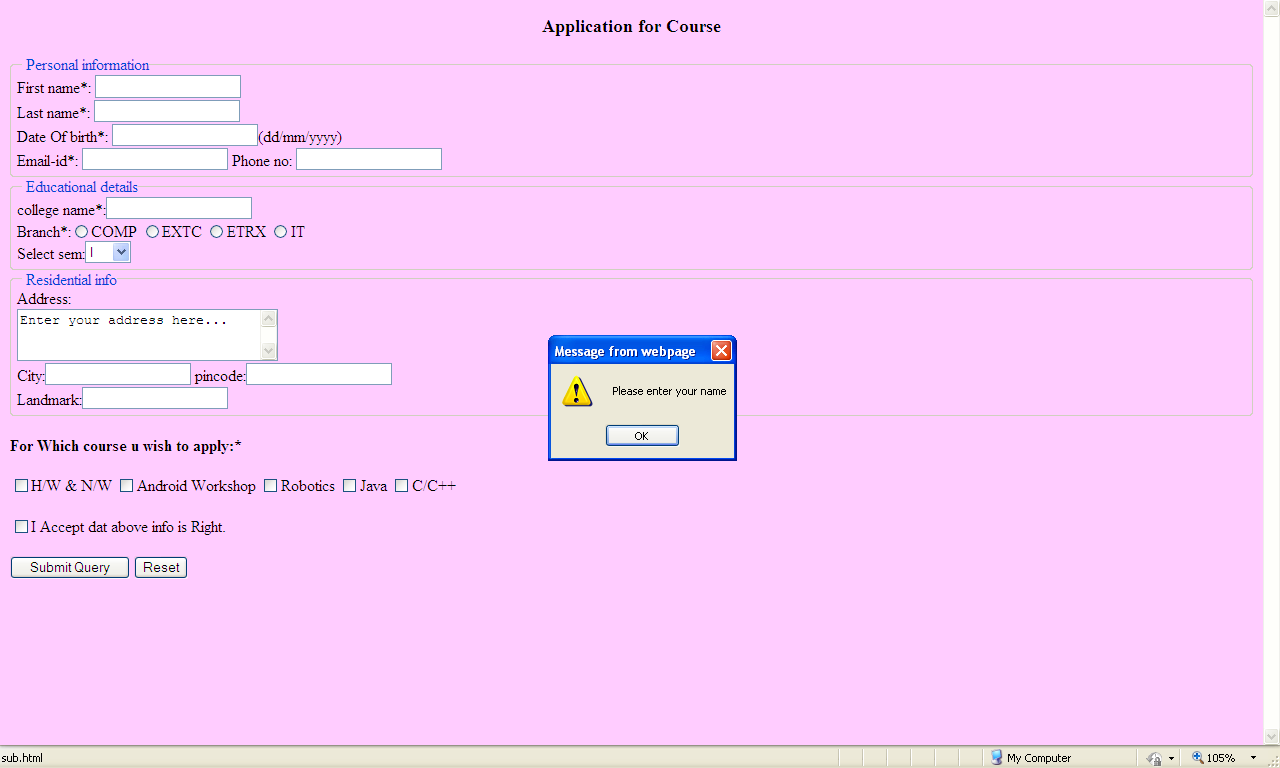
<body>

<input type="button" onclick="sayHello()" value="Say Hello" />

</body></html>

**Example: Form Validation Using JavaScript**

**Output:**

****

**Source Code**

**Form.html**

<Html>

</head>

<script language="JavaScript">

function validation()

 {

if(document.mf.firstname.value=="")

{

alert("Please enter your name")

document.mf.firstname.focus();

return false;

 }

………………………

………………………

……………………….

}

</script>

</head>

<body bgcolor="FFCCFF">

<form name="mf" action="sub.html" method ="post" onsubmit="return validation()">

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</form>

</body>

</html>

**PART B**

(PART B : TO BE COMPLETED BY STUDENTS)

***(Students must submit the soft copy as per following segments within two hours of the practical. The soft copy must be uploaded on the Blackboard or emailed to the concerned lab in charge faculties at the end of the practical in case the there is no Black board access available)***

|  |  |
| --- | --- |
| **Roll No. 75** | **Name: Sudhanshu Jena** |
| **Class : Comp-V** | **Batch : TE-C** |
| **Date of Experiment:** | **Date of Submission** |
| **Grade :** |  |

|  |  |
| --- | --- |
| **B.1** | **Web page Snapshot:**  **Form.html** |
|  |  |
|  | Welcome.html |
|  |  |
| **B.2.** | **Web page source code:**  Form.html  <!DOCTYPE html>  <html>  <head>      <title>Resitation Form</title>      <script src="form.js"type = "text/javascript">          </script>      <style>          body{    background: #2E86C1;  }          .wrapper{    position: absolute;    left: 33%;    top: 5%;    max-width: 500px;    width: 100%;    background: #85C1E9 ;    padding: 25px;    border-radius: 5px;    box-shadow: 4px 4px 2px rgba(254,236,164,1);  }      </style>    </head>  <body >      <div class="wrapper">      <form onsubmit="return validate()" action="Welcome.html">              First Name:          <input id="fname" placeholder="First Name"          type="text">          Last Name:          <input id="lname" placeholder="Last Name"          type="text"><br/><br/>          Select Gender :          <input type="radio" name="Gender" value="male" checked> Male          <input type="radio" name="Gender" value="female"> Female          <br/><br/>          <label for="start">              Enter the Birthday Date:          </label>            <input type="date" name="begin" id="date"              placeholder="dd-mm-yyyy" value=""              min="1997-01-01" max="2030-12-31" ><br/><br/>          Username:          <input id="username" placeholder="Username"          type="text">          Password:          <input id="password" placeholder="Must:[A-Z][a-z][0-9]{chr>8}"          type="password" pattern="(?=.\*\d)(?=.\*[a-z])(?=.\*[A-Z]).{8,}" ><br/><br/>  Confirm Password:          <input id="cpassword" placeholder="\*\*\*\*\*\*\*"          type="password"  name="cpassword"><br/><br/><hr>          Address #1:          <input id="add1" placeholder="Address #1"          type="text"><br/><br/>          Address #2:          <input id="add2" placeholder="Address #2"          type="text"><br/><br/>          City:          <input id="add3" placeholder="City"          type="text">          State:          <input id="add4" placeholder="State"          type="text"><br/><br/>          Zip Code:          <input id="add5" placeholder="Zip"          type="text">          Country:          <input id="add6" placeholder="Country"          type="text"><br/><br/><hr>  <div>      <div style="float: left;width: 50%; height: 115px;">          Email:          <input id="email" placeholder="Gmail"          type="email"><br/><br/>          Phone No.          <input id="phone" placeholder="Phone No."          type="number"><br/><br/>                Name Of College:          <select type="text" value ="" name="Subject">          <optgrup label="college">          <option>Terna College</option>          <option>Pillai's College</option>          <option>D Y Patil college</option>          <option>A C Patil college</option>          <option>ICL college</option>          </select>      </div>      <div style="float: right; width: 50%; height: 115px;">          Previous Education:<br/>          <input id="sse" placeholder="10th"          type="checkbox" checked>          <label for="sse"> 10th</label>          <br/>          <input id="hse" placeholder="12th"          type="checkbox">          <label for="hse">12th</label>          <br/>          <input id="eqv" placeholder="12th"          type="checkbox">          <label for="eqv">Equivalent to HSE</label>          <br/>          <input id="other" placeholder="diploma"          type="checkbox">          <label for="other">Others</label><br/>            <br/><br/>        </div>  </div>          <br/><br/>          <hr>          Any Comments?<br/>          <textarea id="message" placeholder="Message" style="height:70px; width: 450px;"> </textarea><br/>            <br/>          <button style="float: left;background-color: #2E86C1;"  type="submit">Submit</button>            <button style="float: right;background-color: #2E86C1;" type="reset">Reset</button>      </form>  </div>    </body>  </html>  Form.js  function validate(){      var fname = document.getElementById("fname")      var lname = document.getElementById("lname")      var email = document.getElementById("email")      var phone = document.getElementById("phone")      var password = document.getElementById("password")  var cpassword = document.getElementById("cpassword")      var address1 = document.getElementById("add1")      var address2 = document.getElementById("add2")      var address3 = document.getElementById("add3")      var address4 = document.getElementById("add4")      var address5 = document.getElementById("add5")      var address6 = document.getElementById("add6")      var username = document.getElementById("username")      var message = document.getElementById("message")      var date = document.getElementById("date")      var regx = /^[7-9]\d{9}$/          if(fname.value.trim()==""){          alert("Please enter your First Name!!")          return false      }      else if(lname.value.trim()==""){          alert("Please enter your Last Name!!")          return false      }      else if(date.value.trim()==""){          alert("Please enter Your Birthday Date!!")          return false      }        else if(username.value.trim()==""){          alert("Please enter your Username!!")          return false      }      else if(password.value.trim()==""){          alert("Please enter your Password!!")          return false      }  else if (cpassword.value!=password.value) {          alert ("\nPassword did not match: Please try again...")          return false;      }      else if(address1.value.trim()==""){          alert("Please enter your Address!!")          return false      }      else if(address2.value.trim()==""){          alert("Please enter your Address!!")          return false      }      else if(address3.value.trim()==""){          alert("Please enter your City!!")          return false      }      else if(address4.value.trim()==""){          alert("Please enter your State!!")          return false      }      else if(address5.value.trim()==""){          alert("Please enter your Zip Code!!")          return false      }      else if(address6.value.trim()==""){          alert("Please enter your Country!!")          return false      }      else if(email.value.trim()==""){          alert("Please enter your Email!!")          return false      }      else if(email.value.indexOf(".", 0) < 0 ||email.value.indexOf("@", 0) < 0){          alert("Please provide a valid Email!!")          return false      }      else if(phone.value.trim()==""){          alert("Please enter your Phone No.!!")          return false      }      else if(phone.value){          if(phone.value.match(regx)){              return true          }          else{              alert("Please enter a valid Phone No.!!")              return false          }        }        else if(message.value.trim()==""){          alert("Please enter some message!!")          return false      }        else{          true      }    }    Welcome.html  <!DOCTYPE html>  <html>  <head>      <title>Resitation Form</title>        <script>        function pageRedirect() {            window.location.href = "http://127.0.0.1:5500/form.html";        }      </script>      <style>        body{          background: #E74C3C;        }        </style>    </head>  <body action="form.html">    <h1 ><center>Welcome to my World </center></h1>    <h2 style="top: 40%;"><center> If we go easy on them they will never learn.</center></h2>    <br/>    <button id="back" type="button" onClick="pageRedirect()"    style="left: 48%;position: absolute;background: #F5B7B1;border-radius: 5px;">Back</button>      </body>  </html> |
| **B.3** | **Questions:**   * 1. Differentiate between get and post method.   **ANS:-**   |  |  | | --- | --- | | GET | POST | | 1) In case of Get request, only **limited amount of data**can be sent because data is sent in header. | In case of post request, **large amount of data** can be sent because data is sent in body. | | 2) Get request is **not secured** because data is exposed in URL bar. | Post request is **secured** because data is not exposed in URL bar. | | 3) Get request **can be bookmarked.** | Post request **cannot be bookmarked.** | | 4) Get request is **idempotent**. It means second request will be ignored until response of first request is delivered | Post request is **non-idempotent.** | | 5) Get request is **more efficient**and used more than Post. | Post request is **less efficient**and used less than get. |  * 1. Explain Document Object Model.   **ANS:-**  The Document Object Model (DOM) is a *programming interface* for HTML and XML (Extensible markup language) documents. It defines the logical structure of documents and the way a document is accessed and manipulated.  Note: It is called as a Logical structure because DOM doesn’t specify any relationship between objects.  DOM is a way to represent the webpage in the structured hierarchical way so that it will become easier for programmers and users to glide through the document. With DOM, we can easily access and manipulate tags, IDs, classes, Attributes or Elements using commands or methods provided by Document object.  **Structure of DOM:**  DOM can be thought of as Tree or Forest (more than one tree). The term structure model is sometimes used to describe the tree-like representation of a document. One important property of DOM structure models is *structural isomorphism*: if any two DOM implementations are used to create a representation of the same document, they will create the same structure model, with precisely the same objects and relationships.  **Properties of DOM**:  Let’s see the properties of document object that can be accessed and modified by the document object. https://cdncontribute.geeksforgeeks.org/wp-content/uploads/DOM.png   1. **Window Object:** Window Object is at always at top of hierarchy. 2. **Document object:** When HTML document is loaded into a window, it becomes a document object. 3. **Form Object:** It is represented by ***form*** tags. 4. **Link Objects:** It is represented by ***link***tags. 5. **Anchor Objects:** It is represented by ***a href*** tags. 6. **Form Control Elements:**: Form can have many control elements such as text fields, buttons, radio buttons, and checkboxes, etc.    1. Explain various JavaScript functions.   **ANS:-** |  |
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|  |  |  |
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| **B3** | **Conclusion:**  After successful completion of this experiment students will be able to design dynamic web page using HTML5 and JavaScript and apply the concept of client side validation and design dynamic web pages using JavaScript. |  |