

WAPH-Web Application Programming and Hacking

Instructor: Dr. Phu Phung

Student

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Short-bio: Anirudh has interests in full stack web development as well as get skilled in the field of routing and switching i.e., networking as well.

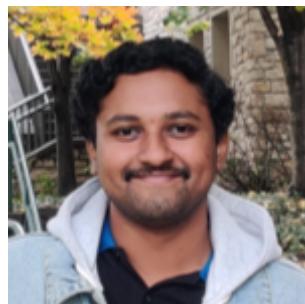


Figure 1: Anirudh Dasari

Repository Information

Repository's URL: <https://github.com/Dasarisu-UC/Dasarisu-UC.github.io>

This is a public repository for Anirudh Dasari to store all code for the individual Project 1. The organization of this repository is as follows.

Individual Project 1

Individual Project 1 Overview

In this Individual project assignment, there are three requirements, general requirements, technical and non-technical requirements. Under general requirements, I have used a bootstrap personal portfolio theme which is available for free in the internet which is developed by the developer Xiaoying Riley. In the general requirements, I have implemented my headshot, basic info about me in the portfolio, contact information, background and education, experiences and skills. Not only but also the HTML page is integrated in the portfolio which introduces Web Application Programming and Hacking course and related hands-on projects. Under Non-technical requirements, I have used the open

source CSS template which is bootstrap, also I have included the page tracker in my website which counts the page views. under technical requirements, I have used Jquery to implement digital clock, analog clock, show/hide my email. For one more functionality, I have used angular JS framework for generating a functionality which is a USD to INR converter. Later, I have implemented joke API which updates every 60-seconds using Jquery. Next I have implemented random image generator from picsum API which generates random images every 3.5 seconds. Finally, I have implemented the JS cookies to remember the client which displays the welcome message and also it displays the welcome back message when the same user get backs to portfolio with date and time

General Requirements

- a. Personal Website on Github Cloud(github.io)** In this task I have created the github cloud public repo, and pushed the developed portfolio to the repo. Where it includes the profile with my name, resume, headshot, contact information and background with my education details, experiences and skills.

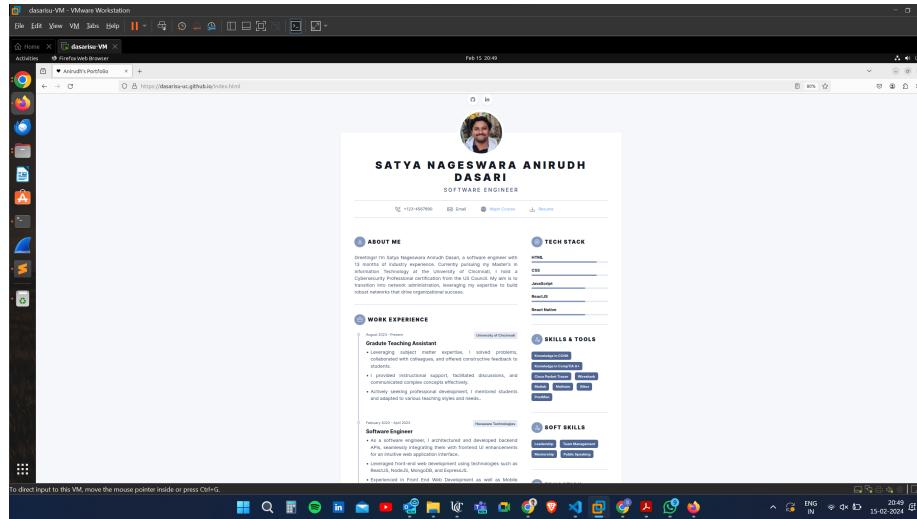


Figure 2: Portfolio

- b. Link to new WAPH-HTML Page** I have created the new html page, where it has all basic information of the course along with all the labs information, hackathon information and the individual project overviews.

Non-technical Requirements

- a. Used BootStrap CSS template** In this subtask, I have used the BootStrap CSS template, the snippet is included in the snapshot below.

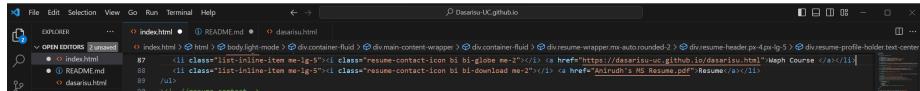


Figure 3: WAPHHTMLLink

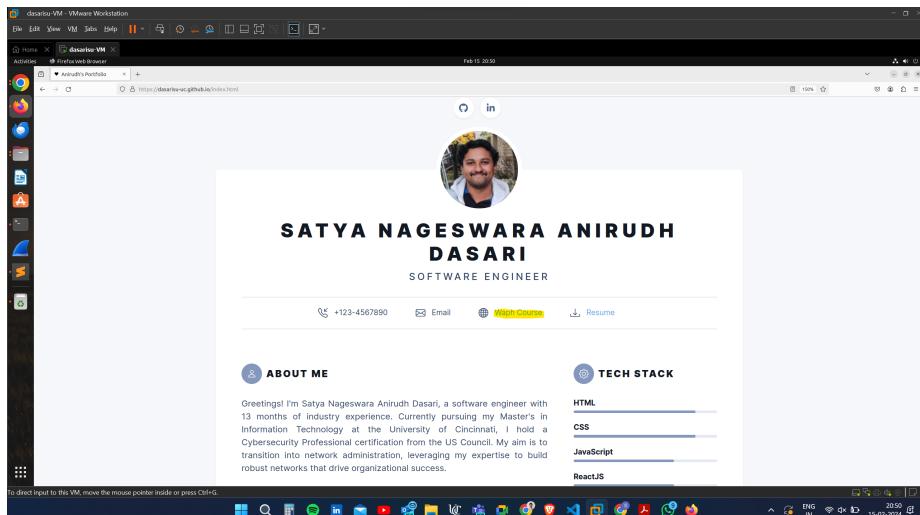


Figure 4: Link To WAPH

```

<!-- Bootstrap Icons -->
<link rel="stylesheet" href="https://cdn.jsdelivr.net/npm/bootstrap-icons@1.10.3/font/bootstrap-icons.css">

<!-- Bootstrap JS (optional) -->
<script src="https://ajax.googleapis.com/ajax/libs/jquery/3.5.1/jquery.min.js"></script>
<script src="https://cdn.jsdelivr.net/npm/popper.js@1.16.0/umd/popper.min.js"></script>
<script src="https://maxcdn.bootstrapcdn.com/bootstrap/4.5.2/js/bootstrap.min.js"></script>

```

Figure 5: BootStrap Script

b. Used Flag Counter for Page Tracking In this subtask I have used flag counter href to track the website which is included in the footer of the portfolio.

```
<div><a href="https://info.flagcounter.com/Q2x4"></a></div>
```

Figure 6: Flag Counter Snippet

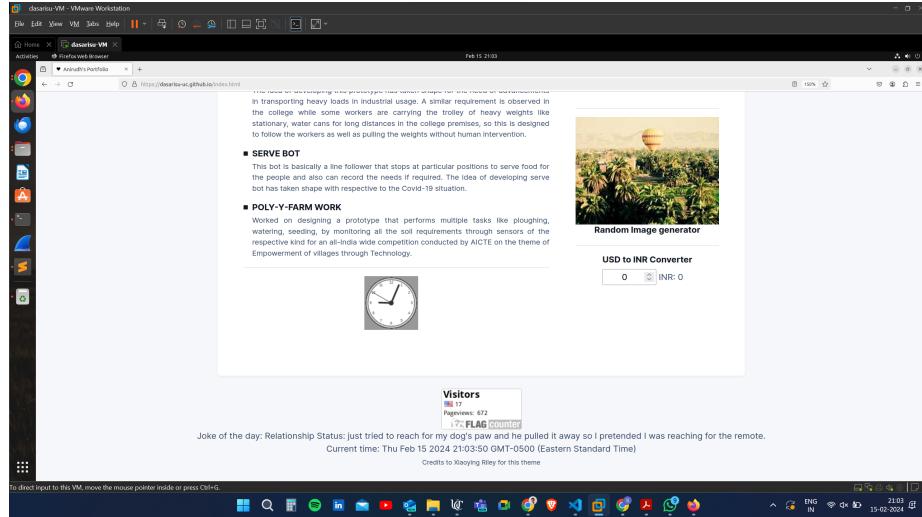


Figure 7: Flag Counter Output

Technical Requirements

a. Basic JavaScript Code In this task, I have used Jquery framework to implement and execute the digital clock, analog clock, show and hide email in the portfolio, the Jquery has been imported through the CDN in the index.html file. The code snippet and the screenshots for digital clock, analog clock has been showcased below.

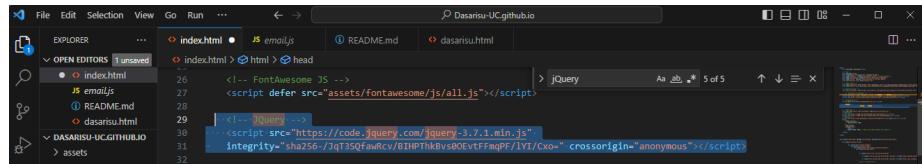


Figure 8: Jquery Script

The Show/hide email has been implemented in the portfolio in the list section of the page, where the code snippets and the required output will be displayed below.

```

File Edit Selection View Go Run Terminal Help
index.html
  index.html
    <div id="digital-clock">
      <script>
        function fetchJokeOfTheDay() {
          $.get("https://api.jokesapi.dev/joke/random").done(result) {
            $("#response").html(`Joke of the day: ${result.joke}`);
          }
        }
        function displayTime() {
          document.getElementById("digital-clock").innerHTML = "Current time: " + new Date();
        }
        setInterval(displayTime, 500);
      </script>

```

Figure 9: Digital Clock Code Snippet

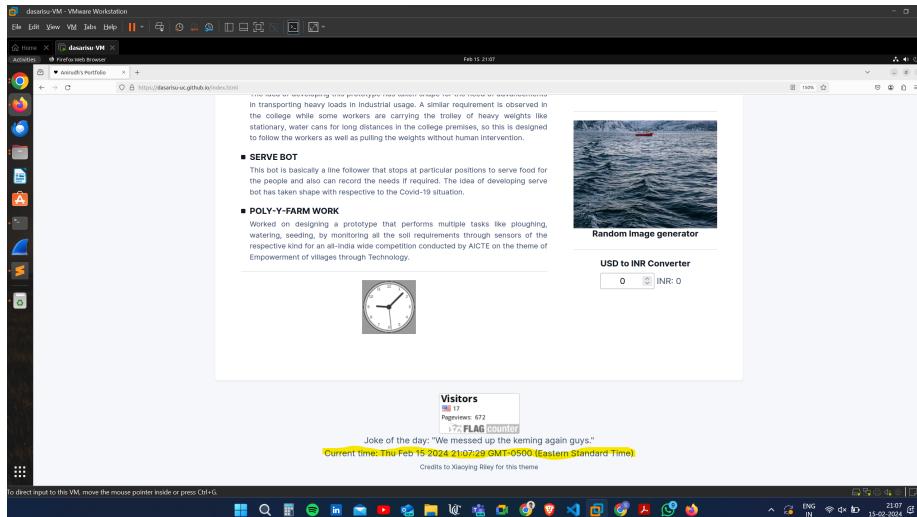


Figure 10: Digital Clock Output

```

File Edit Selection View Go Run Terminal Help
index.html
  index.html
    <div class="analog-clock" style="text-align: center;">
      <script src="https://wphn-uc.github.io/analog.js"></script>
      <canvas id="analog-clock" width="100" height="100" style="background-color: #999999;"/>
      <script>
        var canvas = document.getElementById("analog-clock");
        var ctx = canvas.getContext("2d");
        var radius = canvas.height/2;
        ctx.translate(radius, radius);
        radius = radius * 0.9;
        setInterval(drawClock, 1000);

        function drawClock() {
          drawFace(ctx, radius);
          drawNumbers(ctx, radius);
          drawTime(ctx, radius);
        }
      </script>

```

Figure 11: Analog Clock Code Snippet

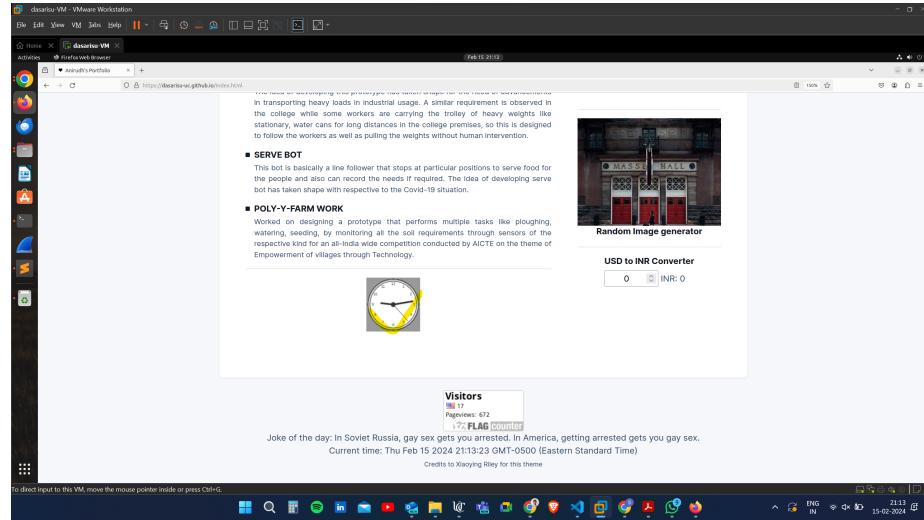


Figure 12: Analog Clock Output



Figure 13: Show Email Code Snippet 1

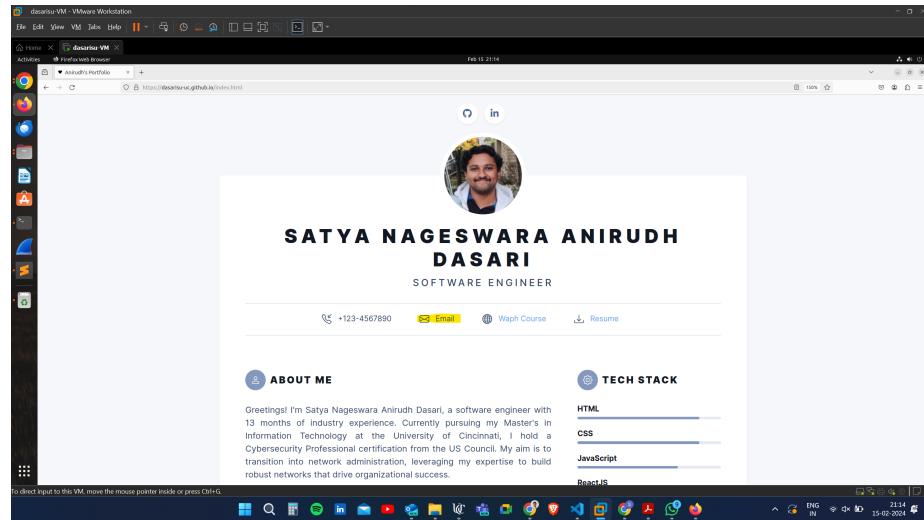
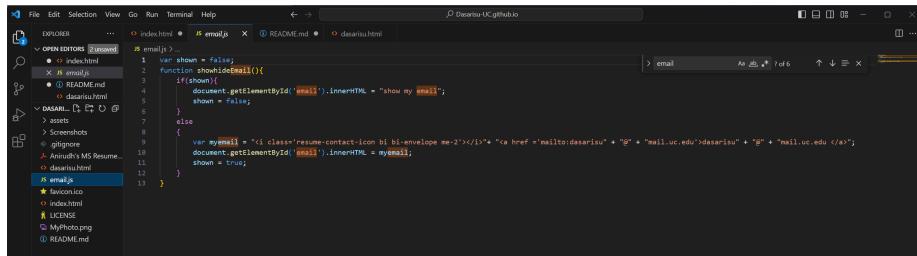


Figure 14: Show Email Code Output 1



```
File Edit Selection View Go Run Terminal Help
OPEN EDITORS 2 opened
index.html README.md dasariu.html
index.html
README.md
dasariu.html
DASARIU README.md
assets
Screenshots
gitignore
Anandu UC Resume...
dasariu.html
email.js
favicon.ico
index.html
LICENSE
MyPhoto.png
README.md

index.html
README.md
dasariu.html
email.js
LICENSE
MyPhoto.png
README.md

var shown = false;
function showhideEmail(){
  if(shown){
    document.getElementById('email').innerHTML = "show my email";
    shown = false;
  }
  else{
    var myEmail = "<i class='resume-contact-icon bi bi-envelope me-2'></i>" + "<a href='mailto:dasariu' + \"@\" + \"mail.uc.edu\">dasariu + \"@\" + \"mail.uc.edu\"</a>";
    document.getElementById('email').innerHTML = myEmail;
    shown = true;
  }
}

<!-- Email Contact -->
<div id="email"></div>
```

Figure 15: Show Email Code Snippet 2

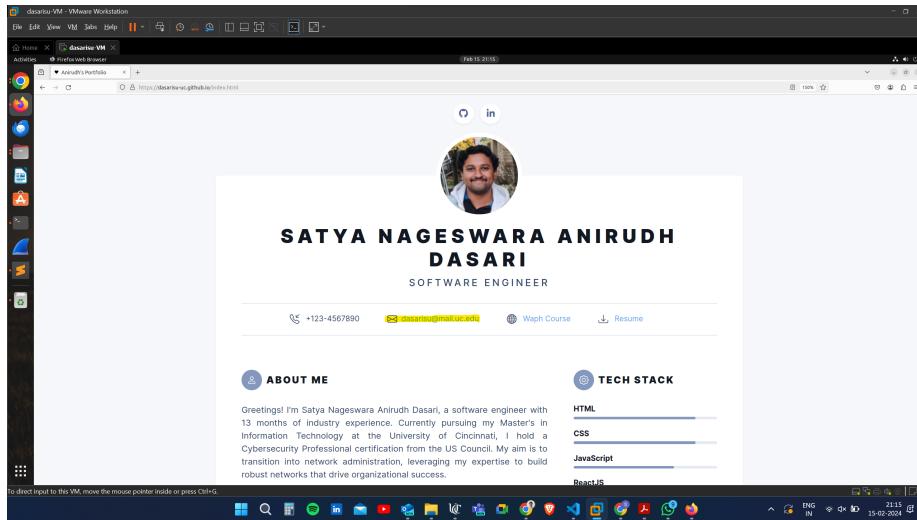


Figure 16: Show Email Code Output 2

One of the own functionality that I have implemented using Angular framework in the portfolio is the USD to INR conversion, where the related code snippet and the output in the portfolio are displayed in the below screenshots.

```

<script src="https://unpkg.com/react@17/umd/react.development.js"></script>
<script src="https://unpkg.com/react-dom@17/umd/react-dom.development.js"></script>
<!-- Angular -->
<script src="https://ajax.googleapis.com/ajax/libs/angularjs/1.8.2/angular.min.js"></script>

```

Figure 17: Angular Script Code Snippet

```

// Define the Angular app module
var app = angular.module('converterApp', []);

// Define the Angular controller
app.controller('ConverterController', function($scope) {
  $scope.usd = 0;
  $scope.inr = 0;

  $scope.convertToINR = function() {
    $scope.inr = $scope.usd * 83; // Assuming 1 USD = 83 INR
  };
});

```

Figure 18: USD to INR Code Snippet 1

```

// Define the Angular app module
var app = angular.module('converterApp', []);

// Define the Angular controller
app.controller('ConverterController', function($scope) {
  $scope.usd = 0;
  $scope.inr = 0;

  $scope.convertToINR = function() {
    $scope.inr = $scope.usd * 83; // Assuming 1 USD = 83 INR
  };
});

```

Figure 19: USD to INR Code Snippet 2

b. Two Public web APIs integration In this task, I have used two Web API's to implement two functionalities, one is the JOKE API, where it fetches the joke of any random kind for every 60 seconds. The code snippet and the respective output is shown in the below screenshots.

The next API that I have used is to fetch the random images from the Picsum Website. The respective code snippet and the relative output is showcaased in the below screenshots.

c. The JS Cookied to Remember the Client In this subtask, I have followed the hint that is given in the class lecture and implemented the JS cookies to remember the user's name every time the person visits my webpage. The relative code snippet and respective screenshot has been showcased in the below screenshots.

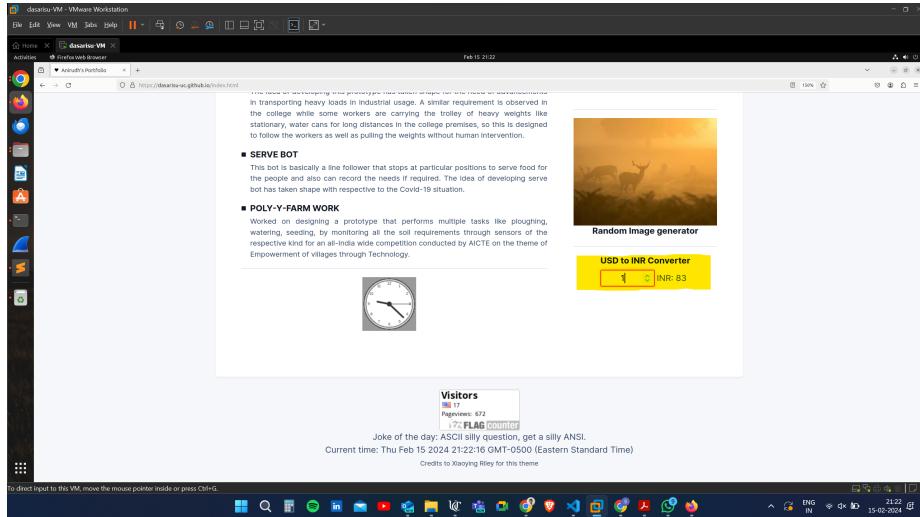


Figure 20: USD to INR Code Output

```

<!-- Joke API -->
<script src="https://code.jquery.com/jquery-3.7.1.min.js" integrity="sha256=sha256-/Qq/1E8qISrD86mZtumdznlwWzJyfXyv0M=" crossorigin="anonymous"></script>
```

Figure 21: JokeAPI Code Snippet 1

```

<!-- Joke API -->
<script src="https://code.jquery.com/jquery-3.7.1.min.js" integrity="sha256=sha256-/Qq/1E8qISrD86mZtumdznlwWzJyfXyv0M=" crossorigin="anonymous"></script>
```

Figure 22: JokeAPI Code Snippet 2

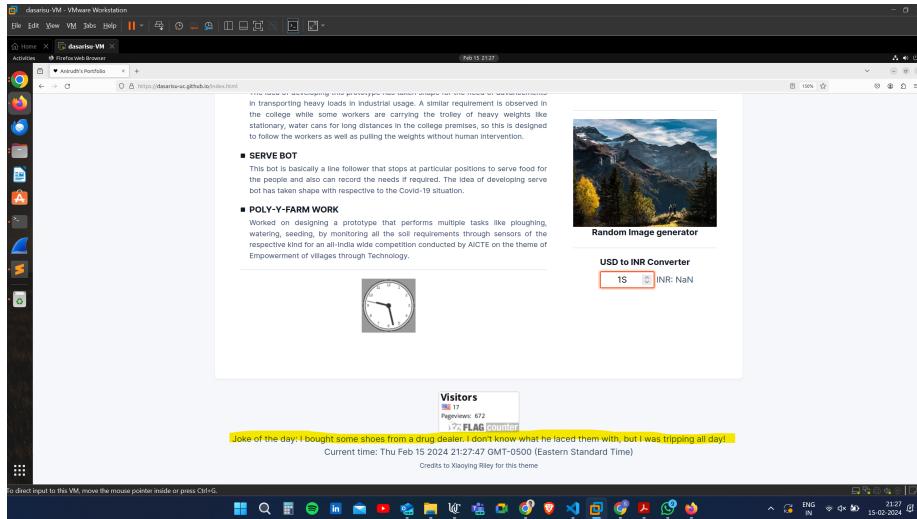


Figure 23: JokeAPI Output

```

File Edit Selection View Go Run Terminal Help
EXPLORER ... README.md README.md dreasiru.html
OPEN EDITORS 2 opened
index.html ed-2 > div.resume-body.p-5 > div row > div col-12.col-lg-4.ps-4 > section.resume-long-section.resume-section > div image-container > h5 > script > fetchRandomImage > $get('https://picum.photos/400/300') callback
... random
index.html
<script>
function fetchRandomImage() {
    $get('https://picum.photos/400/300', function() {
        const imageurl = 'https://picum.photos/400/300' + Math.random();
        $('#randomImage').attr('src', imageurl);
    });
}

$(document).ready(function() {
    fetchRandomImage();
    setInterval(fetchRandomImage, 3500);
})
</script>

```

Figure 24: Random Image Generator Code Snippet

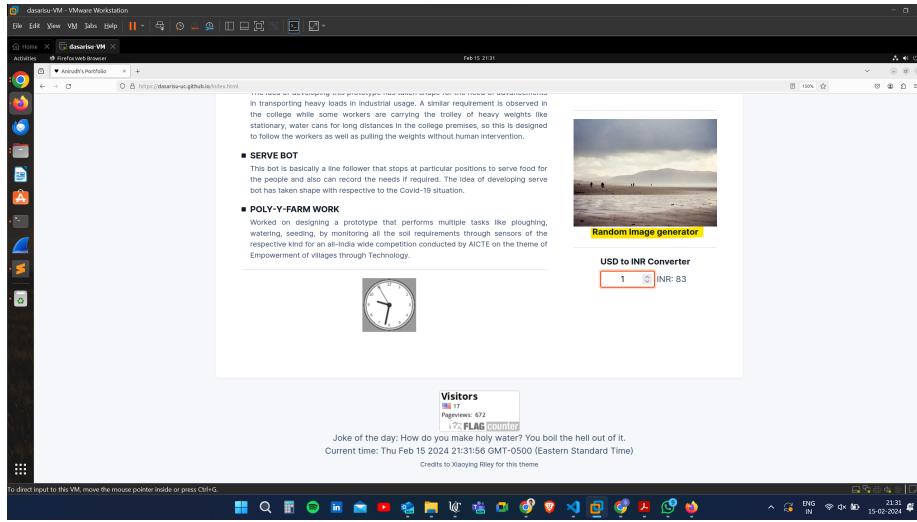


Figure 25: Random Image Generator Output

```

    // cookie storing
    function setGetUsername() {
        var username = document.cookie.replace(/((?:^|\s*)+)(username)(\s*\=|\s*)([^;]*)(;\s*)/gi, '$1');
        if (!username) {
            if (username != null && username != "") {
                var newusername = prompt("Welcome! Please enter your username", "Y00Busername");
                if (newusername != null && newusername != "") {
                    document.cookie = "username=" + newusername + ";max-age=" + (365 * 24 * 60 * 60); // store cookie for 1 year
                    return newusername;
                }
            } else {
                return username;
            }
        }
    }

    function displayWelcomeMessage() {
        var username = setGetUsername();
        var currentDate = new Date();
        var lastvisit = document.cookie.replace(/((?:^|\s*)+)(lastvisit)(\s*\=|\s*)([^;]*)(;\s*)/gi, '$1');
        if (username) {
            if (lastvisit) {
                if (username and lastvisit time are found in the cookie, display welcome back message with last visit date/time
                var lastvisitDate = new Date(lastvisit);
                alert("Welcome back, " + username + ". Your last visit was " + lastvisitDate.toLocaleString('en-US', {timezone: 'America/New_York'}));
            } else {
                // If only username is found in the cookie, update the last visit time
                document.cookie = "lastvisit=" + currentDate.toUTCString() + ";max-age=" + (365 * 24 * 60 * 60); // Store cookie for 1 year
                alert("Welcome " + username + "!");
            }
        }
    }

    displayWelcomeMessage();

```

Figure 26: Cookie Code Snippet

When the Username is not stored in the browser Cookies, it will ask for the username for storing.

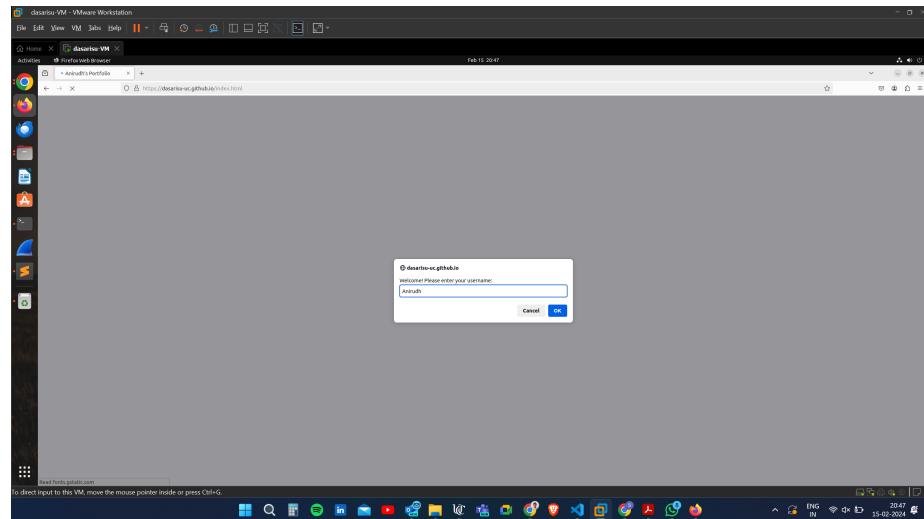


Figure 27: Cookie Output 1

It will welcome the user once the name has been stored.

If we revisit the page, it says that the user's last visit details as a alert message in the webpage before the site loads.

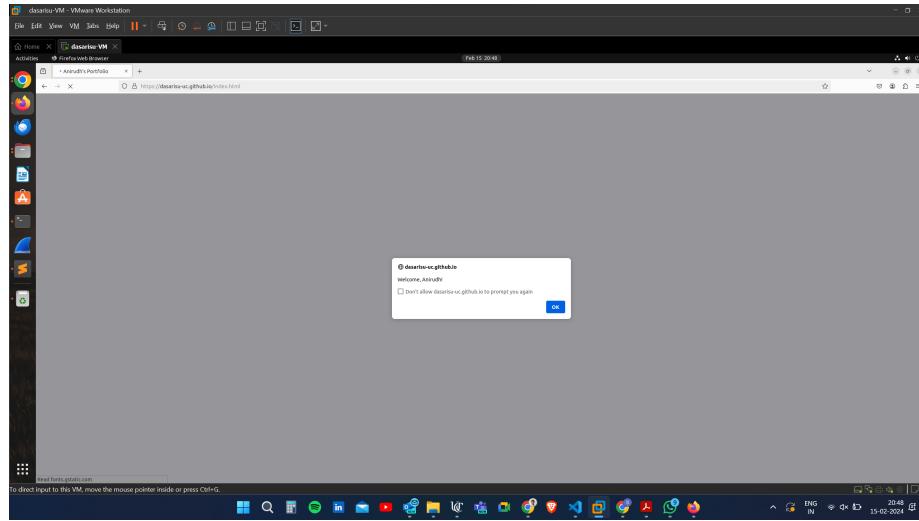


Figure 28: Cookie Output 2

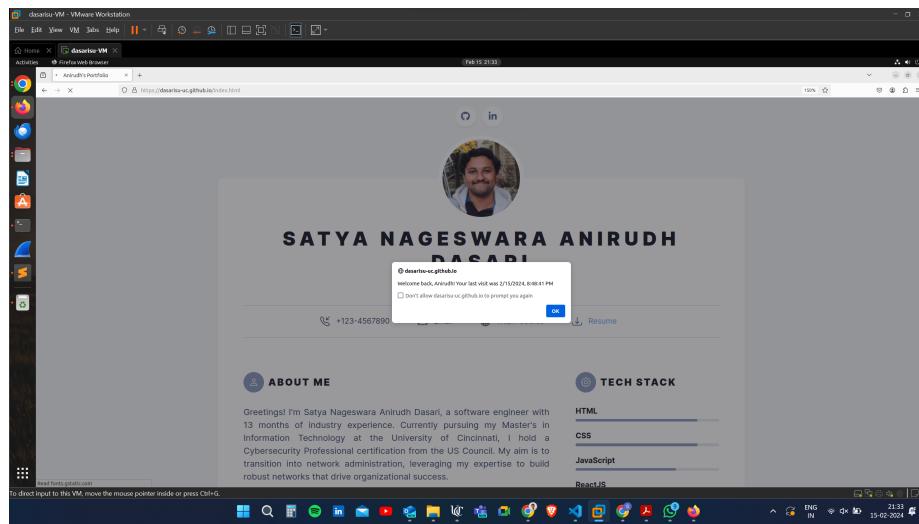


Figure 29: Cookie Output 3