



National University of Modern Languages

Web Engineering

Lab # 1

BSSE - 6 - Morning

Submitted By:

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Submitted To:

Sir Umer Haroon

Lab 1: Intro to HTML and tools

What is HTML?

HTML stands for Hyper Text Markup Language. It is the standard markup language for creating Web pages. It is used to describe the structure of a Web page. It consists of a series of elements. HTML elements tell the browser how to display the content.

Element in HTML

Elements in HTML tells the browser how to display the content. Some examples of elements are listed below

`<h1> Heading 1 </h1>`

`<p> Paragraph <p>`

`<div> </div>`

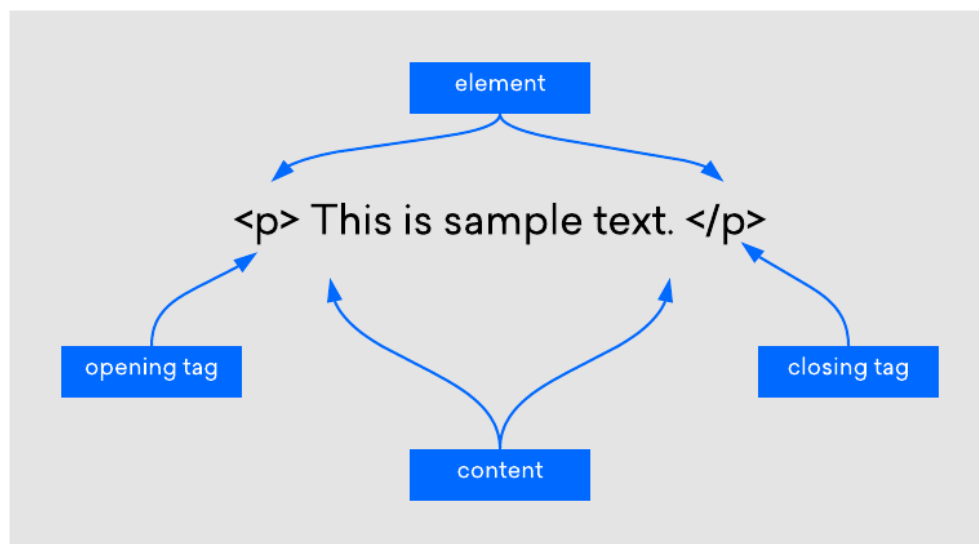
` Span `

Some elements do not have a closing tag. For example

``

`
`

`<hr>`

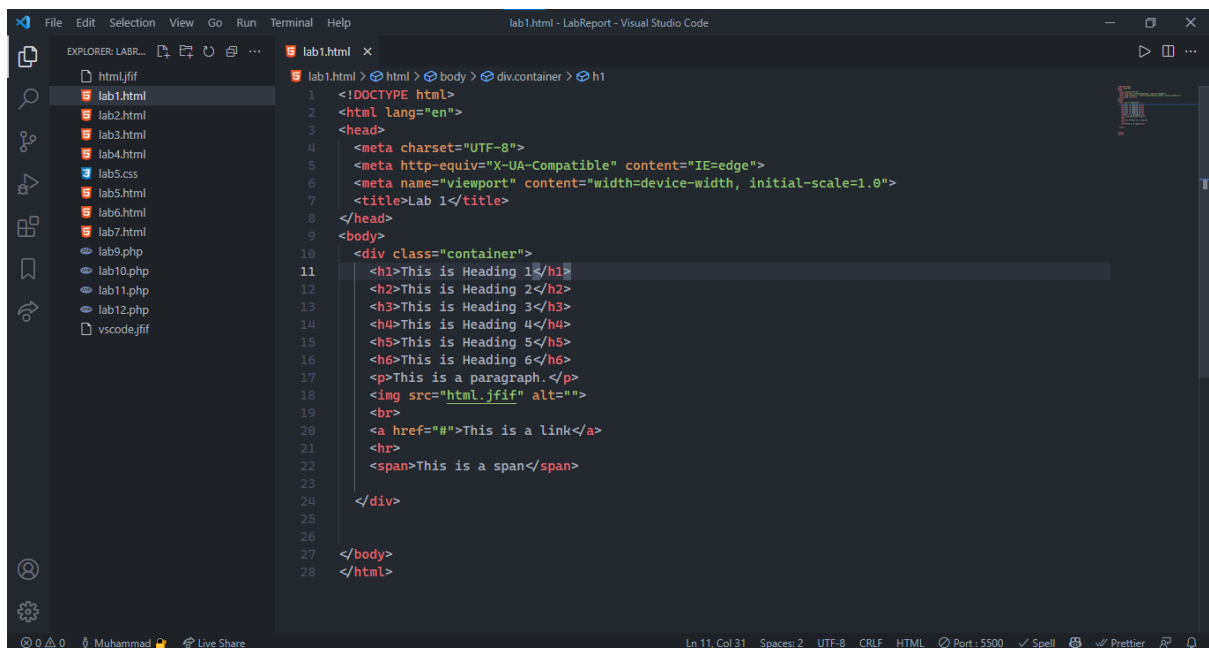


Tools:

There are many tools available for web development code editors and IDEs. For Example

- Editors
 1. Visual Studio Code
 2. Atom
 3. Sublime Text
 4. Notepad ++
 5. Brackets
- IDEs
 1. WebStorm
 2. PhpStorm
 3. DreamWeaver
 4. WYSIWYG Web Builder

I would be using VS Code for web development as it is a lightweight editor with a wide support for first-party and third-party extensions.



Code:

```
<!DOCTYPE html>
```

```
<html lang="en">
```

```
<head>
```

```
<meta charset="UTF-8">
```

```
<meta http-equiv="X-UA-Compatible" content="IE=edge">
```

```
<meta name="viewport" content="width=device-width, initial-scale=1.0">
```

```
<title>Lab 1</title>
```

```
</head>
```

```
<body>
```

```
<div class="container">
```

```
<h1>This is Heading 1</h1>
```

```
<h2>This is Heading 2</h2>
```

```
<h3>This is Heading 3</h3>
```

```
<h4>This is Heading 4</h4>
```

```
<h5>This is Heading 5</h5>
```

```
<h6>This is Heading 6</h6>
```

```
<p>This is a paragraph.</p>
```

```

```

```
<br>
```

```
<a href="#">This is a link</a>
```

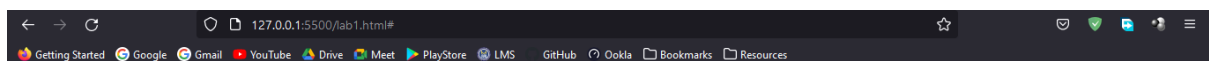
```
<hr>
```

```
<span>This is a span</span>
```

```
</div>
```

```
</body>
```

```
</html>
```



This is Heading 1

This is Heading 2

This is Heading 3

This is Heading 4

This is Heading 5

This is Heading 6

This is a paragraph.



[This is a link](#)

This is a span



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Lab # 2

BSSE - 6 - Morning

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Lab 2: Exploring html for web dev. (images)

Image Tag

The tag is used to embed an image in an HTML page. Images are not technically inserted into a web page; images are linked to web pages. The tag creates a holding space for the referenced image.

The tag has two required attributes:

- src - Specifies the path to the image
- alt - Specifies an alternate text for the image, if the image for some reason cannot be displayed

Also, always specify the width and height of an image. If width and height are not specified, the page might flicker while the image loads.

If you don't want aspect ratio of an image to be disturbed, only set the value of width or height of the image.

Code:

```
<!DOCTYPE html>

<html lang="en">

<head>

  <meta charset="UTF-8">

  <meta http-equiv="X-UA-Compatible" content="IE=edge">

  <meta name="viewport" content="width=device-width, initial-scale=1.0">

  <title>Lab 2</title>

</head>

<body>

  <h1>Exploring html for web dev.(images)</h1>

  <h2>Image source as a local file</h2>

  <h2>Image source as an address</h2>
```

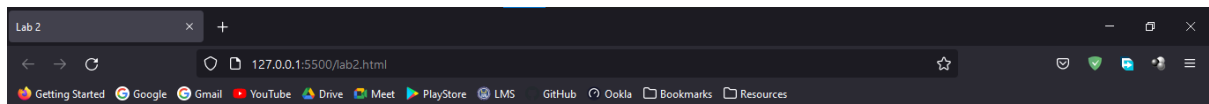
[illegible]

h9Z9V1H3M/wACevxfPHi1fps/yT4S+n7Jqdem08GmnCiqLT4NNRWUeHlnmyWnvl9Pgry
4qV+ER+Hz/lnPe2hcvoqqP+Cf+z1+DjWGP8vn/SM74i3dr8PB6f1r4vrm5eeT sno0z+13TM
WIIEsKAJYVLKBgSwJYVLAlhQwJCpZQkVaDEoCkEUgKQRQCgKRBQQoCgikAgKC
Op2uvlIvrgvezKG2nRwSs2A+v8hbN7Zel/hVsPDbNLYweBxkaz2/33PoOCneCv++96bSdL7
jmdTlAYD5TyoszrdXLqskvCkv9HvcNGsNfo+W4yd8Rf6+Tx+zVm2PYpPyZ0yww0dyzFq
SBLcGcWFSygYEsCWFSwJYUMCQJZVJFUgxUBSCKQCgikBSApEFIIUBQQoCgFBH
WbZXGt9k17jKG3G61vgVm9pX+jvUSjGS1VGJRUl6k+hrJ50+kaROuWXpR6NvMb548H
mdraKej1FumlPelVJJyhReYqWUu5o7cV4yUi8R1cWWlsd5pM9H7bFm96zi/mx9r6zKYhz
5Jn4u80ScrqYZfr3VQ6X7ZpGu/ZSZ7pY49zesfGY/L7AfOvr3xzb tubNZPrs1El3OUsh0WK
NUrHdD5LJO81p/7T+Xn9IL5R9kH70bZW/R2rMWoASwoAlhUsoGBLAlhUsCWFDAlhU
soSKpBioCkEKAoCkEUgKIFAUgigFBCAoDgbYXqwfVJry/8LDOjqmZNj7hsG3nNFo5vp
lpdPJ9/Nxz5nzeaNZbR3z+X0uC3NirPdH4eW5Vci79XqbdVRbVmzczVZvQw4wUeElnPQ
vYju4bja46RS0dPe4uJ4G2S83rPX3Ol2XyU2jXbOEtNLiliSnW4Pj9LODs/V4ZjfM87JwXE
biOT8PWbG5H6iF1V106oKuyFm5HM5PdecN8EujtOXNxtJrNaxPa6OH9G5K3re8xGp3rq
9tJ4Tb6Ess8t7cviG0bG6bJPpklmbX4n0sRrsfHUncxMuv2QvWm+xLzMpbLuyZi1gKlgSw
oAllEsCQoYEsCQqWAMKlIGIqwxUAoIpAUBSCFAUBSIEIpAIRSAQOhtVfJrsmvcywyw
1dQZNR2mwOXfwamrT3aZzhVCNcbKppT3V0ZjLg/tR52fgOe03rbtl6WDj+SSutXsj4PV6
Dljs6/C59Uyf7OoXNNdm983zOK/B5q/x39O13Y+Nw3/lqe/sej0NsWnNSi4YzvqSccd/Qc2p
3r3unca3vscXWcpdDTwlfGcvo1Ztf2rgvtN9OFy26V8exy5OO4enW257u10O0OW6lGUKK
H60XHftkk1lY+bHPvOvHwGp3a3g4MvpXcTFKeLwG1nilrriFeef9Hpx1eTj6uNslcJvtiveJZ
3c5kawwqQBhUIEsAYEhUsAYEhUsCWFDKMRVFYqRBSCKApAKCKApAKIKQQoCg
MEUgONTfZql2br80WOrKvV0xk2sBgOy2J02L2NRbXsby+OCS15Omn bGLW41uuqj0zTf
VH1vcNMorMuu1+uVsVGMWkpb2W1l8H7P6mUQzrXT9tlr5N9s37kSUv1cwjFLAGBLC
hlEgSwBhUgSwJYUMCWFSUJFUGKkAoCkEUgFAUgikAgUiBCFAUBghaTWGk0/Y+K
A41mhql7N3+V48i7ZRaXGs2Y/2ZJ9klgu2UXcazS2R6YPvXFeQ2yi0SmjUTrzuPGeDeEy
6JiJ6r3Lrenfl2yfDzJ2G4h+9ezZP50lHsXFjbGbuRXoK49Kcv5n+BNsZtLkRiksJJLqSwilzY
AAMKkoGBLAlhQwJAlhQwJAlhQyJEvYQoIoBQRSAPAKCKAUBRApgIQpgOQEI2QH
IGyBO7HOcLPXhZAcgYAYFDYAAhQBLKACWAMKlgDAkKlgDCpZRLASKpBCEU
gFBFAUgECkEIFJgJagIQ5AcgbIGAwGA2QNkAyAADYUADKJAGBIUMCQBgSwqQB
hUlAwpIEqKRAoIoBQRQCmAoIpMBApMBINKByAhGAcgbIGyAAYAYFGQMANIEgD
YABLChgSwAKlgAVLKBgSwpCkMVIgQikAgUghQFIBQQ5AQFMBASDZAcgbIGyBsg
bIBkDABQZAABsAAAqWAMCWFDakAYVJQMKAMFWiIoBCFAUAoIQKQQgKIKR
UYCgMQYoSDAYDAYAKMQBRmAMCWRQUdACKIIAFDAkCWAFUMAYGCv/2Q=
=" alt="" width="420" height="120">

</body>

</html>

Screenshots:



Exploring html for web dev.(images)

Image source as a local file



Image source as an address





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Web Engineering

Lab # 3

BSSE - 6 - Morning

Submitted By:

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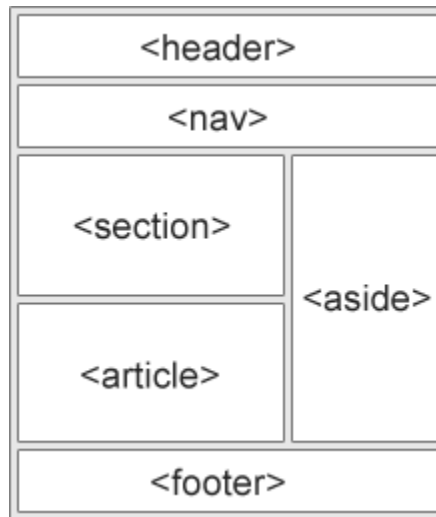
Submitted To:

Sir Umer Haroon

Lab 3: Semantic elements, text formatting, and file paths

Semantic elements:

Semantic element clearly describes its meaning to both the browser and the developer.
Examples of non-semantic elements: `<div>` and `` - Tells nothing about its content.
Examples of semantic elements: `<form>`, `<table>`, and `<article>` - Clearly defines its content.



Code:

```
<!DOCTYPE html>
```

```
<html lang="en">
```

```
<head>
```

```
  <meta charset="UTF-8">
```

```
  <meta http-equiv="X-UA-Compatible" content="IE=edge">
```

```
  <meta name="viewport" content="width=device-width, initial-scale=1.0">
```

```
  <title>Lab 3 | Part 1</title>
```

```
</style>
```

```
  header {
```

```
    display: flex;
```

```
    flex-direction: row;
```

```
    background-color: blanchedalmond;
```

```
    padding: 10px;
```

```
    border: 1px solid black;
```

```
}
```

```
header img {  
  width: 60px;  
}
```

```
header nav {  
  display: flex;  
  flex-direction: row;  
  justify-content: space-around;  
  margin: 20px;  
  border: 1px solid blue;  
}
```

```
header nav a {  
  text-decoration: none;  
  color: rebeccapurple;  
  margin-left: 5px;  
  margin-right: 5px;  
}
```

```
.container {  
  display: flex;  
  flex-direction: row;  
  margin-top: 10px;  
  padding: 20px;  
  border: 2px solid red;  
}
```

```
.sec {
```

```
display: flex;
flex-direction: column;
width: 80%;
border: 2px solid green;
padding: 10px;
}
```

```
aside {
display: flex;
flex-direction: column;
width: 20%;
border: 2px solid orange;
padding: 10px;
margin-left: 10px;
}
```

```
aside ul li {
list-style-type: none;
margin: 10px;
}
```

```
aside ul li a {
text-decoration: none;
color: red;
}
```

```
footer {
display: flex;
flex-direction: column;
background-color: lightblue;
```

```
padding: 20px;
margin-top: 10px;
border: 1px solid black;
}
.columns{
display: flex;
flex-direction: row;
justify-content: space-around;
}
.col{
display: flex;
flex-direction: column;
width: 25%;
border: 1px solid black;
padding: 10px;
}
</style>
</head>

<body>
<header>

<nav>
<a href="#">Home</a>
<a href="#">Gallery</a>
<a href="#">Contact Us</a>
<a href="#">Login</a>
</nav>
</header>
```

```
<div class="container">
```

```
<div class="sec">
```

```
<section>
```

```
<h2>This is a section</h2>
```

```
<p>Lorem ipsum dolor sit, amet consectetur adipisicing elit. Corrupti consequuntur repellat suscipit, pariatur
```

```
    a, similique ut in, perferendis corporis aperiam soluta magnam rem sed dignissimos incidunt enim? Praesentium
```

```
    molestias modi expedita tenetur ab vero recusandae, aperiam voluptatum unde molestiae quos architecto,
```

```
    deleniti atque distinctio.</p>
```

```
</section>
```

```
<article>
```

```
<h2>This is an article.</h2>
```

```
<p>Lorem ipsum dolor sit, amet consectetur adipisicing elit. Corrupti consequuntur repellat suscipit, pariatur
```

```
    a, similique ut in, perferendis corporis aperiam soluta magnam rem sed dignissimos incidunt enim? Praesentium
```

```
    molestias modi expedita tenetur ab vero recusandae, aperiam voluptatum unde molestiae quos architecto,
```

```
    deleniti atque distinctio.</p>
```

```
</article>
```

```
</div>
```

```
<aside>
```

```
<ul>
```

```
<li>
```

```
<h2>This is aside</h2>
```

```
</li>
```

```
<li><a href="">Text 1</a></li>
```

```
<li><a href="">Text 2</a></li>
```

```
<li><a href="">Text 3</a></li>
```

```
<li><a href="">Text 4</a></li>
```

```
<li><a href="">Text 5</a></li>
<li><a href="">Text 6</a></li>
<li><a href="">Text 7</a></li>
</ul>
</aside>
</div>
<footer>
<h2>This is footer</h2>
<div class="columns">
<div class="col">
<ul>
<li><a href="https://www.ft.com/tour">View Site Tips</a></li>
<li><a href="http://help.ft.com/">Help Centre</a></li>
<li><a href="https://aboutus.ft.com/contact-us">Contact Us</a></li>
<li><a href="http://www.ft.com/aboutus">About Us</a></li>
<li><a href="https://www.ft.com/accessibility">Accessibility</a></li>
<li><a href="https://www.ft.com/tour/myft">myFT Tour</a></li>
<li><a href="https://aboutus.ft.com/en-gb/careers/">Careers</a></li>
</ul>
</div>
<div class="col">
<ul>
<li><a href="https://www.ft.com/tour">View Site Tips</a></li>
<li><a href="http://help.ft.com/">Help Centre</a></li>
<li><a href="https://aboutus.ft.com/contact-us">Contact Us</a></li>
<li><a href="http://www.ft.com/aboutus">About Us</a></li>
<li><a href="https://www.ft.com/accessibility">Accessibility</a></li>
<li><a href="https://www.ft.com/tour/myft">myFT Tour</a></li>
<li><a href="https://aboutus.ft.com/en-gb/careers/">Careers</a></li>
</ul>
```


</div>

<div class="col">

View Site Tips

Help Centre

Contact Us

About Us

Accessibility

myFT Tour

Careers

</div>

<div class="col">

View Site Tips

Help Centre

Contact Us

About Us

Accessibility

myFT Tour

Careers

</div>

<div class="col">

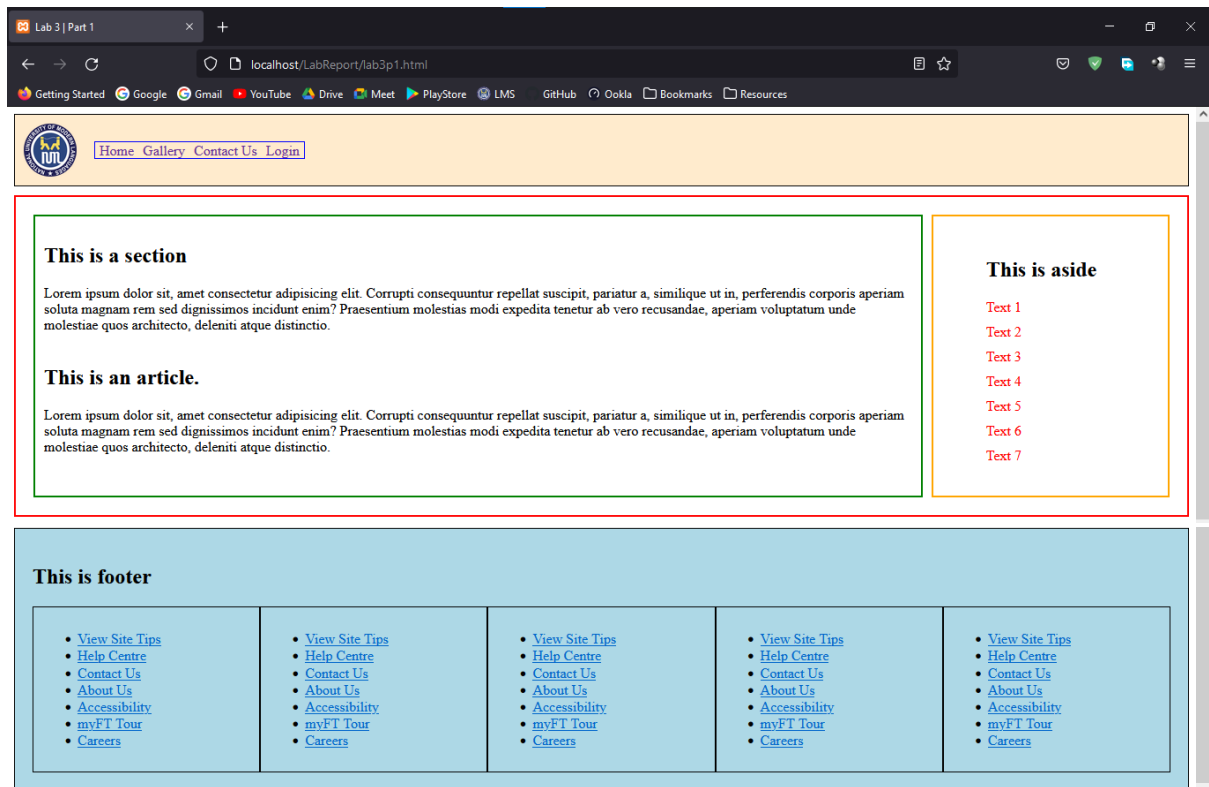
View Site Tips

Help Centre

Contact Us

About Us

Accessibility



Text Formatting

HTML contains several elements for defining text with a special meaning.

Code:

```
<!DOCTYPE html>
```

```
<html lang="en">
```

```
<head>
```

```
  <meta charset="UTF-8">
```

```
  <meta http-equiv="X-UA-Compatible" content="IE=edge">
```

```
  <meta name="viewport" content="width=device-width, initial-scale=1.0">
```

```
  <title>Lab 3 | Part 2</title>
```

```
</head>
```

```
<body>
```

```
  <h1>Text formatting</h1>
```

```
  <div class="container">
```

```
    <ul>
```

```
      <li><b>This is a bold text</b></li>
```

```
      <li><i>This is an italic text</i></li>
```

```
      <li><strong>This is a strong text.</strong></li>
```

```
      <li><em>This is an emphasized text.</em></li>
```

```
      <li><mark>This is a marked text.</mark></li>
```

```
      <li><small>This is a small text.</small></li>
```

```
      <li><del>This is a deleted text.</del></li>
```

```
      <li><ins>This is an inserted text.</ins></li>
```

```
      <li>Eg. H<sub>2</sub>O <sub>This is a subscript text.</sub> </li>
```

```
      <li>Eg. x<sup>2</sup>+y<sup>2</sup>+2xy <sup>This is a superscript text.</sup></li>
```

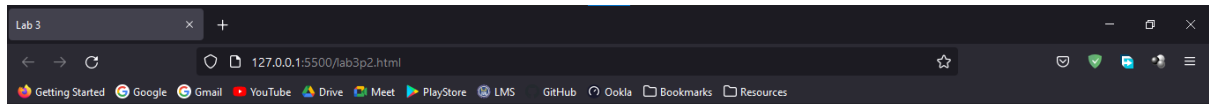
```
    </ul>
```

```
  </div>
```

</body>

</html>

Screenshot



Text formatting

- **This is a bold text**
- *This is an italic text*
- **This is a strong text.**
- ***This is an emphasized text.***
- **This is a marked text.**
- This is a small text.
- ~~This is a deleted text.~~
- This is an inserted text.
- Eg. H₂O This is a subscript text.
- Eg. x²+y²+2xy This is a superscript text.

File Paths:

A file path describes the location of a file in a web site's folder structure.

Path	Description
	The "picture.jpg" file is located in the same folder as the current page
	The "picture.jpg" file is located in the images folder in the current folder
	The "picture.jpg" file is located in the images folder at the root of the current web
	The "picture.jpg" file is located in the folder one level up from the current folder

Examples:

- <link rel="stylesheet" href="style.css">
- <script src="script.css"></script>
-



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Lab # 4

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Lab 4: Exploring CSS (inline)

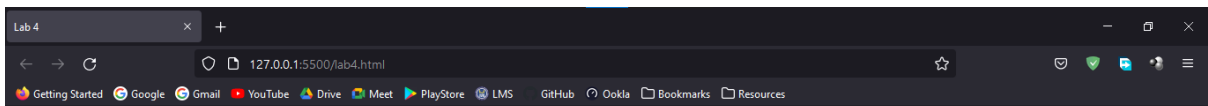
Inline CSS:

To use inline styles, add the style attribute to the relevant element. The style attribute can contain any CSS property.

Code:

```
<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="UTF-8">
  <meta http-equiv="X-UA-Compatible" content="IE=edge">
  <meta name="viewport" content="width=device-width, initial-scale=1.0">
  <title>Lab 4</title>
</head>
<body>
  <h1 style="border: 2px solid black; padding: 10px; color: blue;">
    Exploring css(inline)
  </h1>
  <div style="height: 200px; width: 200px; background-color: brown;" class="container">
    
  </div>
</body>
</html>
```

Screenshots:



Exploring **css(inline)**





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Web Engineering

Lab # 5

BSSE - 6 - Morning

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Lab 5: Exploring CSS (internal, external)

Internal CSS:

An internal style sheet may be used if one single HTML page has a unique style. The internal style is defined inside the <style> element, inside the head section.

External CSS:

With an external style sheet, you can change the look of an entire website by changing just one file. Each HTML page must include a reference to the external style sheet file inside the <link> element, inside the head section. An external style sheet can be written in any text editor and must be saved with a .css extension. The external .css file should not contain any HTML tags.

Code:

HTML Code with Internal CSS:

```
<!DOCTYPE html>
```

```
<html lang="en">
```

```
<head>
```

```
<meta charset="UTF-8">
```

```
<meta http-equiv="X-UA-Compatible" content="IE=edge">
```

```
<meta name="viewport" content="width=device-width, initial-scale=1.0">
```

```
<link rel="stylesheet" href="lab5.css">
```

```
<style>
```

```
.container {
```

```
  display: flex;
```

```
  flex-direction: column;
```

```
  border: 2px solid black;
```

```
  padding: 10px;
```

```
}
```

```
.container h1 {
```

```
  color: brown;
```

```
}
```

```
</style>
```

```
<title>Lab 5</title>
```

```
</head>
```

```
<body>
```

```
<h1>Exploring css(internal & external)</h1>
```

```
<div class="container">
```

```
<h1>This div is styled using internal css</h1>
```

```
<div class="row">
```

```
<div class="box">
```

```
<h2>The div and its contents are styled using internal css</h2>
```

<p>Lorem ipsum dolor sit amet consectetur adipisicing elit. Obcaecati, nostrum minima distinctio dolorum, saepe,

laudantium rerum atque provident quis alias laborum eligendi doloremque nisi ad? Cumque, quisquam eius

repudiandae expedita vel quo esse consequuntur corrupti natus accusamus ipsa! Excepturi, quaerat?</p>

```
</div>
```

```
<div id="box2" class="box">
```

```
<h2>The div and its contents are styled using internal css</h2>
```

<p>Lorem ipsum dolor sit amet consectetur adipisicing elit. Obcaecati, nostrum minima distinctio dolorum, saepe,

laudantium rerum atque provident quis alias laborum eligendi doloremque nisi ad? Cumque, quisquam eius

repudiandae expedita vel quo esse consequuntur corrupti natus accusamus ipsa! Excepturi, quaerat?</p>

```
</div>
```

```
</div>
```

```
</div>
```

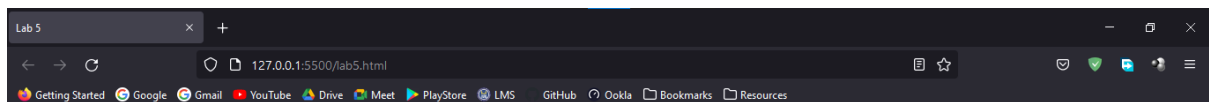
```
</body>
```

```
</html>
```

External CSS:

```
.row{  
  display: flex;  
  flex-direction: row;  
  border: 2px solid blue;  
  padding: 10px;  
}  
  
.row h1{  
  color: brown;  
}  
  
.box{  
  border: 2px dotted green;  
  padding: 10px;  
  margin: 5px;  
  background-color: aquamarine;  
}
```

Screenshot:



Exploring css(internal & external)

This div is styled using internal css

The div and its contents are styled using external css

Lorem ipsum dolor sit amet consectetur adipisicing elit. Obcaecati, nostrum minima distinctio dolorum, saepe, laudantium rerum atque provident quis alias laborum eligendi doloremque nisi ad? Cumque, quisquam eius repudiandae expedita vel quo esse consequuntur corrupti natus accusamus ipsa! Excepturi, quaerat?

The div and its contents are styled using external css

Lorem ipsum dolor sit amet consectetur adipisicing elit. Obcaecati, nostrum minima distinctio dolorum, saepe, laudantium rerum atque provident quis alias laborum eligendi doloremque nisi ad? Cumque, quisquam eius repudiandae expedita vel quo esse consequuntur corrupti natus accusamus ipsa! Excepturi, quaerat?



National University of Modern Languages

Web Engineering

Lab # 6

BSSE - 6 - Morning

Submitted By:

Muhammad Umair - 12093

Muhammad Saeed - 12091

Submitted To:

Sir Umer Haroon

Lab 6: Exploring Javascript for web dev.

Javascript:

JavaScript is a text-based programming language used both on the client-side and server-side that allows you to make web pages interactive. Where HTML and CSS are languages that give structure and style to web pages, JavaScript gives web pages interactive elements that engage a user.

Code:

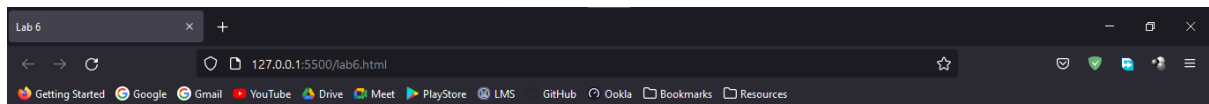
```
<!DOCTYPE html>
<html lang="en">

<head>
  <meta charset="UTF-8">
  <meta http-equiv="X-UA-Compatible" content="IE=edge">
  <meta name="viewport" content="width=device-width, initial-scale=1.0">
  <title>Lab 6</title>
  <style>
    .container{
      width: 400px;
      border: 2px solid black;
      padding: 10px;
    }
    p{
      font-size: 16px;
    }
  </style>
</head>

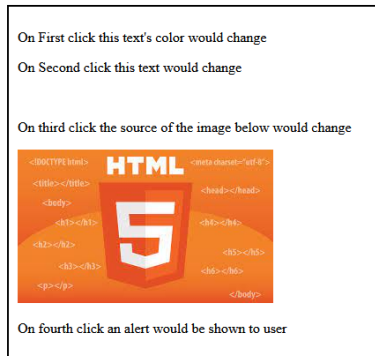
<body onclick="callme()">
  <h1>Exploring javascript for web dev.</h1>
```

```
<br>
<div class="container">
  <p id="p-1">On First click this text's color would change</p>
  <p id="p-2">On Second click this text would change</p>
  <br>
  <p>On third click the source of the image below would change</p>
  
  <br>
  <p>On fourth click an alert would be shown to user</p>
</div>
<script>
  var count = 1;
  function callme() {
    if (count == 1) {
      document.getElementById('p-1').style.color = "brown";
    }
    else if (count == 2) {
      document.getElementById('p-2').innerText = "Text Changed";
    }
    else if (count == 3) {
      document.getElementById("image").src = "vscode.jfif";
    }
    else{
      alert("You have clicked "+count+" times");
    }
    count++;
  }
</script>
</body>
</html>
```

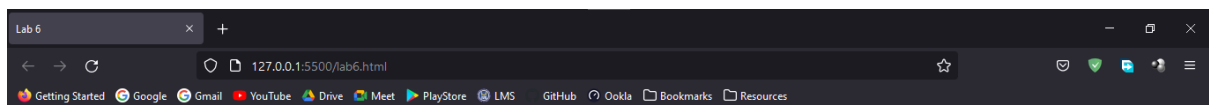
Screenshots:



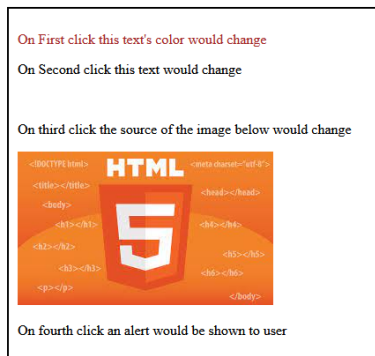
Exploring javascript for web dev.



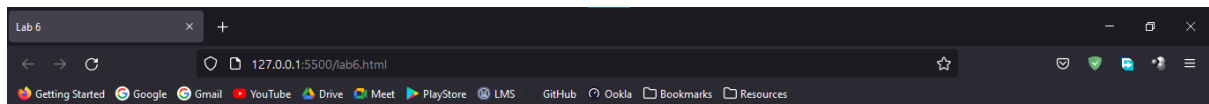
Default View



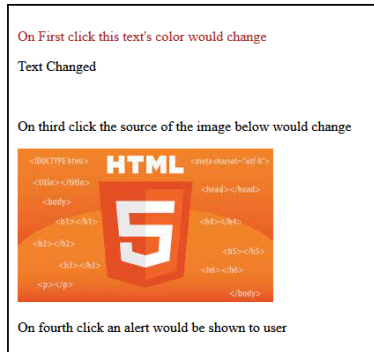
Exploring javascript for web dev.



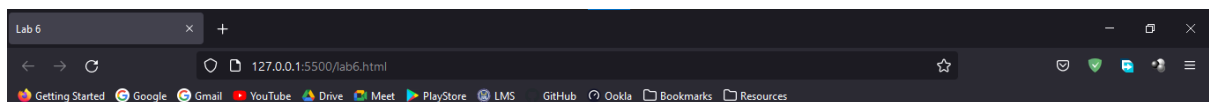
When user clicks for 1st time



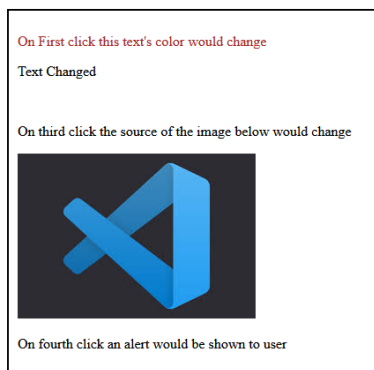
Exploring javascript for web dev.



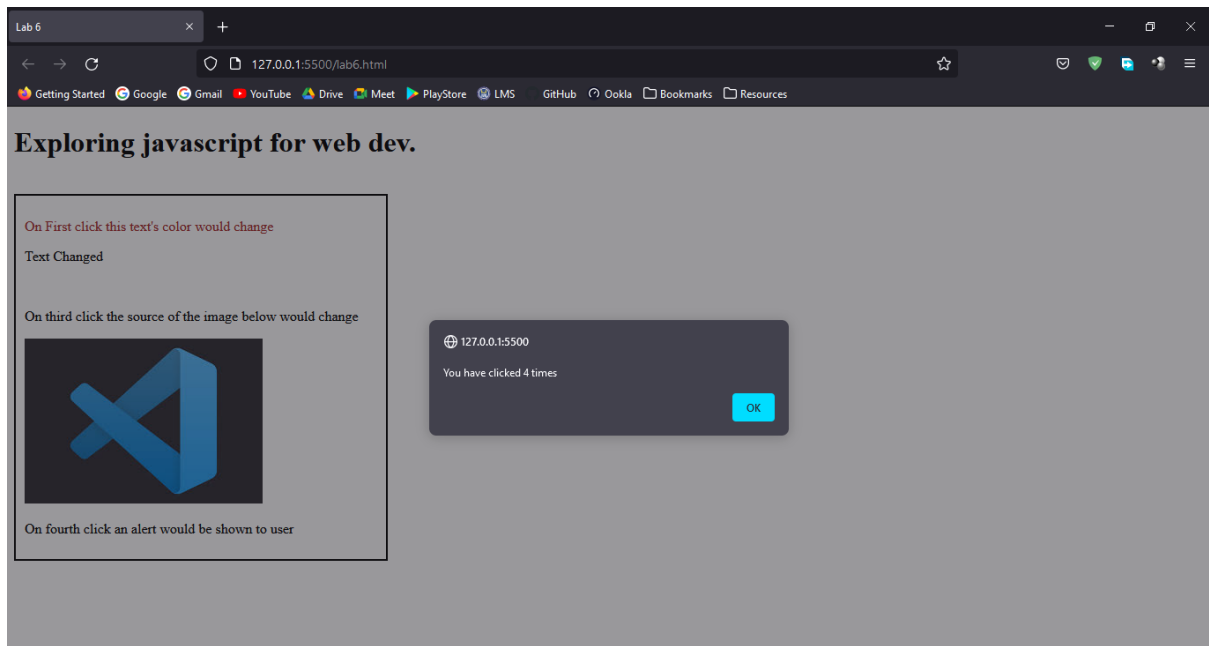
When user clicks for 2nd time



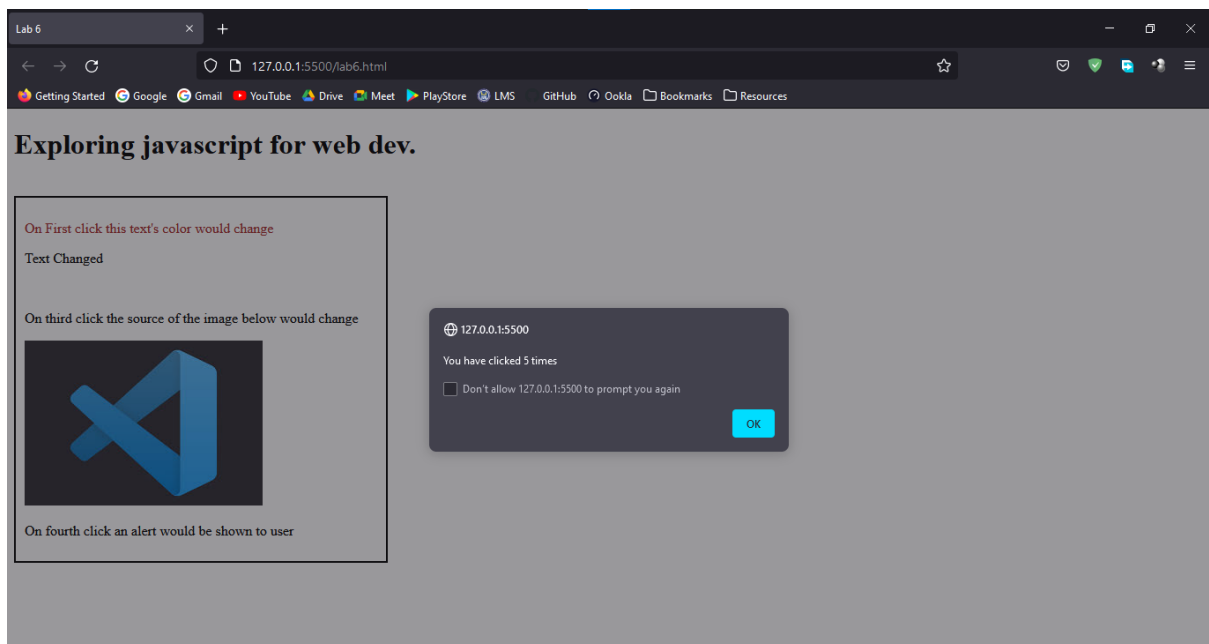
Exploring javascript for web dev.



When user clicks for 3rd time



When user clicks for 4th time



When user clicks for more than 4 times



National University of Modern Languages

Web Engineering

Lab # 7

BSSE - 6 - Morning

Submitted By:

Muhammad Umair – 12093

Muhammad Saeed - 12087

Submitted To:

Sir Umer Haroon

Lab 7: HTML form, input fields, and attributes

Form:

An HTML form is used to collect user input. The user input is most often sent to a server for processing.

The HTML `<form>` element is used to create an HTML form for user input. The `<form>` element is a container for different types of input elements, such as: text fields, checkboxes, radio buttons, submit buttons, etc.

Input Fields:

The HTML `<input>` element is the most used form element. An `<input>` element can be displayed in many ways, depending on the type attribute.

Type	Description
<code><input type="text"></code>	Displays a single-line text input field
<code><input type="radio"></code>	Displays a radio button (for selecting one of many choices)
<code><input type="checkbox"></code>	Displays a checkbox (for selecting zero or more of many choices)
<code><input type="submit"></code>	Displays a submit button (for submitting the form)
<code><input type="button"></code>	Displays a clickable button

Attributes:

1. Read-only Attribute:

The read-only attribute is a Boolean attribute. When present, it specifies that an input field is read-only. A read-only input field cannot be modified, a user can tab to it, highlight it, and copy the text from it).

2. Disabled Attribute:

The disabled attribute is a Boolean attribute. When present, it specifies that the `<input>` element should be disabled. A disabled input element is unusable and un-clickable.

3. Autocomplete Attribute:

The autocomplete attribute specifies whether or not an input field should have autocomplete enabled.

4. Novalidate Attribute:

The novalidate attribute is a Boolean attribute. When present, it specifies that the form-data (input) should not be validated when submitted.

5. Autofocus Attribute:

The autofocus attribute is a Boolean attribute. When present, it specifies that an `<input>` element should automatically get focus when the page loads.

6. Placeholder Attribute:

The placeholder attribute specifies a short hint that describes the expected value of an input field. The short hint is displayed in the input field before the user enters a value.

7. Required Attribute:

The required attribute is a Boolean attribute. When present, it specifies that an input field must be filled out before submitting the form.

Code:

```
<!DOCTYPE html>

<html lang="en">

<head>

  <meta charset="UTF-8">

  <meta http-equiv="X-UA-Compatible" content="IE=edge">

  <meta name="viewport" content="width=device-width, initial-scale=1.0">

  <style>

    body {

      display: flex;

      flex-direction: column;

    }

    .container {

      display: flex;

      flex-direction: column;

      align-self: center;

      width: 400px;

      border: 2px solid black;

      padding: 10px;
```

```
}
```

```
.row {  
  display: flex;  
  flex-direction: row;  
  margin-top: 10px;  
}
```

```
.row label {  
  width: 40%;  
}
```

```
.row input {  
  width: 60%;  
}
```

```
.row input,  
.row label {  
  height: 20px;  
}
```

```
.row button {  
  width: 50%;  
  margin: 20px;  
  border-radius: 25px;  
  padding-top: 5px;  
  padding-bottom: 5px;  
}
```

```
</style>
```

```
<title>Lab 7</title>
```

```
</head>
```

```
<body>
```

```
<h1>Html form, input fields, and attributes</h1>
```

```
<div class="container">
```

```
<form action="" novalidate>
```

```
<div class="row">
```

```
<label for="name">Full Name:</label>
```

```
<input type="text" name="name" id="name" required>
```

```
</div>
```

```
<div class="row">
```

```
<label for="age">Age (years):</label>
```

```
<input type="number" name="age" id="age">
```

```
</div>
```

```
<div class="row">
```

```
<label for="email">Email:</label>
```

```
<input type="email" id="email" name="email" autocomplete="ON" required>
```

```
</div>
```

```
<div class="row">
```

```
<label for="password">Password:</label>
```

```
<input type="password" name="password" id="password" required>
```

```
</div>
```

```
<div class="row">
```

```
<label for="confirm-password">Confirm Password:</label>
```

```
<input type="password" name="confirm-password" id="confirm-password" required>
```

```
</div>
```

```
<div class="row">
```

```
<button style="background-color: blue; color: white;" type="submit" id="submit">Submit</button>
```

```
<button style="background-color: red; color: white;" type="reset" id="reset">Reset</button>
```

```
</div>

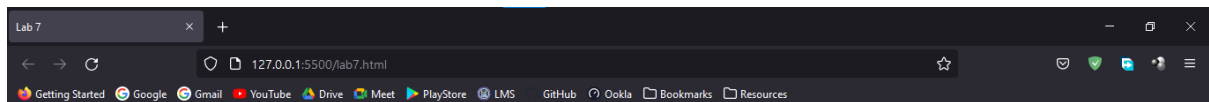
</form>

</div>

</body>

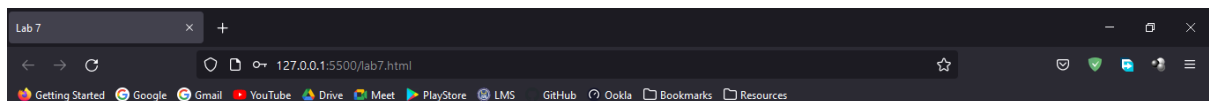
</html>
```

Screenshot:



Html form, input fields, and attributes

Full Name:	<input type="text"/>
Age (years):	<input type="text"/>
Email:	<input type="text"/>
Password:	<input type="password"/>
Confirm Password:	<input type="password"/>
<div><input type="button" value="Submit"/> <input type="button" value="Reset"/></div>	



Html form, input fields, and attributes

Full Name:	<input type="text" value="Muhammad Umair"/>
Age (years):	<input type="text" value="21"/>
Email:	<input type="text" value="muhammadumair523@gmail.com"/>
Password:	<input type="password" value="*****"/>
Confirm Password:	<input type="password" value="*****"/>
<div><input type="button" value="Submit"/> <input type="button" value="Reset"/></div>	



National University of Modern Languages

Web Engineering

Lab # 8

BSSE - 6 - Morning

Submitted By:

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Muhammad Saeed - 12091

Submitted To:

Sir Umer Haroon

Lab 8: Exploring server environment, installation and configuration

Server Environment:

XAMPP helps a local host or server to test its website and clients via computers and laptops before releasing it to the main server. It is a platform that furnishes a suitable environment to test and verify the working of projects based on Apache, Perl, MySQL database, and PHP through the system of the host itself.

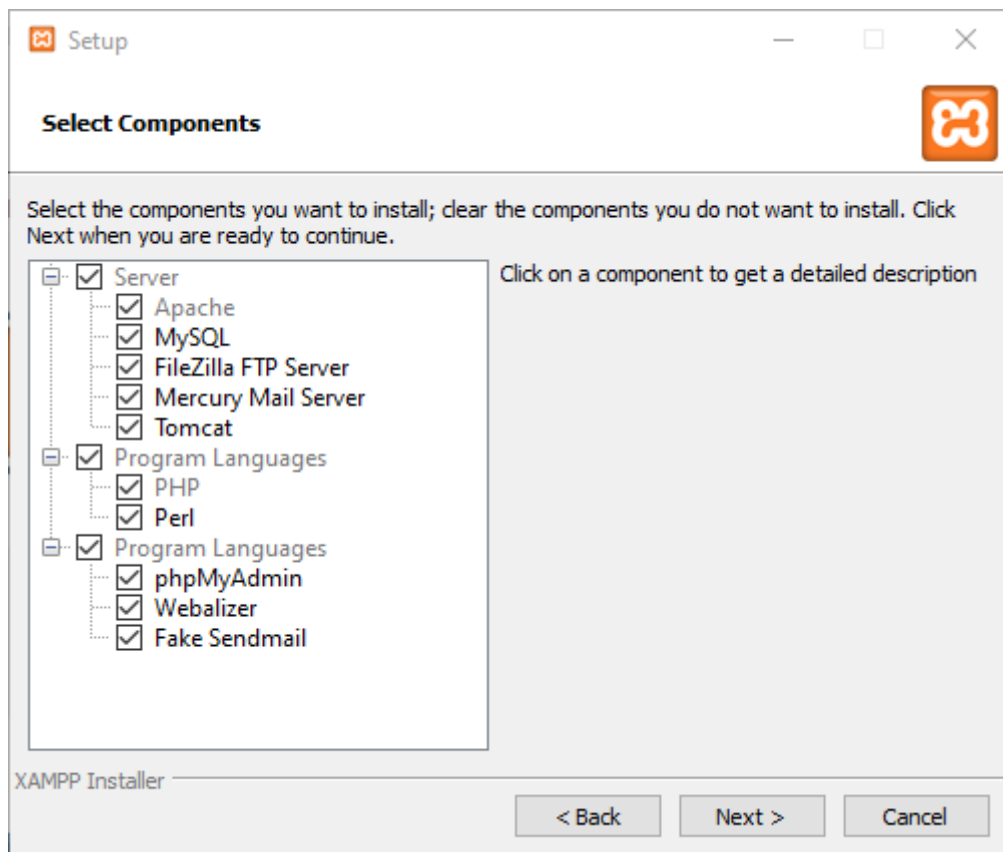
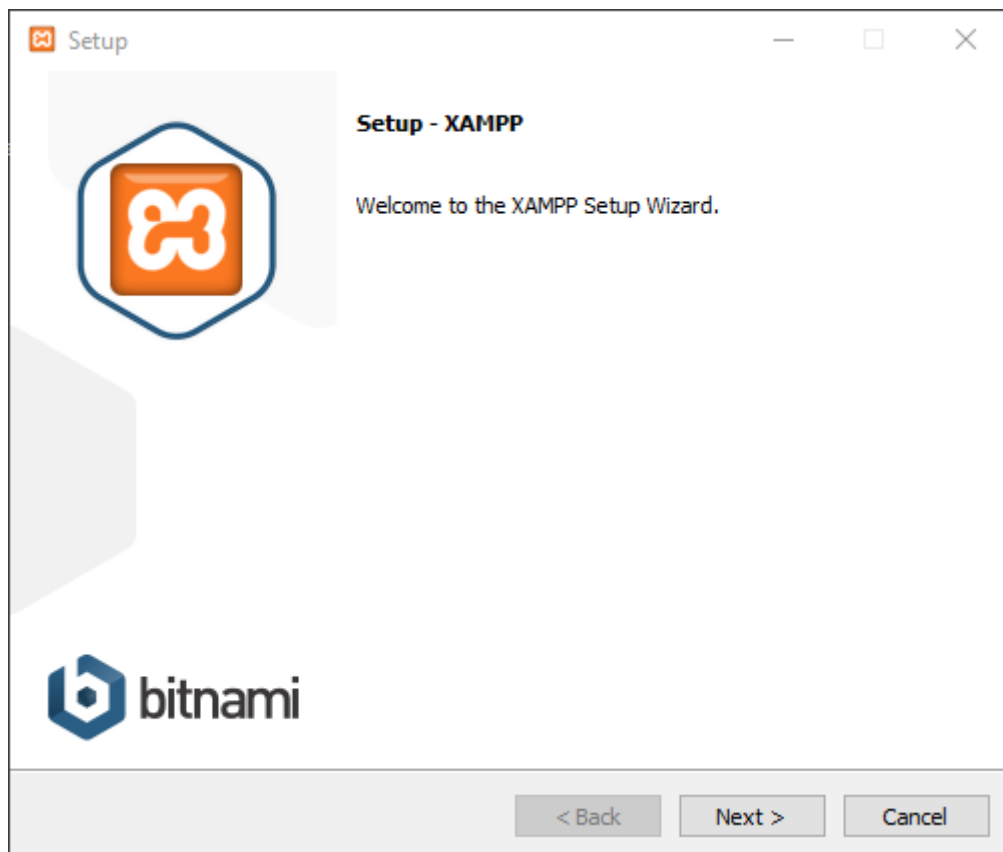
There are alternatives for XAMPP too.

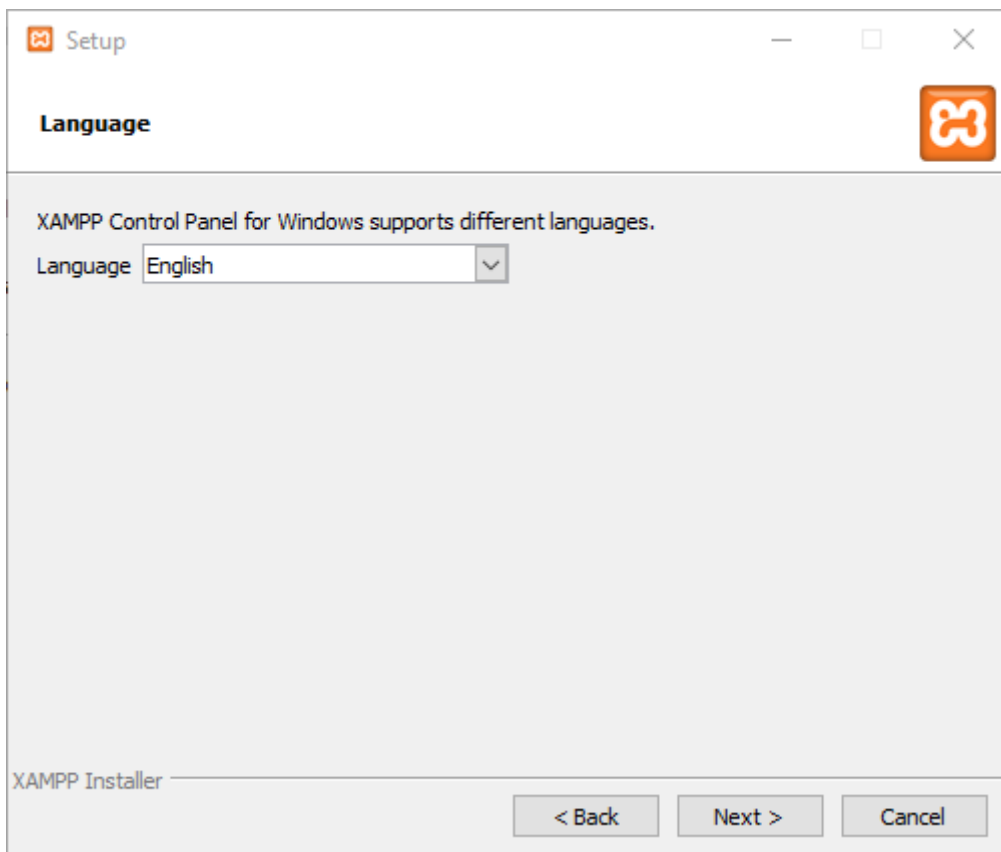
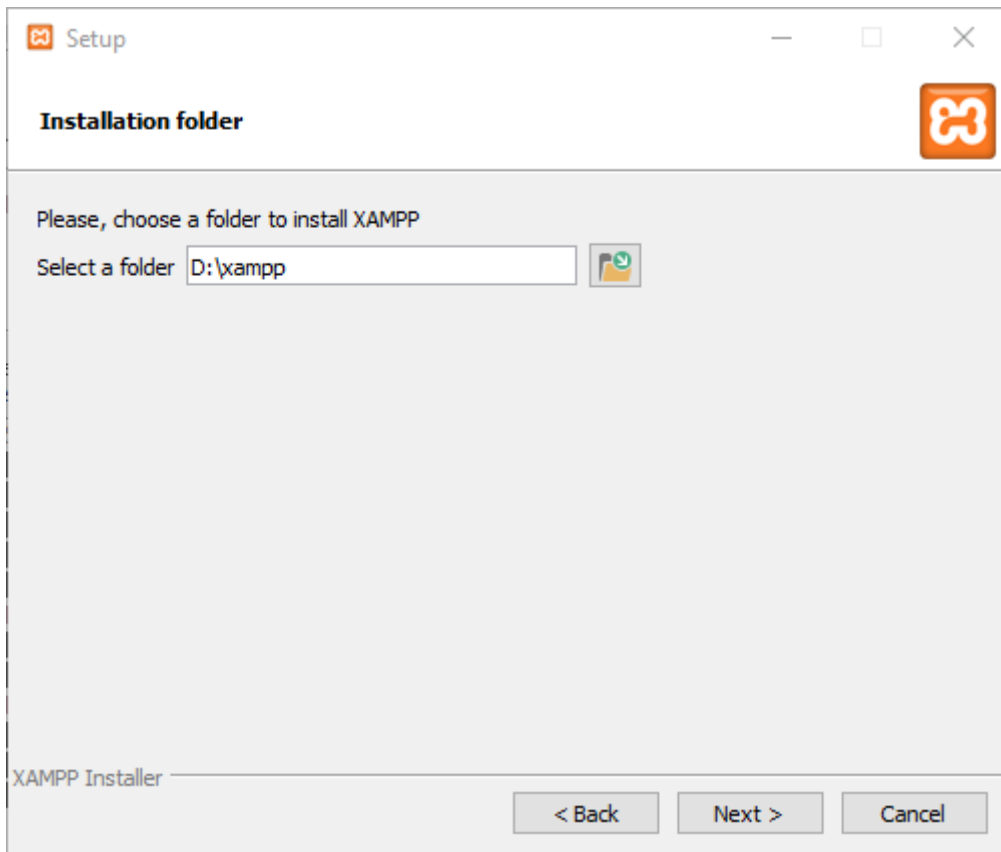
1. WAMP (windows only)
2. LAMP (linux only)
3. EasyPHP
4. AMPPS

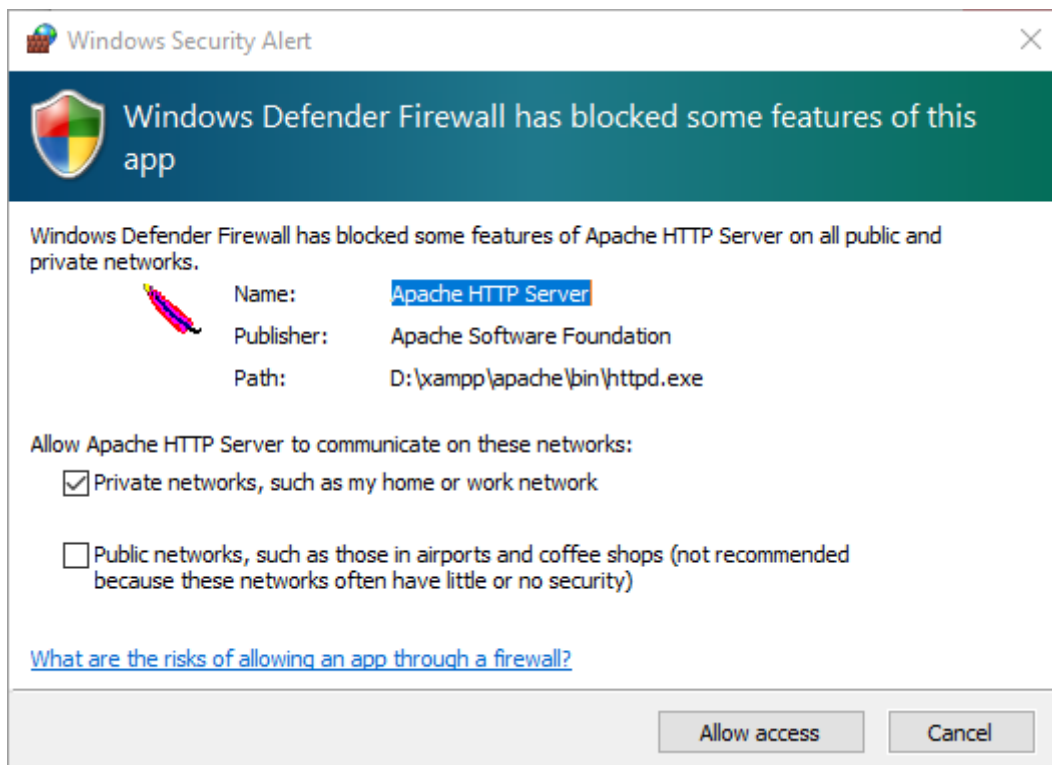
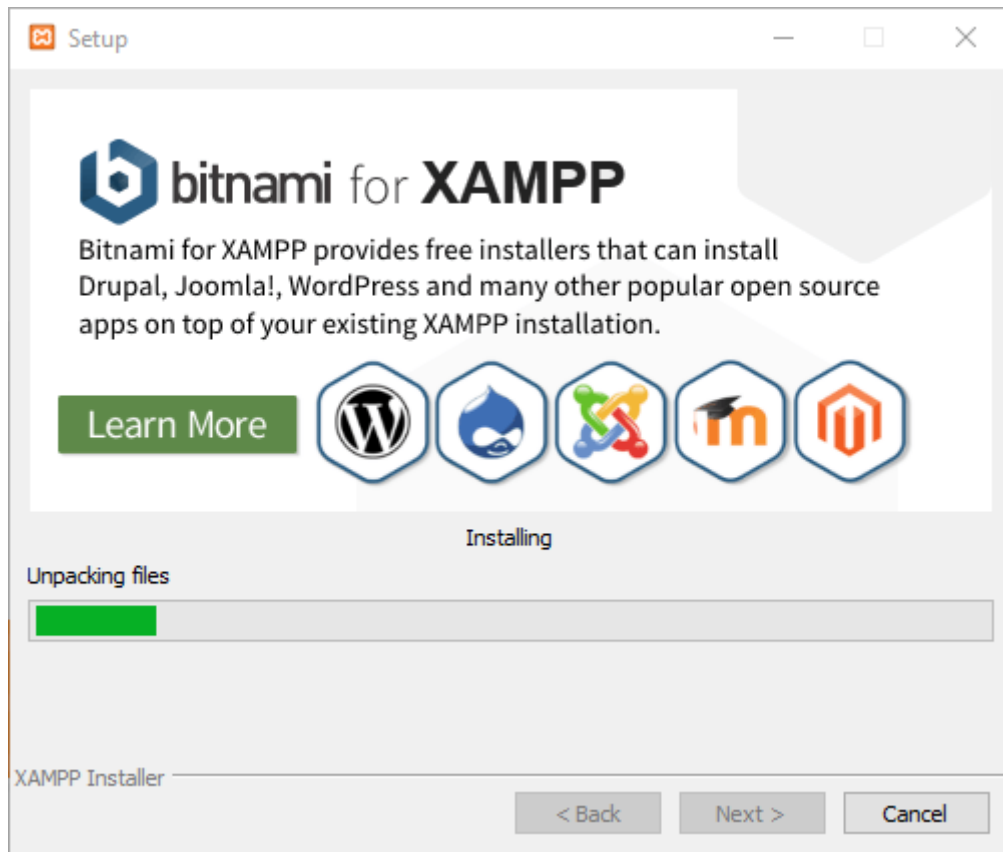
1. Downloading XAMPP



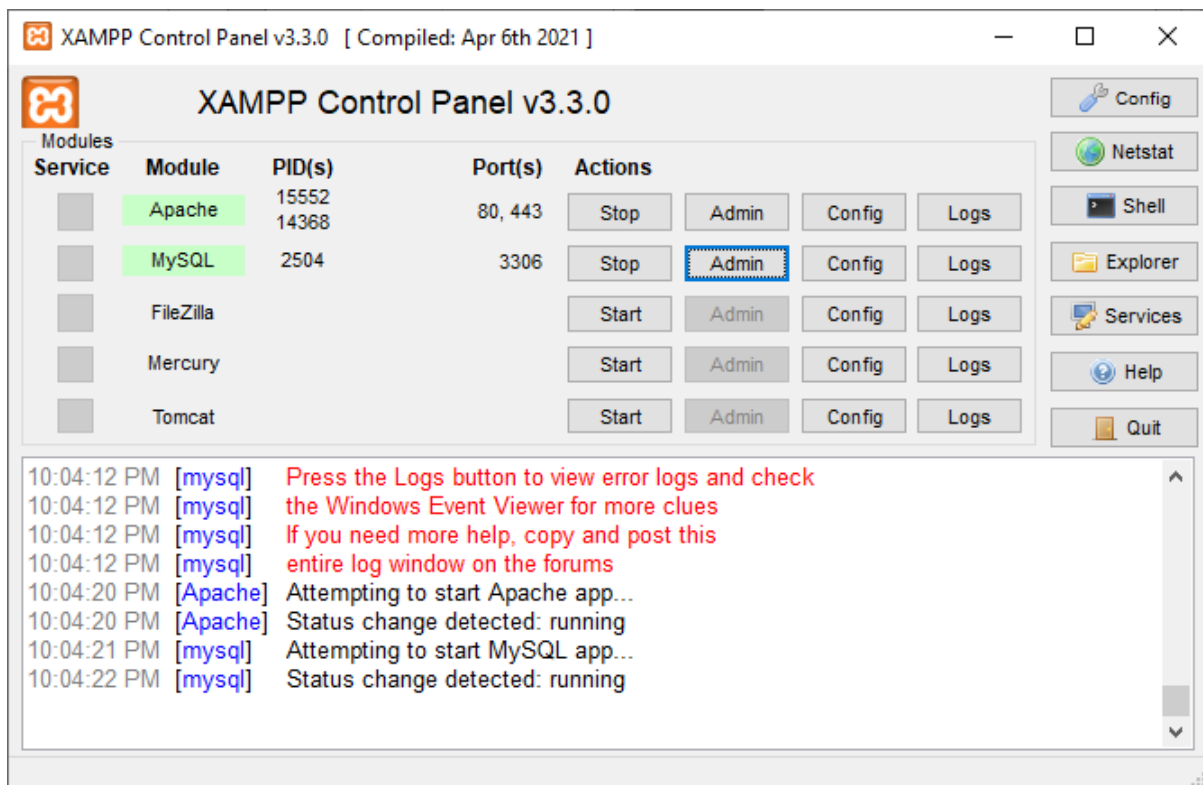
2. Installing XAMPP



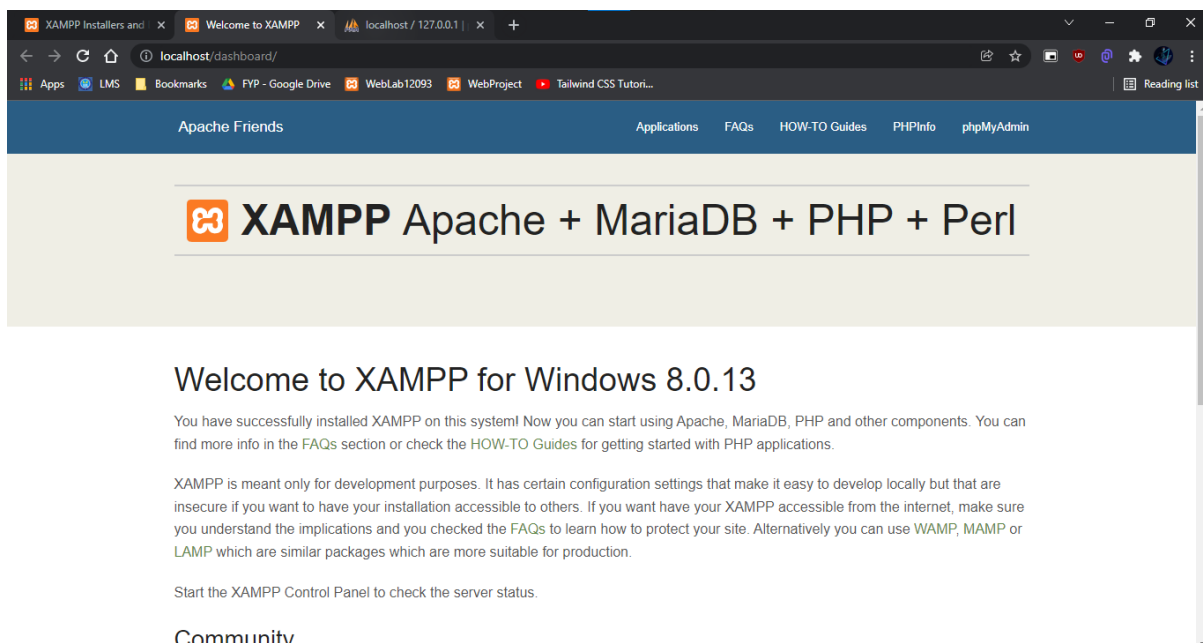




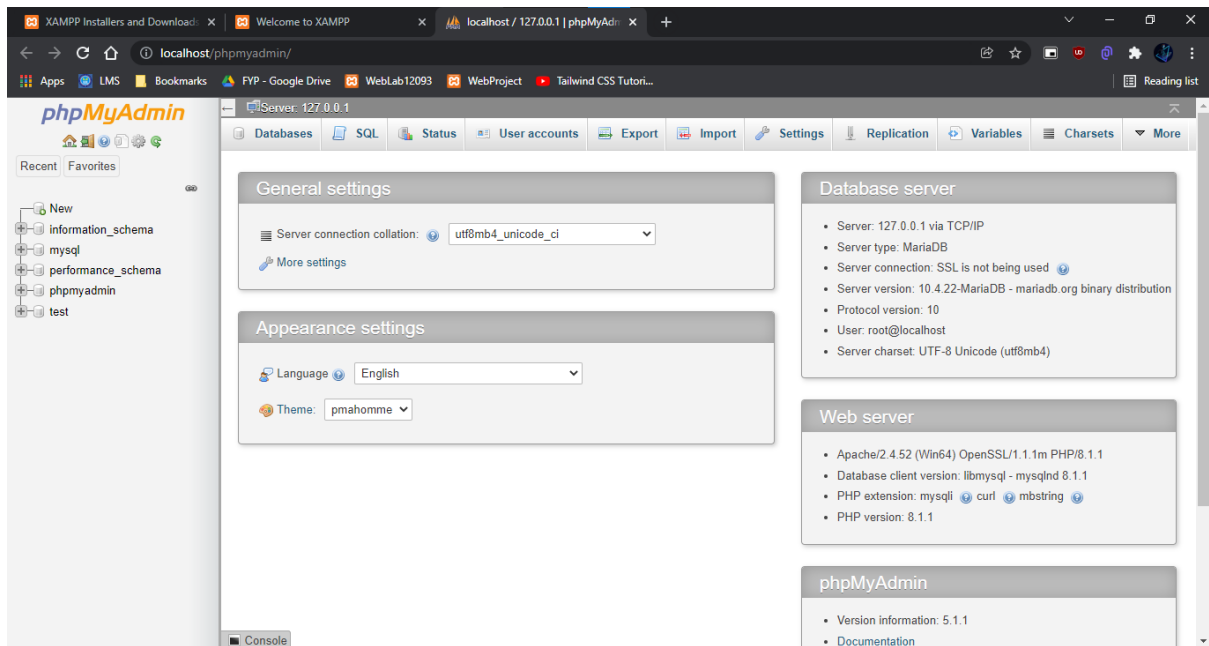
3. Launching XAMPP



XAMPP Control Panel



Apache is a web server



phpmyadmin is for database management

More about XAMPP

- Sometimes XAMPP throws an error that this specific port is being used by some other program. We can fix that by changing the port number in xampp or closing that program.
- If Web Server (Apache) is not accessible by “localhost/dashboard” we can write “localhost:80/dashboard” or “172.0.0.1/dashboard” or “172.0.0.1:80/dashboard” where 80 is the port number.
- htdocs is the folder where we create our projects to be launched in xampp and are accessible through “localhost/Project_name”.



National University of Modern Languages

Web Engineering

Lab # 9

BSSE - 6 - Morning

Submitted By:

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Submitted To:

Sir Umer Haroon

Lab 9: Running basic php commands (syntax, variables, comments, output)

PHP:

PHP is an acronym for "PHP: Hypertext Preprocessor". PHP is a widely used, open-source scripting language. PHP scripts are executed on the server. PHP is free to download and use. But as we are using XAMPP and PHP is already bundled into it.

- PHP can generate dynamic page content
- PHP can create, open, read, write, delete, and close files on the server
- PHP can collect form data
- PHP can send and receive cookies
- PHP can add, delete, modify data in your database
- PHP can be used to control user-access
- PHP can encrypt data

Syntax:

- PHP file extension is .php
- PHP code is started with **<?php** and ended with **?>** tag
- In PHP, keywords (e.g. **if**, **else**, **while**, **echo**, etc.), **classes**, **functions**, and **user-defined functions** are not case-sensitive.

Variables

- Variables are initialized with \$ e.g. \$var, \$name etc

Comments

- For single line comments. # text or // text
- For multiline comments /* text */

Code:

```
<?php
```

```
# This is a single line comment
```

```
// This is a single line comment
```



```
/*
```

```
This is a  
multi-line  
comment
```

```
*/
```

```
#to declare a variable in php we use $variable_name
```

```
$a = 10;
```

```
$b = 20;
```

```
$c = "Hello";
```

```
$d = "World";
```

```
echo "printing a variable in php<br>";
```

```
echo ($a."<br>");
```

```
echo ($b."<br>");
```

```
echo "<br>";
```

```
echo "concatenating two strings in php<br>";
```

```
echo ($c.$d."<br>");
```

```
echo "<br>";
```

```
#declaring a function in php
```

```
function add($x, $y) {
```

```
    return ($x + $y."<br>");
```

```
}
```

```
echo "calling a function in php<br>";
```

```
echo add(10, 20);
```

```
echo "<br>;
```

```
echo "for loop in php<br>";  
for ($i = 0; $i < 10; $i++) {  
    echo ($i."<br>");  
}  
echo "<br>;
```

```
echo "while loop in php<br>";  
$i = 0;  
while ($i < 10) {  
    echo ($i."<br>");  
    $i++;  
}  
echo "<br>;
```

```
echo "if statement in php<br>";  
if ($a > $b) {  
    echo ("a is greater than b."<br>");  
} else {  
    echo ("b is greater than a."<br>");  
}  
echo "<br>;
```

```
echo "switch statement in php<br>";  
switch ($a) {  
    case 10:  
        echo ("a is 10."<br>");  
        break;
```

```
case 20:

    echo ("a is 20"."<br>");

    break;

default:

    echo ("a is not 10 or 20"."<br>");

    break;

}

echo "<br>";
```

```
echo "array in php<br>";

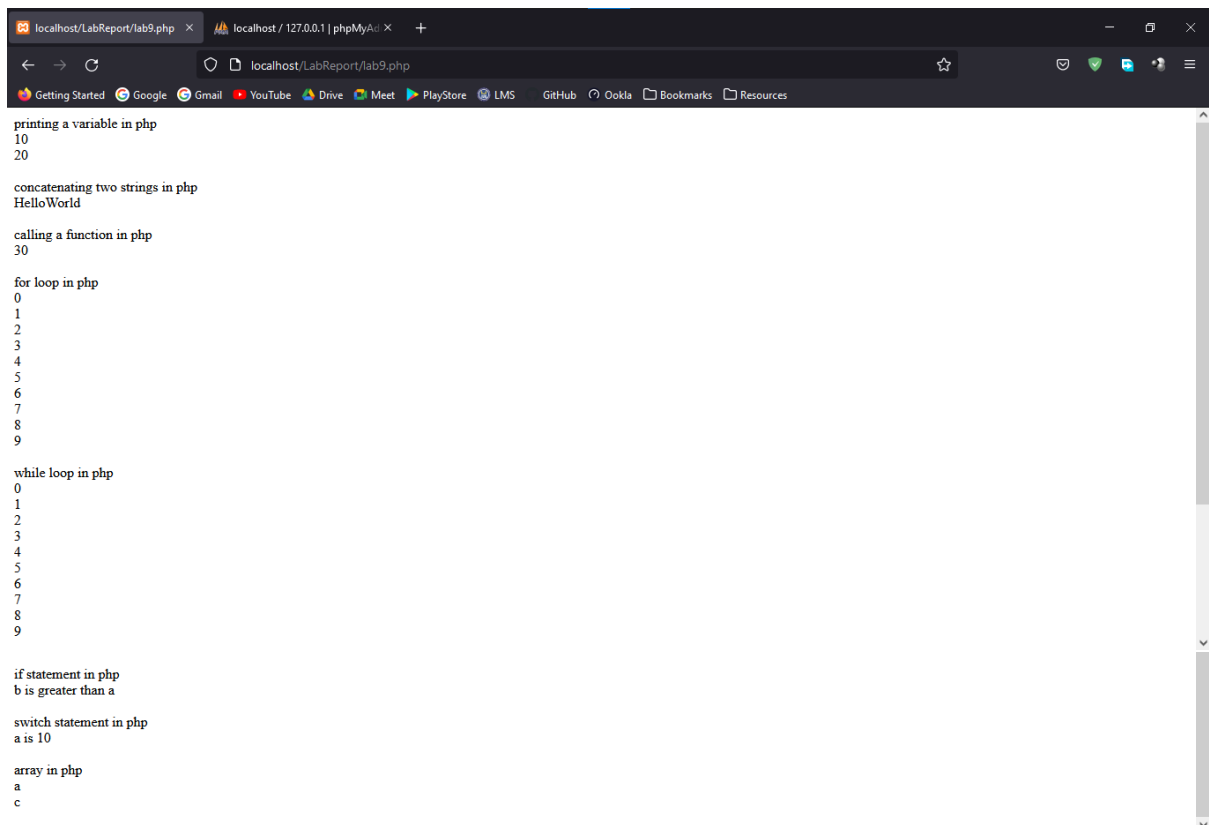
$arr = array("a", "b", "c");

echo ($arr[0]."<br>");

echo ($arr[2]."<br>");

echo "<br>";
```

Output:





National University of Modern Languages

Web Engineering

Lab # 10

BSSE - 6 - Morning

Submitted By:

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Submitted To:

Sir Umer Haroon

Lab 10: Use of database and data insertion using php

mysqli_connect:

mysqli_connect is used to connect to a database. There are four parameters of this method.

1. First one is database location
2. Second is username
3. Third is password
4. Fourth is database name

Code:

```
<?php
$con = mysqli_connect("localhost", "root", "", "labreport");

if (mysqli_connect_errno()) {
    echo "Failed to connect to MySQL: " . mysqli_connect_errno();
} else {
    echo "Connection Successful";
}
?>

<!DOCTYPE html>
<html lang="en">

<head>
    <meta charset="UTF-8">
    <meta http-equiv="X-UA-Compatible" content="IE=edge">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <style>
        body {
            display: flex;
            flex-direction: column;
```

```
}
```

```
.container {  
  display: flex;  
  flex-direction: column;  
  align-self: center;  
  width: 400px;  
  border: 2px solid black;  
  padding: 10px;  
}
```

```
.row {  
  display: flex;  
  flex-direction: row;  
  margin-top: 10px;  
}
```

```
.row label {  
  width: 40%;  
}
```

```
.row input {  
  width: 60%;  
}
```

```
.row input,  
.row label {  
  height: 20px;  
}
```

```
.row button {
    width: 50%;
    margin: 20px;
    border-radius: 25px;
    padding-top: 5px;
    padding-bottom: 5px;
}
</style>
<title>Lab 10</title>
</head>

<body>
    <h1>Use of database and data insertion using php</h1>
    <div class="container">
        <form method="POST">
            <div class="row">
                <label for="name">Full Name:</label>
                <input type="text" name="name" id="name" required>
            </div>
            <div class="row">
                <label for="age">Age (years):</label>
                <input type="number" name="age" id="age">
            </div>
            <div class="row">
                <label for="email">Email:</label>
                <input type="email" id="email" name="email" autocomplete="ON" required>
            </div>
            <div class="row">
                <label for="password">Password:</label>
```

```
<input type="password" name="password" id="password" required>
</div>

<div class="row">

  <label for="confirm-password">Confirm Password:</label>

  <input type="password" name="confirm-password" id="confirm-password" required>

</div>

<div class="row">

  <button style="background-color: blue; color: white;" name="submit" type="submit"
id="submit">Submit</button>

  <button style="background-color: red; color: white;" type="reset"
id="reset">Reset</button>

</div>

</form>

</div>

</body>

</html>
```

```
<?php
if (isset($_POST['submit'])) {
  $name = $_POST['name'];
  $age = $_POST['age'];
  $email = $_POST['email'];
  $password = $_POST['password'];
  $confirm_password = $_POST['confirm-password'];

  if ($password == $confirm_password) {
    $query = $con->prepare("INSERT INTO users (name, age, email, password) VALUES
(?,?,?,?)");
    $query->bind_param("ssss", $name, $age, $email, $password);
    $query->execute();
  }
}
```



```
$query->close();
```

```
echo "Data inserted successfully";
```

```
} else {
```

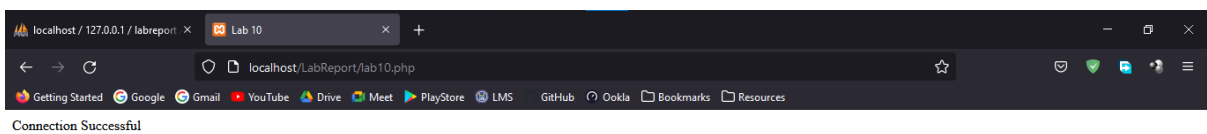
```
echo "Password and Confirm Password do not match";
```

```
}
```

```
}
```

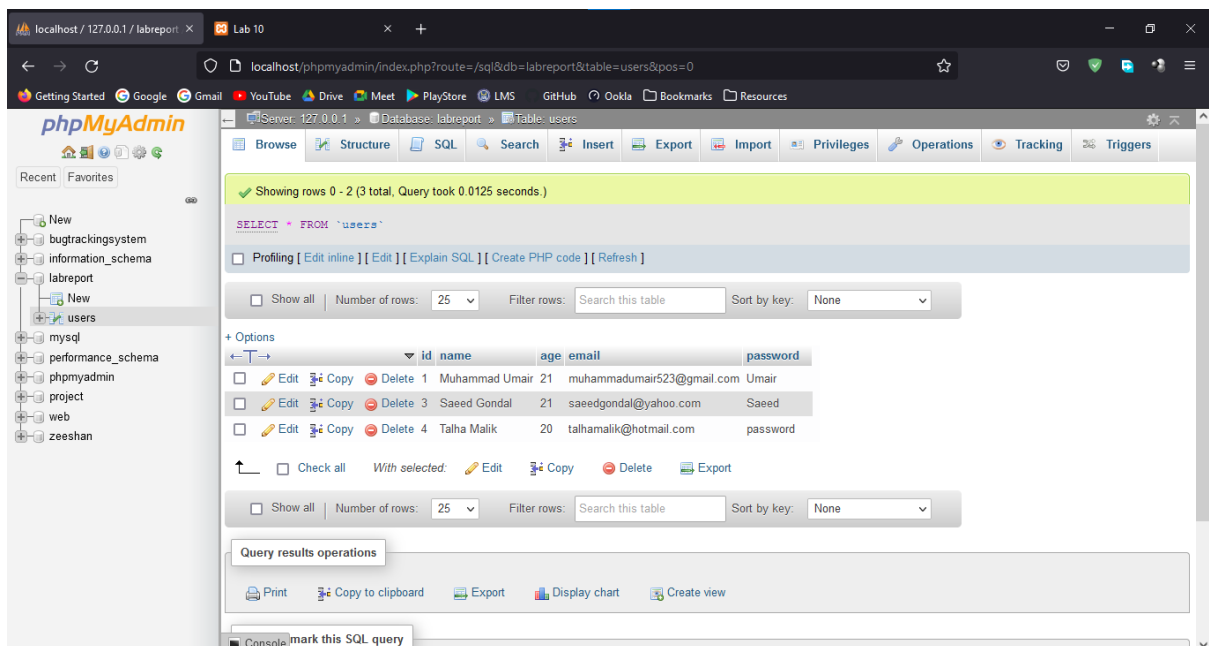
```
?>
```

Screenshot:



Use of database and data insertion using php

Full Name:	<input type="text" value="Talha Malik"/>
Age (years):	<input type="text" value="20"/>
Email:	<input type="text" value="talhamalik@hotmail.com"/>
Password:	<input type="password" value="*****"/>
Confirm Password:	<input type="password" value="*****"/>
<input type="button" value="Submit"/> <input type="button" value="Reset"/>	





National University of Modern Languages

Web Engineering

Lab # 11

BSSE - 6 - Morning

Submitted By:

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Muhammad Saeed - 12091

Submitted To:

Sir Umer Haroon

Lab 11: Use of database and data retrieval using php

Code:

```
<?php

$con = mysqli_connect("localhost", "root", "", "labreport");

if (mysqli_connect_errno()) {
    echo "Failed to connect to MySQL: " . mysqli_connect_errno();
} else {
    echo "Connection Successful";
}

?>

<!DOCTYPE html>

<html lang="en">

<head>

    <meta charset="UTF-8">

    <meta http-equiv="X-UA-Compatible" content="IE=edge">

    <meta name="viewport" content="width=device-width, initial-scale=1.0">

    <style>

        body {

            display: flex;

            flex-direction: column;

        }

        .container {

            align-self: center;

            padding: 10px;

        }
```

```

table {
    border-collapse: collapse;
    width: 100%;
    border: 2px solid black;
}

td, th {
    text-align: center;
    width: auto;
    padding: 10px 20px 10px 20px;
    border: 1px solid black;
}
</style>
<title>Lab 11</title>
</head>

<body>
<h1>Use of database and data retrieval using php</h1>
<div class="container">
<table>
<tr>
<th>Id</th>
<th>Name</th>
<th>Age</th>
<th>Email</th>
<th>Password</th>
</tr>
<?php

$query = $con->prepare("SELECT * FROM users");

```

```

$query->execute();

$result = $query->get_result();

while ($row = $result->fetch_assoc()) {

?>

<tr>

<td><?php echo $row['id']; ?></td>

<td><?php echo $row['name']; ?></td>

<td><?php echo $row['age']; ?></td>

<td><?php echo $row['email']; ?></td>

<td><?php echo $row['password']; ?></td>

</tr>

<?php
}

?>

</table>

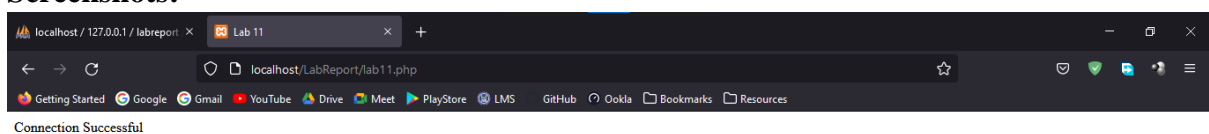
</div>

</body>

</html>

```

Screenshots:



Use of database and data retrieval using php

Id	Name	Age	Email	Password
1	Muhammad Umair	21	muhammadumair523@gmail.com	Umair
3	Saeed Gondal	21	saeedgondal@yahoo.com	Saeed
4	Talha Malik	20	talhamalik@hotmail.com	password



National University of Modern Languages

Web Engineering

Lab # 12

BSSE - 6 - Morning

Submitted By:

Muhammad Umair - 12093

Muhammad Saeed - 12091

Submitted To:

Sir Umer Haroon

Lab 12: Use of database and data updation using php

Code:

Data Retrieval

```
<?php
$con = mysqli_connect("localhost", "root", "", "labreport");

if (mysqli_connect_errno()) {
    echo "Failed to connect to MySQL: " . mysqli_connect_errno();
} else {
    echo "Connection Successful";
}
?>

<!DOCTYPE html>
<html lang="en">

<head>
    <meta charset="UTF-8">
    <meta http-equiv="X-UA-Compatible" content="IE=edge">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>Lab 12</title>
    <style>
        body {
            display: flex;
            flex-direction: column;
        }

        .container{
            align-self: center;
            padding: 10px;
```

```
}
```

```
table {  
  border-collapse: collapse;  
  width: 100%;  
  border: 2px solid black;  
}
```

```
td,  
th {  
  text-align: center;  
  width: auto;  
  padding: 10px 20px 10px 20px;  
  border: 1px solid black;  
}
```

```
</style>
```

```
</head>
```

```
<body>
```

```
<h1>Use of database and data updation using php</h1>
```

```
<div class="container">
```

```
<table>
```

```
<tr>
```

```
<th>Id</th>
```

```
<th>Name</th>
```

```
<th>Age</th>
```

```
<th>Email</th>
```

```
<th>Password</th>
```

```
<th>Operation</th>
```

```
</tr>
```

```
<?php
```



```

$query = $con->prepare("SELECT * FROM users");
$query->execute();
$result = $query->get_result();
while ($row = $result->fetch_assoc()) {
    ?>
    <tr>
        <td><?php echo $row['id']; ?></td>
        <td><?php echo $row['name']; ?></td>
        <td><?php echo $row['age']; ?></td>
        <td><?php echo $row['email']; ?></td>
        <td><?php echo $row['password']; ?></td>
        <td><a href="lab12p2.php?id=<?php echo $row['id'] ?>">Update</a></td>
    </tr>
<?php
}
?>
</table>
</div>
</body>

</html>

```

Data Updation

```

<?php
$con = mysqli_connect("localhost", "root", "", "labreport");

if (mysqli_connect_errno()) {
    echo "Failed to connect to MySQL: " . mysqli_connect_errno();
} else {

```

```
    echo "Connection Successful";  
}
```

```
if (isset($_GET['id'])) {  
    $id = $_GET['id'];  
}  
?>
```

```
<!DOCTYPE html>  
<html lang="en">
```

```
<head>  
    <meta charset="UTF-8">  
    <meta http-equiv="X-UA-Compatible" content="IE=edge">  
    <meta name="viewport" content="width=device-width, initial-scale=1.0">  
    <title>Lab 12 | Update Form</title>  
    <style>  
        body {  
            display: flex;  
            flex-direction: column;  
        }  
        #updateForm {  
            align-self: center;  
            width: 400px;  
            border: 2px solid black;  
            padding: 10px;  
            margin-top: 30px;  
        }  
  
        .row {
```

```
display: flex;
flex-direction: row;
margin-top: 10px;
}
```

```
.row label {
width: 40%;
}
```

```
.row input {
width: 60%;
}
```

```
.row input,
.row label {
height: 20px;
}
```

```
.row button {
width: 50%;
margin: 20px;
border-radius: 25px;
padding-top: 5px;
padding-bottom: 5px;
}
```

```
</style>
```

```
</head>
```

```
<body>
```

```
<h1>Enter Updated details</h1>
```

```
<div id="updateForm">
  <form method="POST">
    <div class="row">
      <label for="name">Full Name:</label>
      <input type="text" name="name" id="name" required>
    </div>
    <div class="row">
      <label for="age">Age (years):</label>
      <input type="number" name="age" id="age">
    </div>
    <div class="row">
      <label for="email">Email:</label>
      <input type="email" id="email" name="email" autocomplete="ON" required>
    </div>
    <div class="row">
      <label for="password">Password:</label>
      <input type="password" name="password" id="password" required>
    </div>
    <div class="row">
      <label for="confirm-password">Confirm Password:</label>
      <input type="password" name="confirm-password" id="confirm-password" required>
    </div>
    <div class="row">
      <button style="background-color: blue; color: white;" name="submit" type="submit"
id="submit">Submit</button>
      <button style="background-color: red; color: white;" type="reset"
id="reset">Reset</button>
    </div>
  </form>
</div>
</body>
```

</html>

<?php

```
if (isset($_POST['submit'])) {
```

```
    $name = $_POST['name'];
```

```
    $age = $_POST['age'];
```

```
    $email = $_POST['email'];
```

```
    if ($_POST['password'] == $_POST['confirm-password']) {
```

```
        $password = $_POST['password'];
```

```
    } else {
```

```
        echo "Password and Confirm Password do not match";
```

```
    }
```

```
    $query = $con->prepare("UPDATE users SET id='$id', name='$name', age='$age',  
email='$email', password='$password' WHERE id='$id'");
```

```
    $query->execute();
```

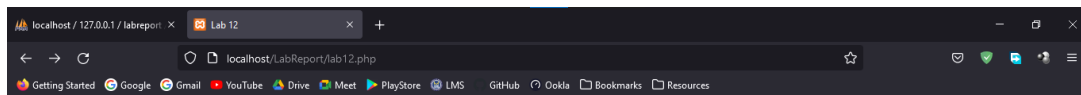
```
    $query->close();
```

```
    header("Location:lab12.php");
```

```
}
```

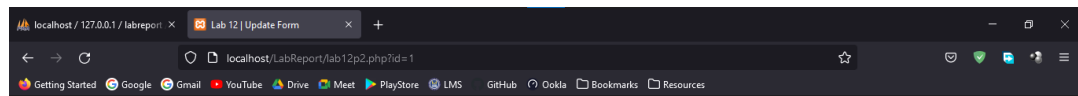
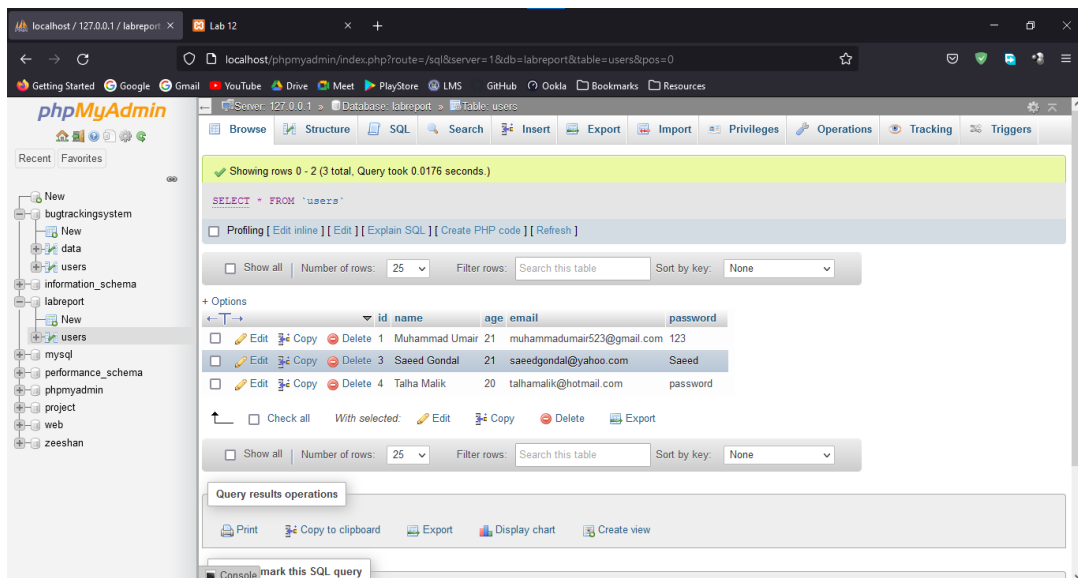
?>

Screenshots:



Use of database and data updation using php

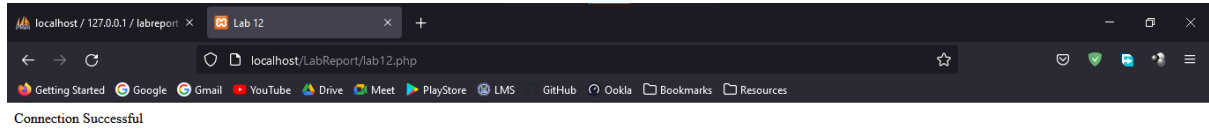
Id	Name	Age	Email	Password	Operation
1	Muhammad Umair	21	muhammadumair523@gmail.com	123	Update
3	Saeed Gondal	21	saeedgondal@yahoo.com	Saeed	Update
4	Talha Malik	20	talhamalik@hotmail.com	password	Update



Enter Updated details

Full Name:	<input type="text" value="Muhammad Umair"/>
Age (years):	<input type="text" value="21"/>
Email:	<input type="text" value="muhammadumair523@gmail.com"/>
Password:	<input type="password" value="*****"/>
Confirm Password:	<input type="password" value="*****"/>
<input type="button" value="Submit"/> <input type="button" value="Reset"/>	

After Updation



Use of database and data updation using php

Id	Name	Age	Email	Password	Operation
1	Muhammad Umair	21	muhammadumair523@gmail.com	Umair523	Update
3	Saeed Gondal	21	saeedgondal@yahoo.com	Saeed	Update
4	Talha Malik	20	talhamalik@hotmail.com	password	Update

