

Web Application Design

Software Design Architecture Lab # 4

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Web Application Design

- Web application design is an important stage when building a web application. It focuses on the look and feel of the web application.
- Every Application have user interface where user interacts with an application.
- The design stage encompasses several different aspects, including user interface design (UI), usability (UX), content production, and graphic design. we focused mainly on UI and UX design.

Web Application Design

- We will be using html, css, javascript for designing our webapplication
- Tools we will be using in this lab are
 1. Sublime Text (For writing our code : you people can use any text editor like notepad++, notepad, Dreamviewer etc in order to write your web design)
 2. Google Chrome

Web Application Design - HTML

What is HTML?

- HTML stands for Hyper Text Markup Language
- HTML describes the structure of a Web page
- HTML consists of a series of elements
- HTML elements tell the browser how to display the content
- HTML elements are represented by tags
- HTML tags label pieces of content such as "heading", "paragraph", "table", and so on
- Browsers do not display the HTML tags, but use them to render the content of the page

Web Application Design - CSS

- What is CSS?
- **CSS** stands for **Cascading Style Sheets**
- CSS describes **how HTML elements are to be displayed on screen, paper, or in other media**
- **CSS saves a lot of work.** It can control the layout of multiple web pages all at once
- External stylesheets are stored in **CSS files**
- **With CSS we can make our html design much better and makeup/decorate our web design more efficiently.**

Web Application Design - Javascript

What is 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. Common examples of JavaScript that you might use every day include the search box on Amazon, a news recap video embedded on The New York Times, or refreshing your Twitter feed.
- Incorporating JavaScript improves the user experience of the web page by converting it from a static page into an interactive one. To recap, JavaScript adds **behavior** to web pages.

Web Application Design - Javascript

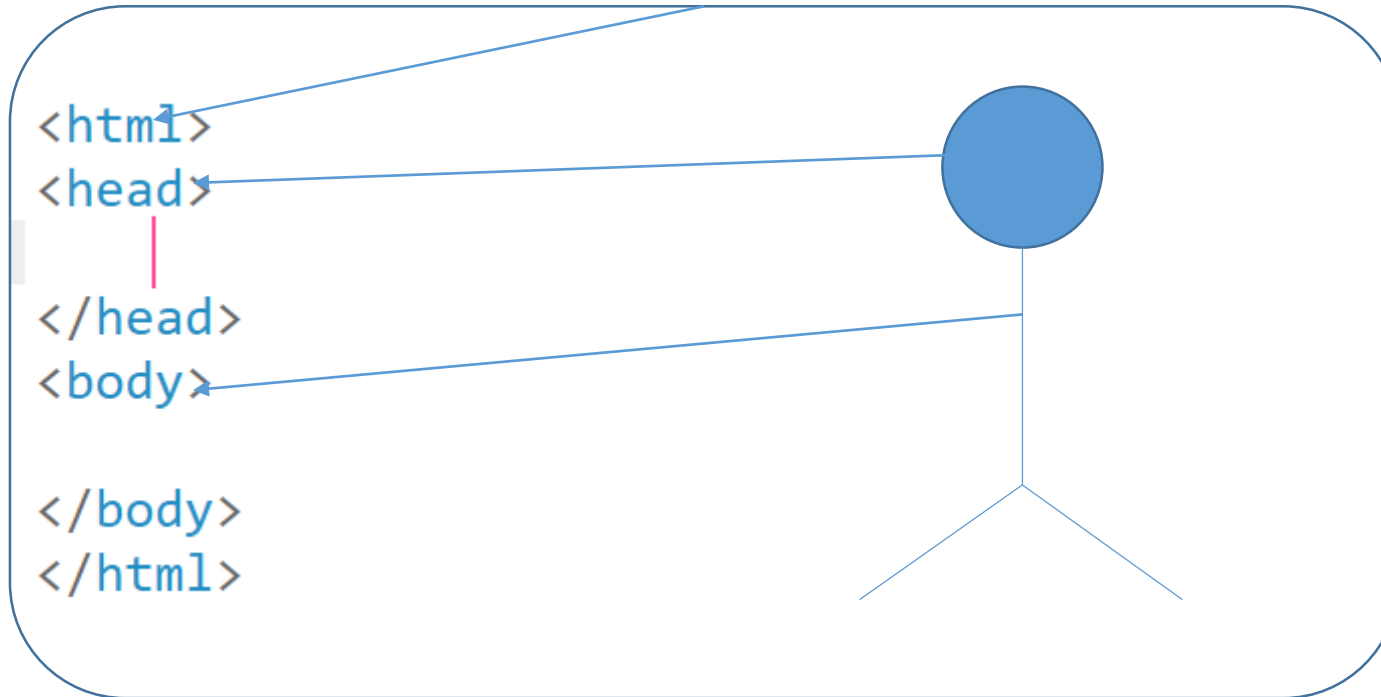
- Javascript can be used for both client side and serverside scripting. As many frameworks has been developed like Node.js etc
- We in this lab will use javascript for frontend client side scripting.

Web Application Design

- For Demonstration purpose we will design a very basic page.
 1. First of all we will write our **html** that describes basic skeleton of our design.
 2. Then we will decorate that design with **CSS**
 3. Finally we will write our Javascript for making our web design interactive.

Web Application Design

- All html content will be written in body tag of html



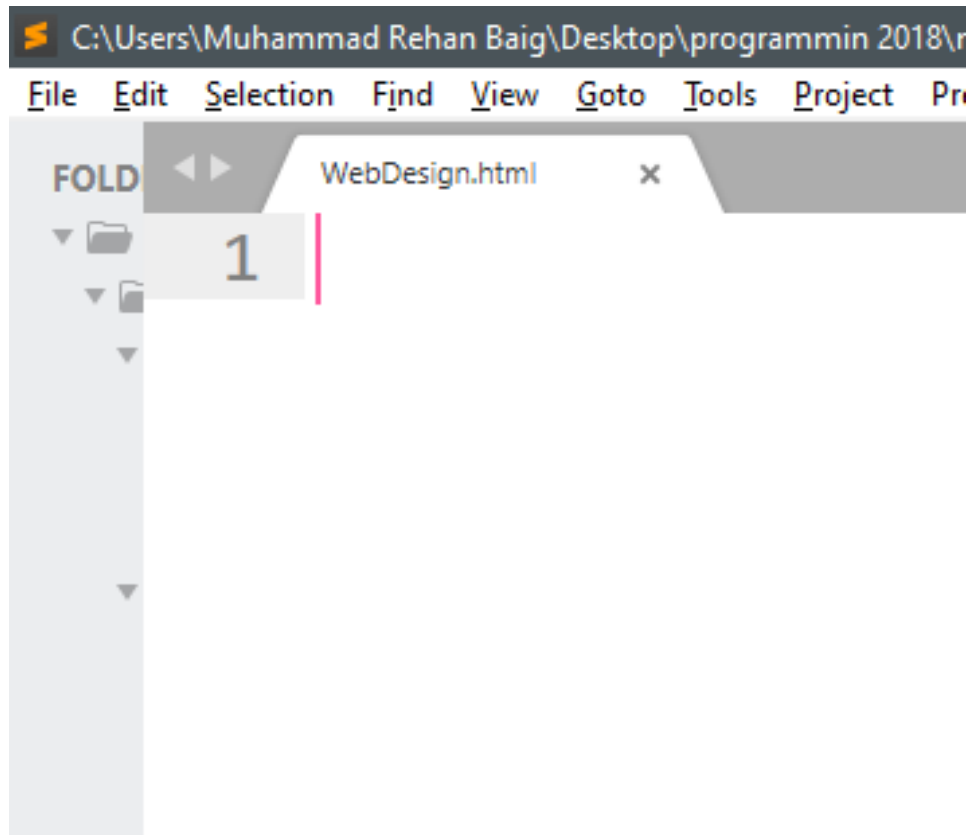
Web Application Design

- All styling **css** is done in **head** and scripting is done in **body** in the end as well in **head**

Creating Basic Web Application Design Step by Step

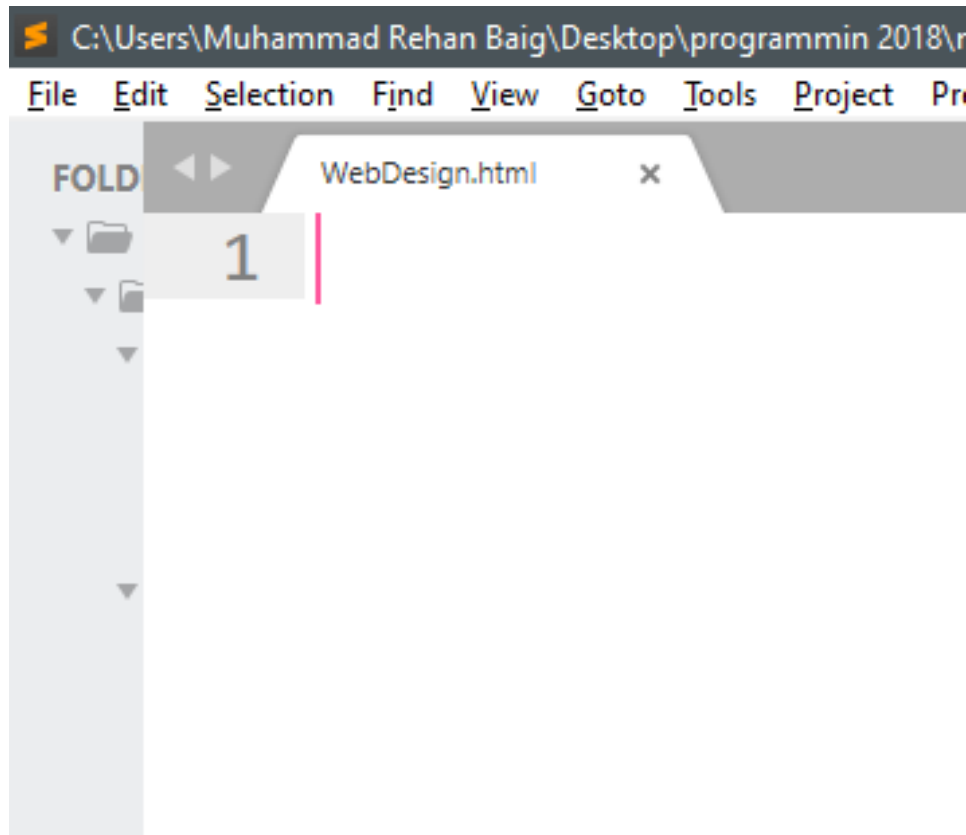
Web Application Design

- Create a new file and name your file what ever you want save it with extension of .html



Web Application Design

- Adding markup tags for making UI with Html

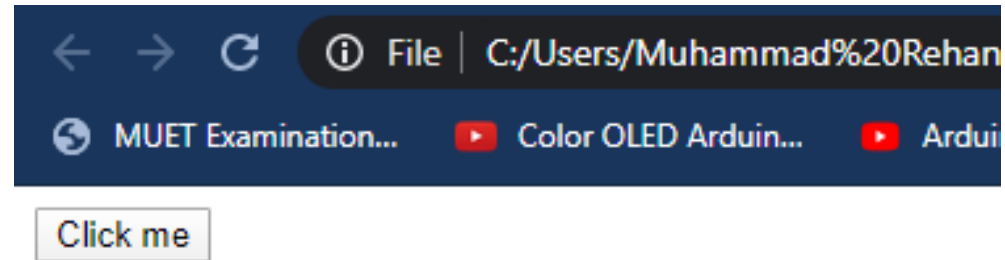


Web Application Design

- Added button in our design

```
<html>
<head>

</head>
<body>
  <button>Click me</button>
</body>
</html>
```

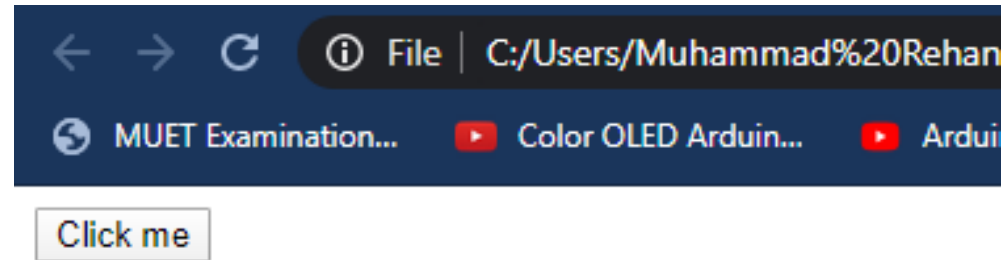


Web Application Design

- Added button in our design

```
<html>
<head>

</head>
<body>
  <button>Click me</button>
</body>
</html>
```



Web Application Design

- Added one input as a textbox that will take username as input and assigned txtuser as id of this text box with placeholder username

```
<html>
```

```
<head>
```

```
</head>
```

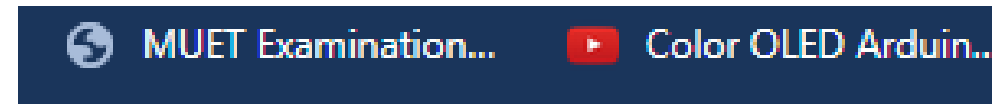
```
<body>
```

```
<input type="text" placeholder="Username" id="txtuser">
```

```
<button>Click me</button>
```

```
</body>
```

```
</html>
```



Username

Click me

Web Application Design

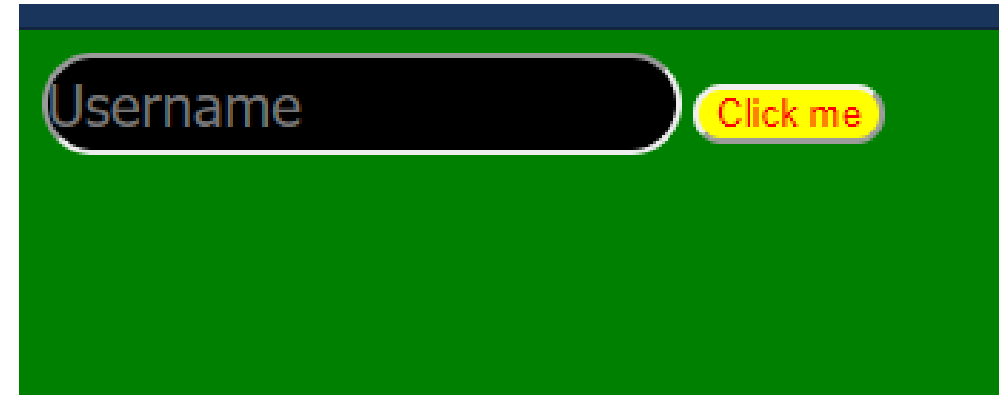
- Now beautifying these controls with css For styling we will add style tag in our head tag

```
<head>  
<style type="text/css">  
|  
</style>  
</head>
```

Web Application Design

- Adding style for our button too we will be using class now class will be applied to all button if needed but id must be unique and specify only one control

```
WebDesign.html x
<head>
<style type="text/css">
body{
    background-color: green;
}
#txtuser{
    font-family: tahoma;
    color: white;
    background-color: black;
    border-radius: 20px;
    height: 30px;
    width: 220px;
    font-size: 20px;
}
.btn{
    border-radius: 10px;
    color: red;
    background-color: yellow;
}
</style>
</head>
```



Web Application Design

- Adding functionality to our web design with javascript with script tag

```
<script type="text/javascript">
    function btnclick(){
        var username = document.getElementById("txtuser").value;
        alert("welcome"+username);
    }
</script>
</body>
```

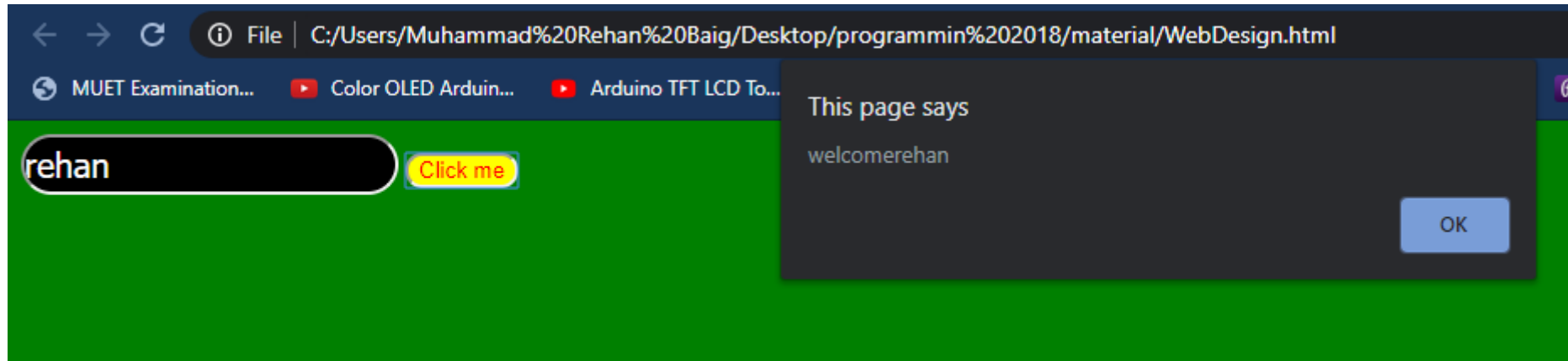
- Basic function shows alert with text of the input that we assigned id as **txtuser**

Web Application Design

- Adding **onclick** function in our button so when button clicked it will call **btnclick** function

```
<button class="btn" onclick="btnclick()">Click me</button>
```

- When our button clicked the btnclick function of javascript works.



- It shows the following output.

Web Application Design

- Here is our complete code

```
<html>
<head>
<style type="text/css">
body{
    background-color: green;
}
#txtuser{
    font-family: tahoma;
    color: white;
    background-color: black;
    border-radius: 20px;
    height: 30px;
    width: 220px;
    font-size: 20px;
}
.btn{
    border-radius: 10px;
    color: red;
    background-color: yellow;
}
</style>
</head>
```

Web Application Design

- Here is our complete code

```
<body>
<input type="text" placeholder="Username" id="txtuser">
<button class="btn" onclick="btnclick()">Click me</button>
<script type="text/javascript">
    function btnclick(){
        var username = document.getElementById("txtuser").value;
        alert("welcome"+username);
    }
</script>
</body>
</html>
```

Tasks

1. **Design** Facebook login page using html, css and javascript -> the page takes username and password and with javascript alert message will be displayed.