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COURSE : B-Tech

BRANCH : IT

2nd Semester

Application Programming
Practical File

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1.Creating an HTML Web page Form

```
1  <html>
2  <head>
3      <title>College Validation Form</title>
4      <style>
5          body
6          {
7              background-image: linear-gradient(red,blue)
8          }
9          .title
10         {
11             margin :50px;
12             color: white;
13         }
14         .form{
15             color: white;
16             background-color: black;
17             border-radius: 20px;
18             padding:60px 100px 30px 100px;
19             margin:50px 400px;
20         }
21
22         .submit
23         {
24             background-color: green;
25             border: 2px solid black;
26             border-radius:28px;
27             color: white;
28             padding: 15px 32px;
29             text-align: center;
30             text-decoration: none;
31             display: inline-block;
32             font-size: 16px;
33             margin: 4px 4px;
34             cursor: pointer;
35         }
36         table
37         {
38             color: white;
39         }
40         td
```

```

41 {
42     padding-left: 30px;
43 }
44 .data
45 {
46     padding-top: 15px;
47 }
48 </style>
49
50
51 </head>
52 <div class="title">
53 <h1><center><u>College Admission form</u></center></h1></div>
54
55 <div class="form">
56     <form action="fm.php" method="post">
57         <table>
58             <tr><td class="data"><h3>First Name</h3><td> <input type="text" placeholder="First Name" name="fno"></td></tr>
59             <tr><td class="data"><h3>Last Name</h3></td><td><input type="text" placeholder="Last Name" name="lno"></td></tr>
60
61             <tr><td class="data"><h3>Email Address</h3></td><td><input type="email" placeholder="Email Address"></td></tr>
62
63             <tr><td class="data"><h3>Password</h3></td><td><input type="Password" placeholder="Password"></td></tr>
64             <tr><td class="data"><h3>Confirm Password</h3></td><td><input type="Password" placeholder="Confirm Password"></td></tr>
65
66             <tr><td class="data"><h3>Gender</h3></td><td><input type="radio" name="r1" >Male
67             <input type="radio" name="r1" >Female</td></tr>
68
69             <tr><td class="data"><h3>DOB</h3></td><td><input type="date"></td>
70
71             <tr><td class="data"><h3>Languages Known</h3></td><td><input type="checkbox" name="c1">Hindi <input type="checkbox" name="c1">English<input type="checkbox" name="c1">Urdu<input type="checkbox" name="c1">Punjabi</td></tr>
72
73             <tr><td><h3>Address</h3></td><td><textarea placeholder="Enter your Address"></textarea></td>
74         </table>
75         <center><div class="submit" ><input type="submit"></div></center>
76     </form>
77 </div>
78 </html>

```

OUTPUT:

College Admission form

First Name	<input style="width: 90%;" type="text" value="First Name"/>
Last Name	<input style="width: 90%;" type="text" value="Last Name"/>
Email Address	<input style="width: 90%;" type="text" value="Email Address"/>
Password	<input style="width: 90%;" type="password" value="Password"/>
Confirm Password	<input style="width: 90%;" type="password" value="Confirm Password"/>
Gender	<input type="radio"/> Male <input type="radio"/> Female
DOB	<input style="width: 80%;" type="text" value="dd-mm-yyyy"/> <input style="width: 20%; height: 20px;" type="button" value="📅"/>
Languages Known	<input type="checkbox"/> Hindi <input type="checkbox"/> English <input type="checkbox"/> Urdu <input type="checkbox"/> Punjabi
Address	<input style="width: 90%;" type="text" value="Enter your Address"/>
<input style="background-color: green; color: white; padding: 5px 15px; border: none; border-radius: 10px;" type="button" value="Submit"/>	

2.Creating Home Page using HTML

CODE:

```
1 <!DOCTYPE html>
2 <html>
3 <head>
4     <title>
5         frameset
6     </title>
7 </head>
8
9 <frameset rows="20%,10%,60%,20%">
10     <frame src="logo.html">
11     <frame src="option.html">
12     <frameset cols="25%,50%,25%">
13     <frame src="name.html">
14     <frame src="image.html">
15     <frame src="lesson2.html">
16     </frameset>
17
18 <frame src="lesson3.html">
19 </frameset>
20 </html>
```

Name.HTML:

```
1 <!doctype html>
2 <html>
3 <head>
4     <title>logo</title>
5     <style>
6         *{margin-left: 0px;
7           margin-top: 0px;
8           padding: 0px;}
9         body{background-image:
10             repeating-radial-gradient(red,#412dd8);
11         }
12         h2{
13             color: white;
14             line-height: 2;
15             word-spacing: 10px;
16             letter-spacing: 1px;}
17         .l1{
18             margin-top: 55px;
19             width: 380px;}
20     </style>
21 </head>
22 <body>
23     <div class="l1">
24         <marquee>
25         <h2>JATIN AGGARWAL</h2>
26
27         <h2>INFORMATION TECHNOLOGY</h2>
28         <h2>(11912078)</h2>
29         </marquee>
30     </div>
31 </body>
32 </html>
```

Logo.HTML

```
1
2 <!doctype html>
3 <html>
4 <head>
5     <title>logo</title>
6     <style>
7         img{
8             margin-left: 130px;
9         }
10
11     </style>
12 </head>
13 <body>
14     
16 </body>
17 </html>
```

Option.HTML

```
1  <!DOCTYPE html>
2  <html>
3  <head>
4      <style type="text/css">
5          *{
6              margin: 0px; }
7          ul{
8              padding: 0px;
9              background-color: red;
10             height: 70px;
11             list-style-type: none;
12         }
13         li{
14             display: inline-block;
15             border: 1px solid red;
16             background-color:red;
17             margin-top: 30px;
18             margin-right: 130px;
19             margin-top: 15px;
20             padding:0px 15px;
21             font-size: 20px
22         }
23         a{
24             text-decoration: none;
25             color:white;
26         }
27         ul li:hover{
28             background-color: white;
29             border-radius: 5px;
30             color: black;
31         }
32         a:hover{
33             color: black;}
34         #p1{
35             margin-left: 25px;}
36     </style>
37 </head>
38 <body>
39 <ul>
40     <li id="p1"><a href="http://iiitsonepat.ac.in/home/about" >HOME</a></li>
41     <li><a href="#">MENU</a>
42     </li>
43     <li><a href="#">SERVICES</a></li><li><a href="#">
44     ABOUT US</a></li><li>
45     <a href="#">FAQ</a></li><li><a href="#">CONTACT US</a></li>
46     </ul>
47 </body>
48 </html>
```

Image.HTML

```
1  <!doctype html>
2  <html>
3  <head>
4      <title>logo</title>
5      <style>
6          *{margin: 0px;
7             padding: 0px;}
8      </style>
9  </head>
10 <body>
11     
13 </body>
14 </html>
```

Lesson2.html

```
1  <!DOCTYPE html>
2  <html>
3  <head>
4      <title>contact detail</title>
5      <style>
6          *{
7              margin: 0px;}
8      .level1{
9          background-color: black;
10         line-height: 2;
11         padding-left: 10px;
12         color:white;}
13     </style>
14 </head>
15 <body>
16     <div class="level1">
17         <h2>    Contact Detail :</h2>
18     <h4>Contact No.- 01744-233189, 7496966902, 9729077477
19     </h4>
20     <h4>
21     Email address:- sonapatiit@gmail.com
22     </h4>
23     <br>
24     </div>
25 </body>
26 </html>
```

Output:



[HOME](#) [MENU](#) [SERVICES](#) [ABOUT US](#) [FAQ](#) [CONTACT US](#)

JATIN AGGARWAL

INFORMATION TECHNOLOG

(11912078)

Login

Username

Password

[Submit](#)

Contact Detail :

Contact No.- 01744-233189, 7496966902, 9729077477

Email address:- sonapatiit@gmail.com

3.Creating XHTML and CSS and understanding its use in creating web pages

```
1 <!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.1//EN"
2 "http://www.w3.org/TR/xhtml11/DTD/xhtml11.dtd">
3 <html lang="en" dir="ltr">
4 <head>
5     <title>Registration Page</title>
6     <style type="text/css">
7         * {box-sizing: border-box
8         }
9
10    .container {
11        padding: 16px;
12        margin: auto;
13        text-align: center;
14    }
15    input[type=text], input[type=password],input[type="email"] {
16        width: 50%;
17        padding: 15px;
18        margin: 5px 0 22px 0;
19        display: inline-block;
20        border: none;
21        background: #f1f1f1;
22    }
23
24    input[type=text]:focus, input[type=password]:focus,input[type="email"]:focus {
25        background-color: #ddd;
26        outline: none;
27    }
28    hr {
29        border: 1px solid #f1f1f1;
30        margin-bottom: 25px;
31    }
32    #registerbtn {
33        background-color: #4CAF50;
34        color: white;
35        padding: 16px 20px;
36        margin: 8px 0;
37        border: none;
38        cursor: pointer;
39        width: 100%;
40        opacity: 0.9;
41    }
42    #registerbtn:hover {
43        opacity:1;
44    }
45    </style>
46 </head>
47 <body>
48     <form>
49         <div class="container">
50             <h1>Register</h1>
51             <hr>
52             Name: <input type="text" id="name" placeholder="Enter your name" name="name"><br>
53             City: <input type="text" placeholder="Enter your name" name="name"><br>
54             Email: <input type="email" placeholder="Enter your mail address" name="mail"><br>
55             Password: <input type="password" placeholder="Enter the password" name="pwd"><br>
56             Gender:<br>
57             Male<input type="radio" name="gender">
58             Female<input type="radio" name="gender">
59             Others<input type="radio" name="gender"><br>
60         </div>
61         <div >
62             <button type="submit" id="registerbtn">Register</button>
63         </div>
64     </form>
65 </div>
66 </body>
67 <script type="text/javascript">
68     document.getElementById("registerbtn").addEventListener("click",function(e){
69     var fieldValue=document.getElementById("name").value;
70     if(fieldValue==null || fieldValue== ""){
71     e.preventDefault();
72     alert("you must enter a username");
73     }
74     });
75 </script>
76 </html>
```


OUTPUT

Register

Name:

City:

Email:

Password:

Gender:
Male ☐ Female ☐ Others ☐

Register

4.Setting up & configuration of Apache Tomcat server

Step-1

Download Apache Tomcat from [this link](#). I'm using version `9.0.10` .

9.0.10

Download Apache Tomcat

Please see the [README](#) file for packaging information. It explains what every distribution contains.

Binary Distributions

- Core:
 - [zip \(pgp, sha1, sha512\)](#)
 - [tar.gz \(pgp, sha1, sha512\)](#)
 - [32-bit Windows zip \(pgp, sha1, sha512\)](#)
 - [64-bit Windows zip \(pgp, sha1, sha512\)](#)
 - [32-bit/64-bit Windows Service Installer \(pgp, sha1, sha512\)](#)
- Full documentation:
 - [tar.gz \(pgp, sha1, sha512\)](#)

Click here

Step-2

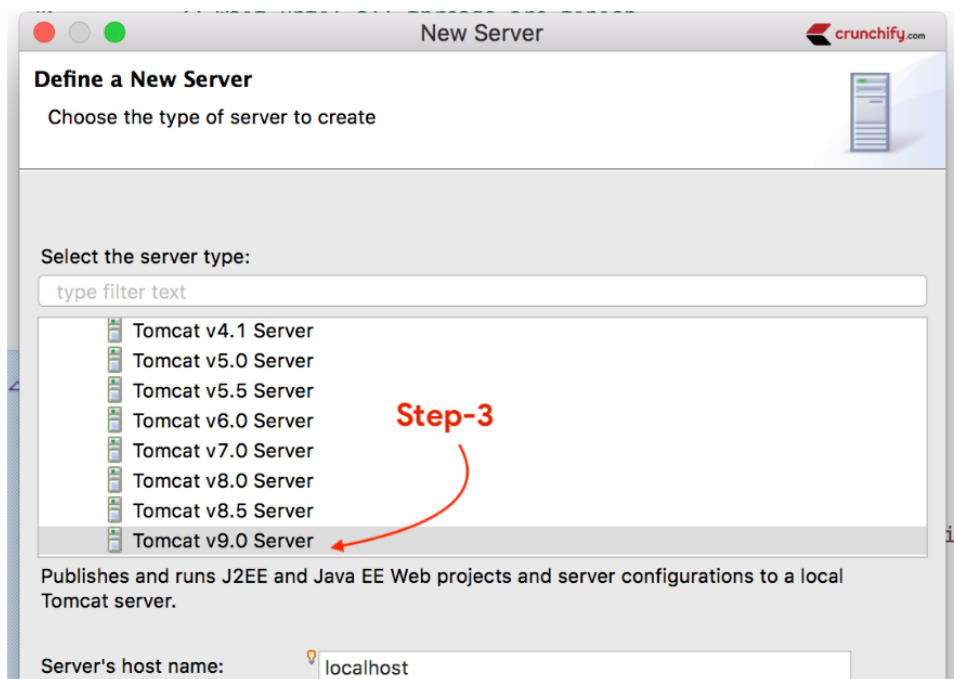
Extract it to **Document** folder.

Name	Size	Date Modified
workspace	--	Jul 28, 2018 at 10:29 AM
apache-tomcat-9.0.10	--	Jun 20, 2018 at 6:34 PM
work	--	Jun 20, 2018 at 6:32 PM
webapps	--	Jun 20, 2018 at 6:32 PM
temp	--	Today at 10:50 AM
logs	--	Jun 20, 2018 at 6:32 PM
lib	--	Today at 10:50 AM
conf	--	Today at 10:50 AM
bin	--	Today at 10:50 AM
RUNNING.txt	17 KB	Jun 20, 2018 at 6:32 PM
RELEASE-NOTES	7 KB	Jun 20, 2018 at 6:32 PM
NOTICE	2 KB	Jun 20, 2018 at 6:32 PM
LICENSE	58 KB	Jun 20, 2018 at 6:32 PM
Eclipse.app	41.7 MB	Jul 26, 2018 at 8:20 PM
apache-tomcat-9.0.10 .zip	10.5 MB	Today at 10:50 AM

**Extract Apache Tomcat
To Document Folder**

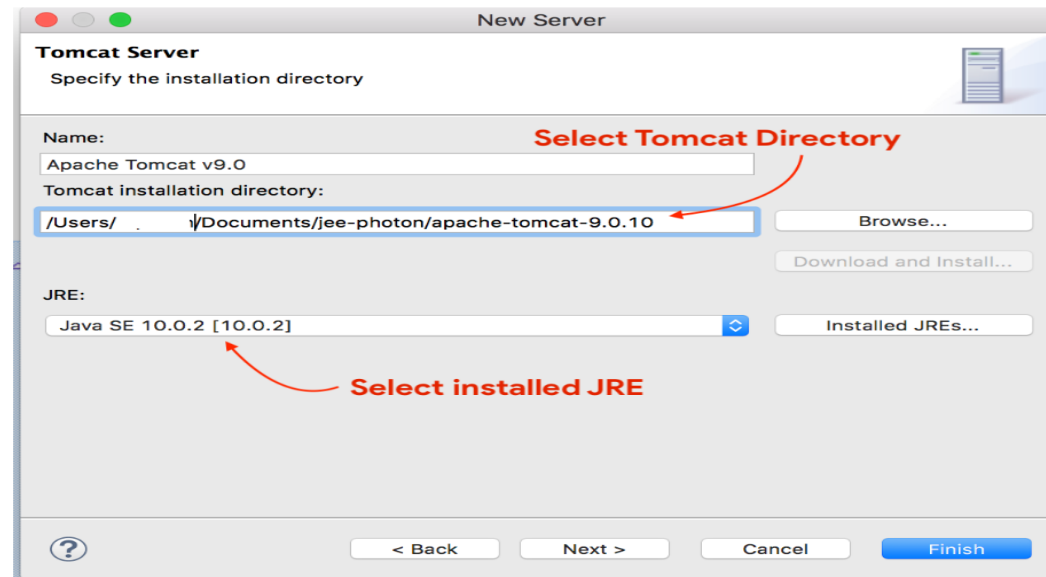
Step-3

- Open Eclipse Environment
- Click on **Servers** Tab
- Click on No servers are available. [Click this link to create a new server...](#)
- Click **Tomcat v9.0 Server** and Next



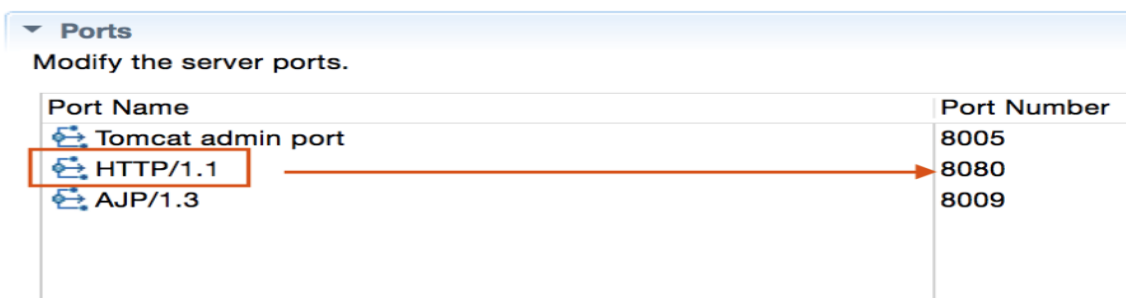
Step-4

Select **Apache installation Directory** and click **Finish**.



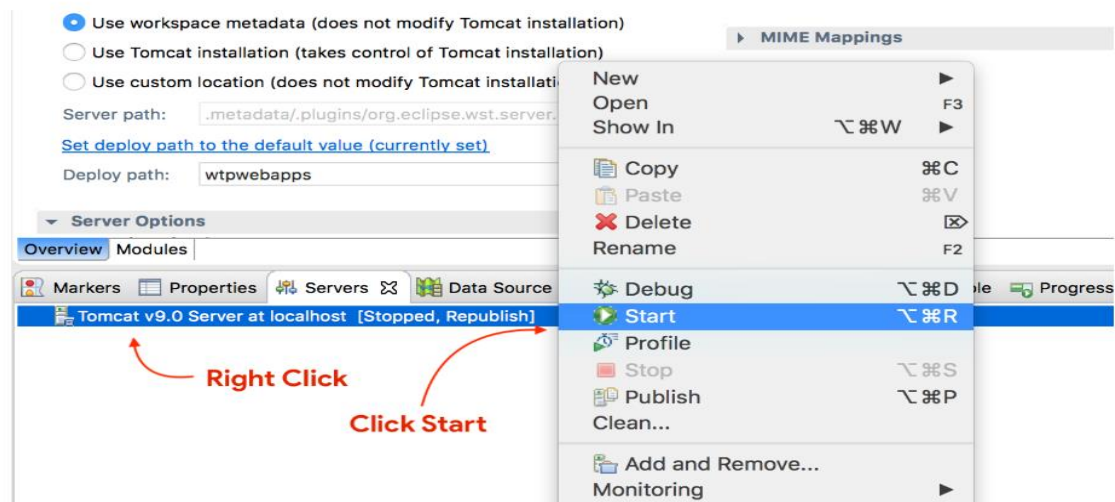
Step-5

You should see **Tomcat v9.0 Server at localhost [Stopped, Republish]** under **Servers** tab. Double click on it verify HTTP ports information. By default HTTP port is 8080.



Step-6

Now right click on Server and click **Start**.



5.Understanding modification of web.xml

```
<?xml
version="1.
0"
encoding="U
TF-8"?>
```

```
<web-app id="WebApp_9" version="3.0"
xmlns="http://java.sun.com/xml/ns/javaee"
xmlns:xsi="https://www.w3.org/2001/XMLSchema-
instance"
xsi:schemaLocation="http://java.sun.com/xml/ns
/javaee
http://java.sun.com/xml/ns/javaee/web-
app_3_0.xsd">
  <display-name>Servlet 3.0
application</display-name>
  <filter>
    <filter-
name>ServletMappedDoFilter_Filter</filter-name>
    <filter-
class>tests.Filter.DoFilter_Filter</filter-class>
    <init-param>
      <param-name>attribute</param-name>
      <param-
value>tests.Filter.DoFilter_Filter.SERVLET_MAPPED</
param-value>
    </init-param>
  </filter>
    <filter-mapping>
      <filter-
name>ServletMappedDoFilter_Filter</filter-name>
      <url-pattern>/DoFilterTest</url-pattern>
      <dispatcher>REQUEST</dispatcher>
    </filter-mapping>
    <filter-mapping>
      <filter-
name>ServletMappedDoFilter_Filter</filter-name>
      <url-pattern>/IncludedServlet</url-
pattern>
      <dispatcher>INCLUDE</dispatcher>
    </filter-mapping>
    <filter-mapping>
      <filter-
name>ServletMappedDoFilter_Filter</filter-name>
```

```

        <url-pattern>ForwardedServlet</url-
pattern>
        <dispatcher>FORWARD</dispatcher>
    </filter-mapping>
    <listener>
        <listener-
class>tests.ContextListener</listener-class>
    </listener>
    <listener>
        <listener-
class>tests.ServletRequestListener.RequestListener<
/listener-class>
    </listener>
    <servlet>
        <servlet-name>welcome</servlet-name>
        <servlet-class>WelcomeServlet</servlet-
class>
    </servlet>
    <servlet>
        <servlet-name>ServletErrorPage</servlet-
name>
        <servlet-
class>tests.Error.ServletErrorPage</servlet-class>
    </servlet>
    <servlet>
        <servlet-name>IncludedServlet</servlet-
name>
        <servlet-
class>tests.Filter.IncludedServlet</servlet-class>
    </servlet>
    <servlet>
        <servlet-name>ForwardedServlet</servlet-
name>
        <servlet-
class>tests.Filter.ForwardedServlet</servlet-class>
    </servlet>
    <servlet-mapping>
        <servlet-name>welcome</servlet-name>
        <url-pattern>/hello.welcome</url-pattern>
    </servlet-mapping>
    <servlet-mapping>
        <servlet-name>ServletErrorPage</servlet-
name>
        <url-pattern>/ServletErrorPage</url-
pattern>
    </servlet-mapping>

```

```

        <servlet-mapping>
            <servlet-name>IncludedServlet</servlet-
name>
            <url-pattern>/IncludedServlet</url-
pattern>
        </servlet-mapping>
        <servlet-mapping>
            <servlet-name>ForwardedServlet</servlet-
name>
            <url-pattern>/ForwardedServlet</url-
pattern>
        </servlet-mapping>
        <welcome-file-list>
            <welcome-file>hello.welcome</welcome-
file>
        </welcome-file-list>
        <error-page>
            <exception-
type>java.lang.ArrayIndexOutOfBoundsException</exce-
ption-type>
            <location>/ServletErrorPage</location>
        </error-page>
        <error-page>
            <error-code>404</error-code>
            <location>/error404.html</location>
        </error-page>
    </web-app>

```

The web.xml Deployment Descriptor file describes how to deploy a web application in a servlet container such as Tomcat.

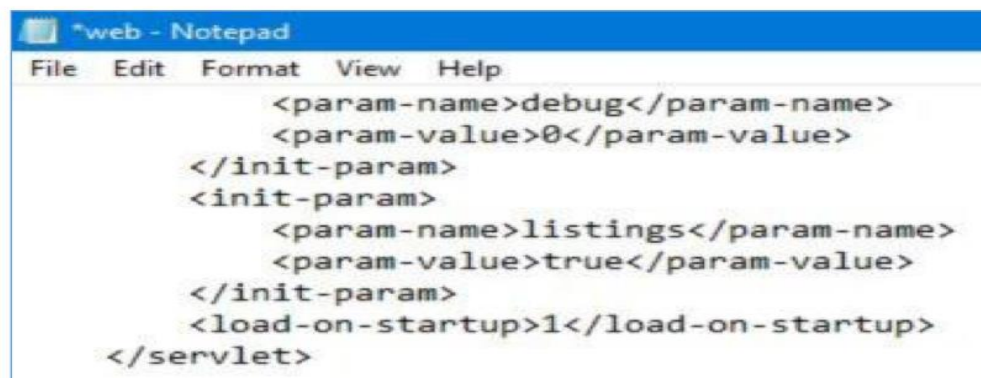
This file is required for every application you deploy on Tomcat. You will find one in the jsp-examples, servlet-examples and ROOT applications provided on a new Tomcat website, and every web application example you download, including inside WAR files.

The location of the file is always the same: application root/WEB-INF/web.xml

At minimum, the file needs to contain an XML descriptor and an opening and closing <web-app> tag.

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:



```

File Edit Format View Help
    <param-name>debug</param-name>
    <param-value>0</param-value>
</init-param>
<init-param>
    <param-name>listings</param-name>
    <param-value>true</param-value>
</init-param>
    <load-on-startup>1</load-on-startup>
</servlet>

```

6.Creating Websites using PHP

HTML Code:

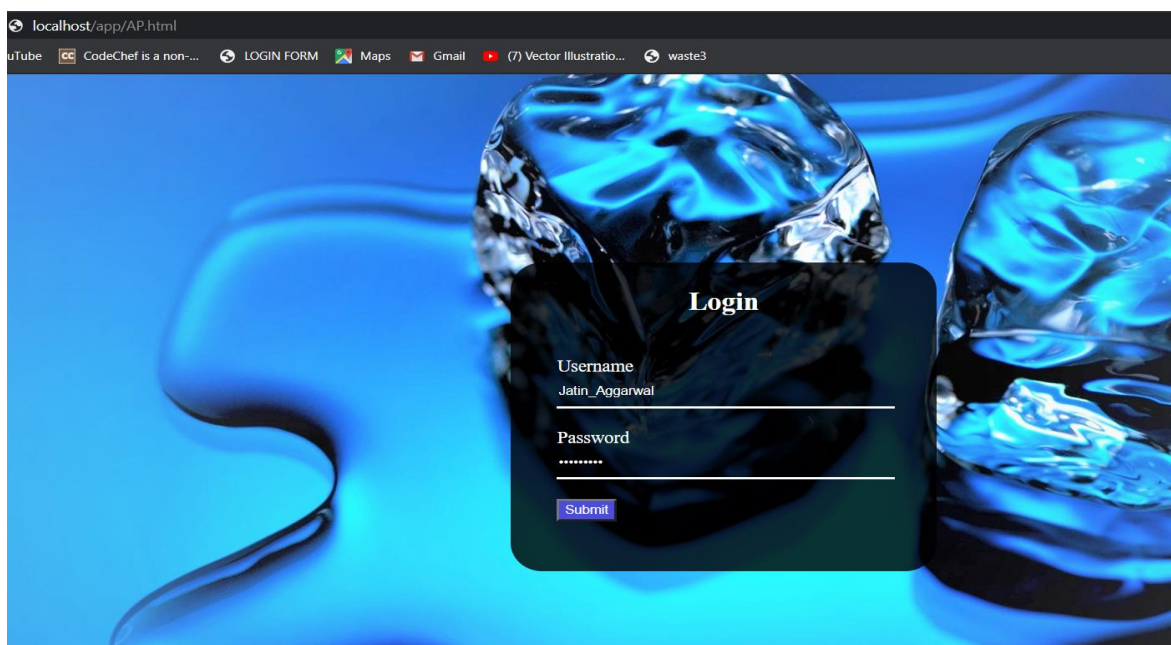
[illegible]

PHP Code:

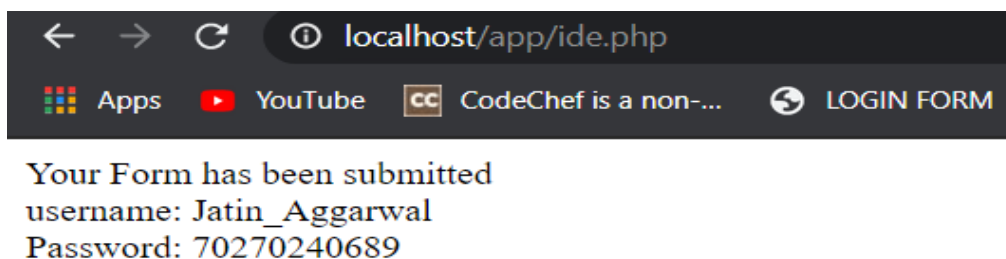
```
1 <?php
2 $user=$_POST['user'];
3 $password=$_POST['password'];
4 echo "Your Form has been submitted";
5 echo "<br>";
6 echo "username:  $user";
7 echo "<br>";
8 echo "Password:  $password";
9 ?>
```

OUTPUT:

(During filling information)



(After clicking submit Button)



7.Understanding Javascript

HTML and Javascript code:

```
1  <!DOCTYPE html>
2  <html>
3  <head>
4      <title>Java Scripts</title>
5      <script type="text/javascript">
6          function validate()
7          {
8              var username=document.getElementById("uname").value;
9              var regx=/@gmail.com/;
10             if(regx.test(username))
11             {
12                 alert("Valid Username");
13             }
14             else
15             {
16                 alert("Invalid Username");
17             }
18         }
19     </script>
20 </head>
21 <body>
22     <br><br><br><br><nr>
23     <h1><center>Registration Form</center></h1>
24     <form action="message.html">
25         <center><input type="text" id="uname" placeholder="username"/></center>
26         <br>
27         <center><button onclick="validate()">Submit</button></center>
28     </form>
29
30 </body>
31 </html>
```

a)when invalid syntax

gmail id enters



Registration Form

abc@gmail.com

Submit

b)when valid syntax gmail

id enters



Registration Form

abc@gmail.com

Submit

8.Creating a Web page with back end in PHP and front end in javascript and hosting it on Apache Tomcat Server.

HTML & Javascript CODE:

```
1
2 <!DOCTYPE html>
3 <html>
4   <head>
5     <title>PHP Server Side Form Validation and JAVASCRIPT client side validation</title>
6     <script src="https://ajax.googleapis.com/ajax/libs/jquery/2.2.0/jquery.min.js"></script>
7     <link rel="stylesheet" href="https://maxcdn.bootstrapcdn.com/bootstrap/3.3.6/css/bootstrap.min.css" />
8     <script src="https://maxcdn.bootstrapcdn.com/bootstrap/3.3.6/js/bootstrap.min.js"></script>
9     <script type="text/javascript">
10      document.getElementById("registerbtn").addEventListener("click",function(e){
11        var fieldValue=document.getElementById("name").value;
12        if(fieldValue==null || fieldValue== ""){
13          e.preventDefault();
14          alert("you must enter a username");
15        }
16      });
17    </script>
18  </head>
19  <body>
20    <br />
21    <div class="container" style="width:500px;">
22      <h3 class="text-center">PHP Server Side Form Validation and JAVASCRIPT client side validation</h3>
23      <form method="POST" action="http://localhost/AP/form.php" name="regform" onsubmit="return validate()">
24        <div class="form-group">
25          <label>Enter Name<span class="text-danger">*</span></label>
26          <input type="text" name="name" id="name" class="form-control" maxlength="75" />
27          <span class="text-danger"><?php echo $name_error; ?></span>
28        </div>
29        <div class="form-group">
30          <label>Enter Email<span class="text-danger">*</span></label>
31          <input type="text" name="email" class="form-control" maxlength="150" />
32          <span class="text-danger"><?php echo $email_error; ?></span>
33        </div>
34        <div class="form-group">
35          <label>Select Gender<span class="text-danger">*</span></label>
36          <div class="radio">
37            <input type="radio" name="gender" value="Male" />Male
38          </div>
39          <div class="radio">
40            <input type="radio" name="gender" value="Female" />Female
41          </div>
42          <span class="text-danger"><?php echo $gender_error; ?></span>
43        </div>
44        <div class="form-group">
45          <button type="submit" name="submit" id="registerbtn" value="Submit" class="btn btn-info">Submit</button>
46        </div>
47      </form>
48      <div><?php echo $output; ?></div>
49    </div>
50    <br />
51  </body>
52 </html>
53
```

PHP code:

```
1 <?php
2 $name_error = '';
3 $email_error = '';
4 $gender_error = '';
5 $output = '';
6 if(isset($_POST["submit"]))
7 {
8     if(empty($_POST["name"]))
9     {
10         $name_error = "<p>Please Enter Name</p>"; }
11     else
12     {
13         if(!preg_match("/^[a-zA-Z ]*$/", $_POST["name"]))
14         {
15             $name_error = "<p>Only Letters and whitespace allowed</p>"; } }
16     if(empty($_POST["email"]))
17     {
18         $email_error = "<p>Please Enter Email</p>"; }
19     else
20     {
21         if(!filter_var($_POST["email"], FILTER_VALIDATE_EMAIL))
22         {
23             $email_error = "<p>Invalid Email format</p>"; } }
24     if(empty($_POST["gender"]))
25     {
26         $gender_error = "<p>Please Enter your Gender</p>"; }
27     if($name_error == "" && $email_error == "" && $gender_error == "")
28     {
29         $output = '<p><label>Output-</label></p>
30         <p>Your Name is '.$_POST["name"].'</p>
31         <p>Your Email is '.$_POST["email"].'</p>
32         <p>Your Gender is '.$_POST["gender"].'</p> '; } }
33 ?>
34
35
```

OUTPUT:

PHP Server Side Form Validation and JAVASCRIPT client side validation

Enter Name*

Enter Email*

Select Gender*

- ☐ Male
☐ Female

Submit