

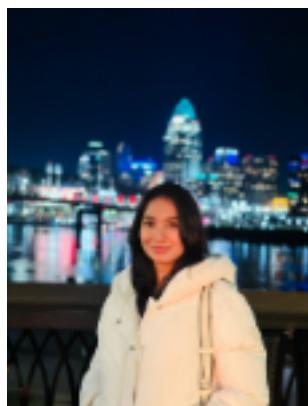
WAPH-Web Application Programming and Hacking

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Student

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Lab 2 - Front-end Web Development

Overview :

This lab explores the construction of front-end web applications in further detail. In relation to Lab 2, I learned how to make a web application by incorporating images and forms with a few simple HTML tags and JavaScript. I also made an HTTP GET and POST request and used the inspect element to further evaluate the request, response, and status code. Subsequently, Jquery, CSS, and Ajax were utilized to improve the online application and simplify the code. After all pertinent screenshots were captured and included, and the material was produced in markdown, the pandoc tool was used to build the PDF file.

<https://github.com/vadagasy/waph-vadagasy/blob/main/lab/lab2/README.md>

Task 1 : Basic HTML with forms, and JavaScript

a. HTML

The code for the straightforward http form in the following image reroutes the echo.php file that we produced in the previous lab upon submission.

vadagasy-VM

Connected to VM

Activities Sublime Text Mar 20 13:44

File Edit Selection Find View Goto Tools Project Preferences Help

waph-vadagasy.html waph-chalast.html

```
<!DOCTYPE html>
<html>
<head>
<meta charset="utf-8">
<title>WAPH- SRUJANA REDDY VADAGANDLA</title>
</head>
<body>
<div id="top">
<h1>Web Application Programming and Hacking</h1>
<h2>Front End Development Lab</h2>
<h3>Instructor : Dr Phu Phung</h3>
</div>
<div id="menubar">
<h3>Student : SRUJANA REDDY VADAGANDLA</h3>

</div>
<div id="main">
<p>A Simple HTML Page</p>
Using the <a href="https://www.w3schools.com/html">W3 Schools Template</a>
<hr>
<b>Interaction with HTTP Forms</b>
</div>

```

Line 17, Column 1

English SEND CTRL+ALT+DEL SEND CTRL+C TOGGLE FULL SCREEN

Press Ctrl-Alt to release the cursor from the guest.

vadagasy-VM

Connected to VM

Activities Firefox Web Browser Mar 20 13:50

WAPH- SRUJANA REDDY VA +

localhost/waph-vadagasy.html

Web Application Programming and Hacking

Front End Development Lab

Instructor : Dr Phu Phung

Student : SRUJANA REDDY VADAGANDLA

My headshot

A Simple HTML Page

Using the [W3 Schools Template](https://www.w3schools.com/html)

Interaction with HTTP Forms

Form with HTTP GET Request

Your input: submit

vadagasy-VM

Connected to VM

Activities Firefox Web Browser Mar 20 13:49

localhost/echo.php?data=he +

localhost/echo.php?data=heloo

helloo

English SEND CTRL+ALT+DEL SEND CTRL+C TOGGLE FULL SCREEN

Press Ctrl-Alt to release the cursor from the guest.

b. JavaScript

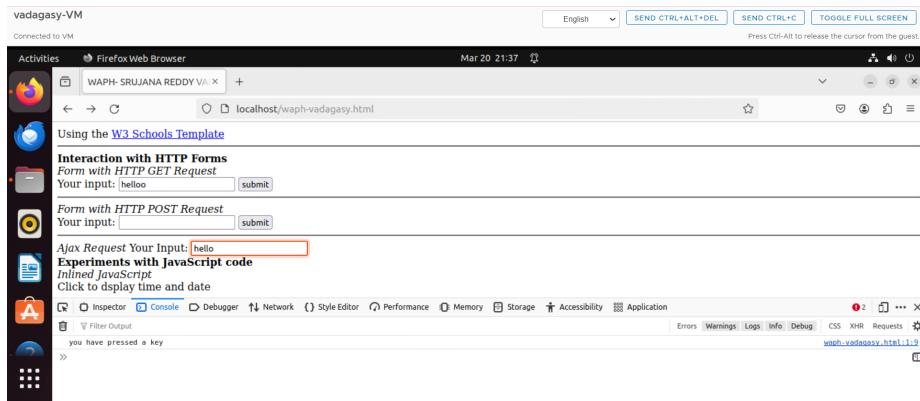
The code we wrote for inline JS to log a message to the console upon a text input's keypress event is shown in the following image.

```

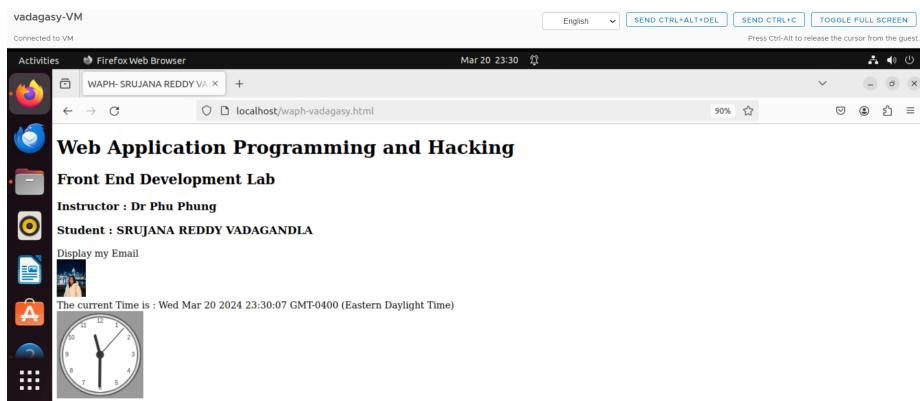
<?php
echo "Your input: " . $_POST['data'];
?>

```

The above code is implemented and is shown as below



The below image shows inline js that has been written to show date on mouse click



The below image displays the code for analog and the digital clock

The screenshot shows a Linux desktop environment with a terminal window titled 'waph-vadagasy.html' containing the following code:

```

54     </div>
55     <script src="https://code.jquery.com/jquery-3.7.1.min.js"
56         integrity="sha256-/JqT3SOvIwdvCV8/8HHPThkDvs80EvtFFmqPF/lYICxo="
57         crossorigin="anonymous"></script>
58
59     function displayTime() {
60         document.getElementById('digital-clock').innerHTML= "The current Time is : "+ Date();
61     }
62     setInterval(displayTime,500);
63
64     <script type="text/javascript">
65         var canvas=document.getElementById("analog-clock");
66         var ctx=canvas.getContext("2d");
67         var radius = canvas.height/2;
68         ctx.translate(radius,radius);
69         radius=radius*0.9;
70         setInterval(drawclock, 1000);
71         function drawclock(){
72             drawFace(ctx,radius);
73             drawNumbers(ctx,radius);
74         }
75         function getEcho(){
76

```

The terminal window has tabs for 'waph-vadagasy.html', 'email.js', 'echo.php', and 'waph-challast.html'. The status bar indicates 'Line 62, Column 32'.

The output of the above code is displayed as below



Task II - Ajax, CSS, jQuery, and Web API integration

a: Ajax

After learning JavaScript and HTML, I began utilizing AJAX. AJAX allows us to retrieve data and communicate with the server without waiting. To do this, it makes use of the XMLHttpRequest Object. This implies I may alter the content on our website without having to reload the entire page. I accomplished this by utilizing a custom input box and a button to request information from a file called echo.php, which I created in our first lab. Then I examined the

responses by inspecting a section of the browser. Here are some images of what happened when I used AJAX to request this information.

The screenshot displays a Linux desktop environment with two windows open:

- Sublime Text:** An unregistered instance of Sublime Text showing the file `waph-vadagasy-ajax.html`. The code includes sections for "AJAX Requests", "Experiments with JavaScript code", and "AJAX Requests". It uses jQuery and includes a clock function.
- Firefox Web Browser:** A window titled "Srujan Reddy Vadagandla" showing a simple HTML page. The page contains a header "Student : Srujan Reddy Vadagandla", a clock, an email input field, and several buttons labeled "Ajax Echo", "Ajax Echo Post", and "Guess Age". The Firefox developer tools Network tab is visible, showing requests for files like `jquery-3.7.1.min.js`, `srujan.jpg`, and `clock.js`.

b. CSS

I also tried the basic style i.e CSS1 for the `waph-vadagasy.html` and the output is attached below.

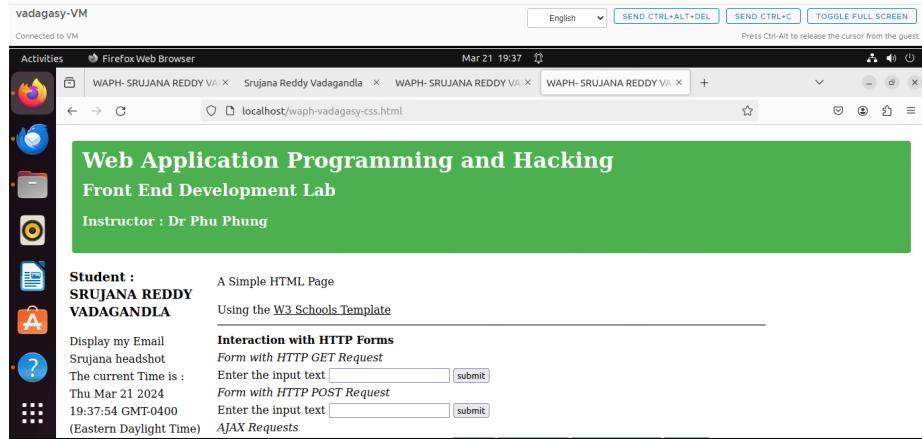


In this section 2b, I focused on making the website seem better. First, I created a simple example to demonstrate how to alter the background color using inline CSS. Later, I added more styles to the homepage using the " element in the head section.

```

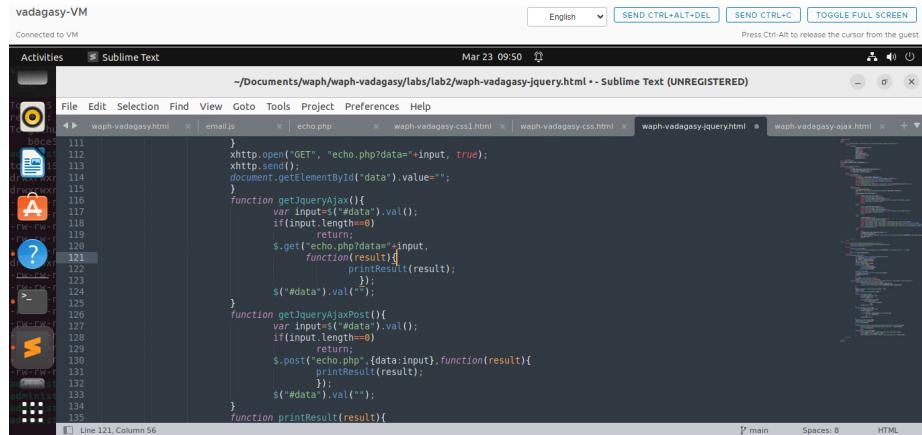
<!DOCTYPE html>
<html>
<head>
<link rel="stylesheet" type="text/css" href="https://waph-uc.github.io/style1.css">
<style>
button{
background-color:#4CAF50;
border:none;
color:white;
padding:10px;
text-align:center;
text-decoration:none;
display:inline-block;
font-size:12px;
margin:4px 2px;
}
</style>
<meta charset="utf-8">
<title>WAPH- SRUJANA REDDY VADAGANDLA</title>
</head>
<body>
<div id="top">
<h1>Web Application Programming and Hacking</h1>
<h2>Front End Development Lab </h2>
<h3>Instructor : Dr Phu Phung</h3>

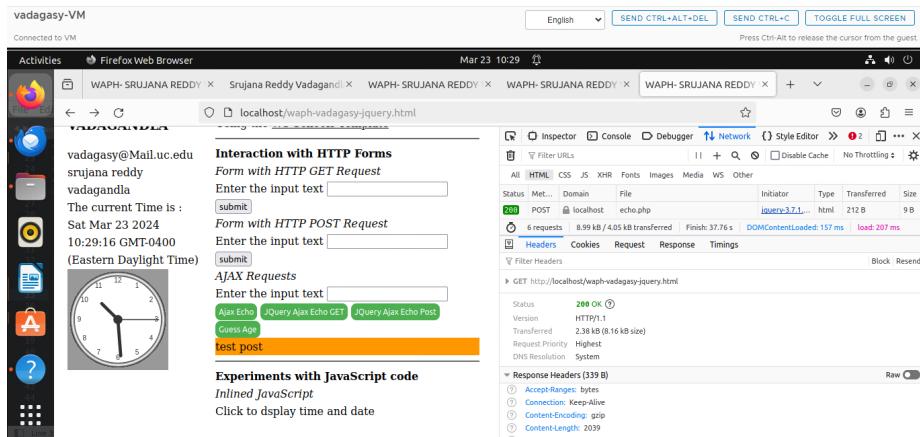
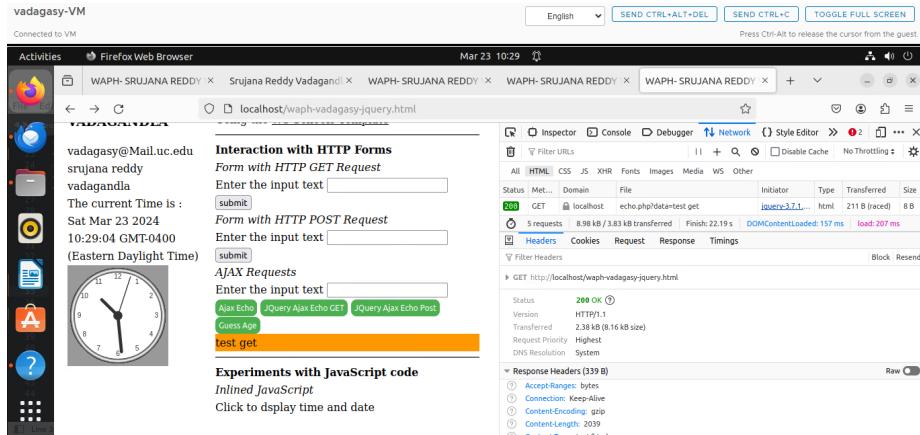
```



c: JQuery

I then began working on the jQuery library. You may use this library in place of methods like `document.getElementById` to assist in selecting HTML elements. Additionally, it simplifies the process of sending AJAX queries to the backend by eliminating the need to create an instance of XMLHttpRequest⁴ and provide event handlers for it. I sent out a jQuery GET and POST request, and the screenshot below shows you what I got back.





d: Web API integration

At last, I got to know that the integrated JavaScript Fetch API may be utilized in place of the outdated XMLHttpRequest (XHR). Instead of depending on callback functions for asynchronous activities, we may utilize the ‘async’ and ‘await’ keywords thanks to the Fetch API, which delivers a promise from the ‘fetch()’ method.

I fetched data using a few free APIs to put this into practice. In order to retrieve data from the API answers, I worked with JSON objects.

I get the daily joke about programming from the first API I tested. I utilized the free-source API’s ‘joke’ JSON property to show the joke in the response.

vadagasy-VM

Connected to VM

Activities Sublime Text Mar 23 10:04

-/Documents/waph/waph-vadagasy/labs/lab2/waph-vadagasy-jquery.html - Sublime Text (UNREGISTERED)

```

File Edit Selection Find View Goto Tools Project Preferences Help
138
139         function printResult(result){
140             $("#response").html(result);
141             console.log(result);
142         }
143         $.get("https://V2.jokeapi.dev/joke/Programming?type=single",function(result){
144             $("#response").html("Programming joke of the day: " + result.joke);
145             console.log(result);
146         })
147         async function guessAge(name){
148             const response= await fetch(`https://api.agify.io/?name=${name}`);
149             const result= await response.json();
150             $("#response").html(`Hello ${name}, your age should be ${result.age}`);
151         }
152     </script>
153 </body>
154 </html>
155
156

```

Line 20, Column 53

English SEND CTRL+ALT+DEL SEND CTRL+C TOGGLE FULL SCREEN Press Ctrl+Alt to release the cursor from the guest.

vadagasy-VM

Connected to VM

Activities Firefox Web Browser Mar 23 10:04

WAPH-SRUJANA REDDY x Srujana Reddy Vadagandla x WAPH-SRUJANA REDDY x WAPH-SRUJANA REDDY x WAPH-SRUJANA REDDY x +

localhost/waph-vadagasy-jquery.html

Sat Mar 23 2024 10:04:14 GMT-0400 (Eastern Daylight Time) submit Form with HTTP POST Request Enter the input text submit

AJAX Requests Enter the input text Ajax Echo JQuery Ajax Echo GET JQuery Ajax Echo Post Guess Age

Programming joke of the day: A byte walks into a bar looking miserable. The bartender asks it: "What's wrong buddy?" "Parity error." It replies, "\nAh that makes sense, I thought you looked a bit off.", flags: { }, id: 24, safe: true, lang: "en"

Experiments with JavaScript code Inlined JavaScript Click to display time and date

English SEND CTRL+ALT+DEL SEND CTRL+C TOGGLE FULL SCREEN Press Ctrl+Alt to release the cursor from the guest.

vadagasy-VM

Connected to VM

Activities Firefox Web Browser Mar 23 10:29

WAPH-SRUJANA REDDY x Srujana Reddy Vadagandla x WAPH-SRUJANA REDDY x WAPH-SRUJANA REDDY x WAPH-SRUJANA REDDY x +

localhost/waph-vadagasy-jquery.html

vadagasy@Mail.uc.edu Interaction with HTTP Forms Form with HTTP GET Request Enter the input text submit

The current Time is : Sat Mar 23 2024 10:29:26 GMT-0400 (Eastern Daylight Time)

Form with HTTP POST Request Enter the input text submit

AJAX Requests Enter the input text Srujana Ajax Echo JQuery Ajax Echo GET JQuery Ajax Echo Post Guess Age

Hello Srujana, your age should be 33

Experiments with JavaScript code Inlined JavaScript Click to display time and date

English SEND CTRL+ALT+DEL SEND CTRL+C TOGGLE FULL SCREEN Press Ctrl+Alt to release the cursor from the guest.

Inorder to know the age ,it is used in Second API.Which is done by taking name as the input , and the output for that is a random age of a person generated by the JSON object.