Name: Saad Rehman **Section: 6E**

Student I'd: 21F-9640 **Assignment: 03**

Course: Web Programming **Topic: Js, JQuery**

Department of Computer Science

Semester	**Spring 2024**

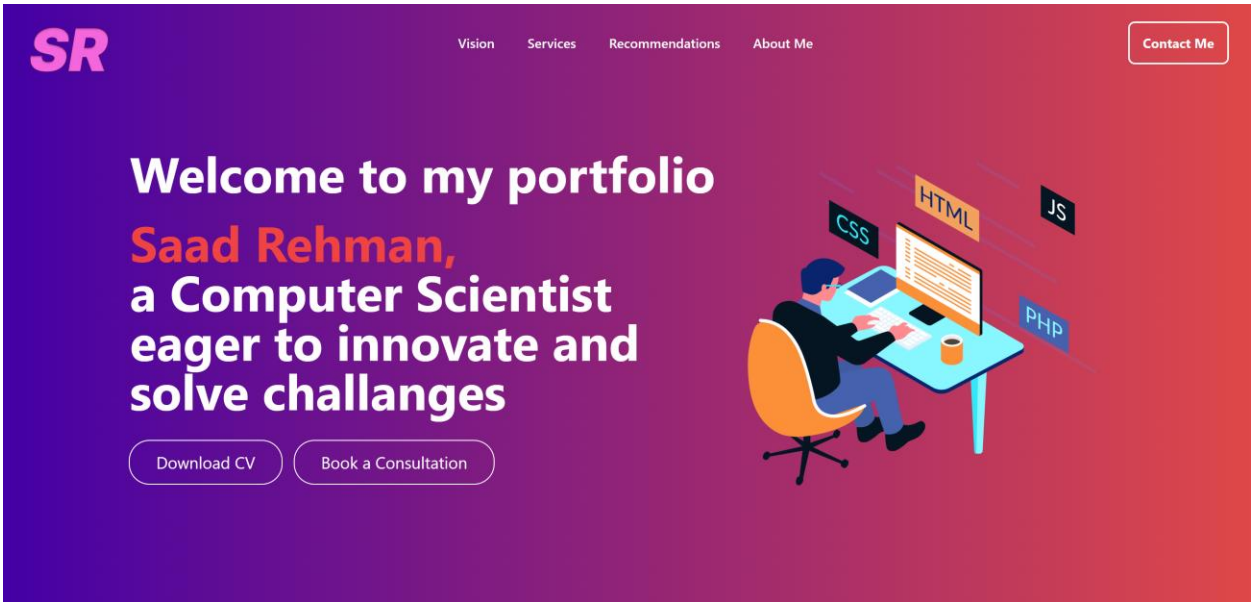
GitHub Link:

Click here to open the link.

Task 1

https://saadrehman-portfolio.vercel.app/

Code Repository



Task 2

Task2.html

```
<!DOCTYPE html>
<html lang="en">
  <head>
    <title>Task 2</title>
    <link
      href="https://fonts.googleapis.com/css2?family=Poppins:wght@400;600&family=
Roboto:wght@400;500&display=swap"
      rel="stylesheet"
    />

    <link
      rel="stylesheet"
      href="https://stackpath.bootstrapcdn.com/bootstrap/4.5.2/css/bootstrap.min.
css"
    />
```

```
    <link rel="stylesheet" href="Task2.css" />
  </head>
  <body onload="getLocation()">
    <div class="container">
      <h1 class="text-center mb-4">Weather App</h1>
      <div class="search-bar form-inline justify-content-center mb-4">
        <input
          type="text"
          id="search-city"
          class="form-control mr-2"
          placeholder="Enter City..."
        />
        <button class="btn btn-primary" onclick="WeatherDetails()">
          Search
        </button>
      </div>
      <div id="weather-info"></div>
      <div id="hourly-forecast"></div>
      <div id="daily-forecast"></div>
    </div>

    <script src="Task2.js"></script>

    <footer class="text-center mt-4">
      <p>Developed by Saad Rehman</p>
    </footer>
  </body>
</html>
```

Task2.css

```
body {
    background: linear-gradient(to right, rgba(0, 0, 0, 0.6), rgba(0, 0, 0,
0.4)), url('background.jpeg') no-repeat center center fixed;
    background-size: cover;
    font-family: 'Roboto', sans-serif;
    color: #fff;
}

h1, h2, h3, h4, h5, h6 {
    font-family: 'Poppins', sans-serif;
    margin: 0.5em 0;
    color: #f1f1f1;
}
```

```
.search-bar input, .search-bar button {
    border: none;
    margin: 5px;
    border-radius: 30px;
    padding: 10px 15px;
}

.search-bar button {
    background-color: #007bff;
    color: white;
    padding: 10px 20px;
    cursor: pointer;
    transition: background-color 0.3s ease;
}

.search-bar button:hover {
    background-color: #0056b3;
}

.container, .forecast-item {
    background-color: rgba(255, 255, 255, 0.2);
    backdrop-filter: blur(8px);
    border-radius: 15px;
    padding: 20px;
}

#weather-info, #hourly-forecast, #daily-forecast {
    text-align: center;
    display: flex;
    flex-direction: column;
    align-items: center;
}

.forecast-item {
    border: 1px solid #ffffff50;
    margin: 10px;
    padding: 15px;
    border-radius: 10px;
    transition: all 0.3s ease-in-out;
}

.forecast-item:hover {
    transform: scale(1.05);
    border-color: #ffffff;
```

```
}

#hourly-forecast > h4, #daily-forecast > h4 {
    color: #ade8f4;
    font-weight: 600;
}

.footer {
    text-align: center;
    font-size: 0.9rem;
    margin-top: 20px;
}


.current-weather img {
    width: 100px;
    height: auto;
    margin-top: 10px;
}
body {
    background-image: url('image.jpg');
    background-size: cover;
  }
```

Task2.js

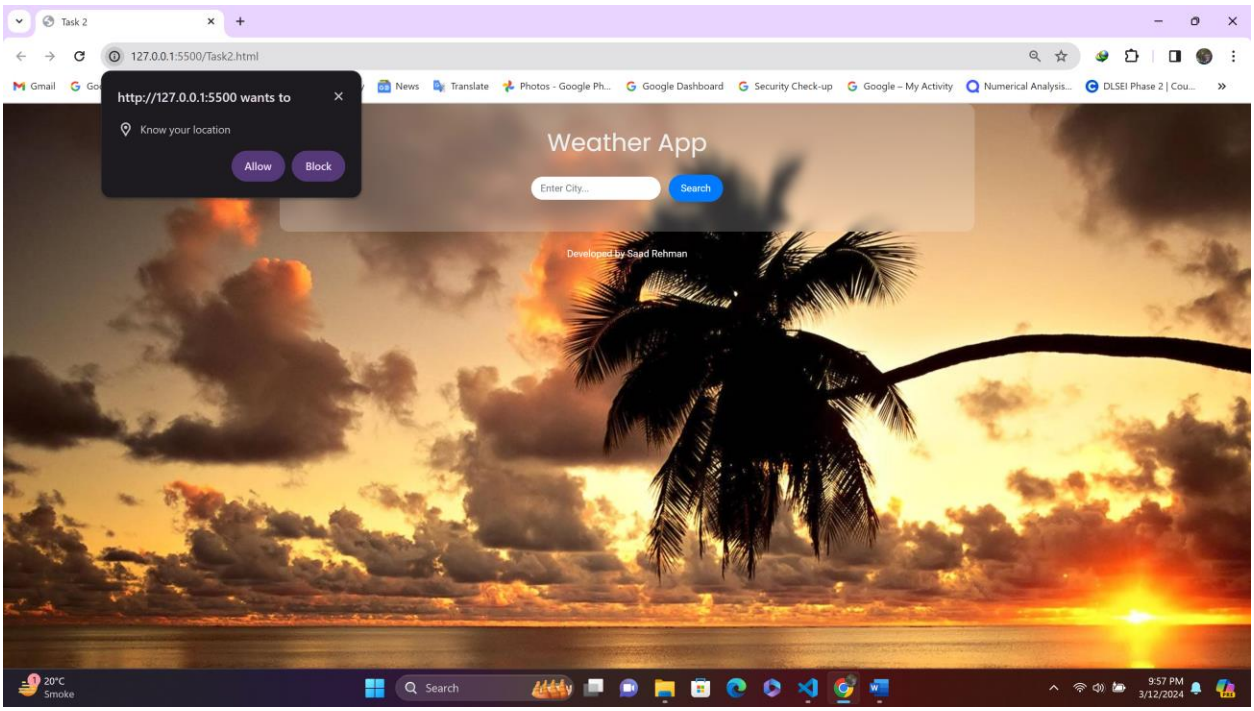
```
function debounce(func, wait) {
    let timeout;
    return function executedFunction(...args) {
        const later = () => {
            clearTimeout(timeout);
            func(...args);
        };
        clearTimeout(timeout);
        timeout = setTimeout(later, wait);
    };
}



function WeatherDetails() {
    const city = document.getElementById("search-city").value;
    if (city.length > 3) {
        const apiKey = "69fa95c453084c6862ae54f6a212636c";
```

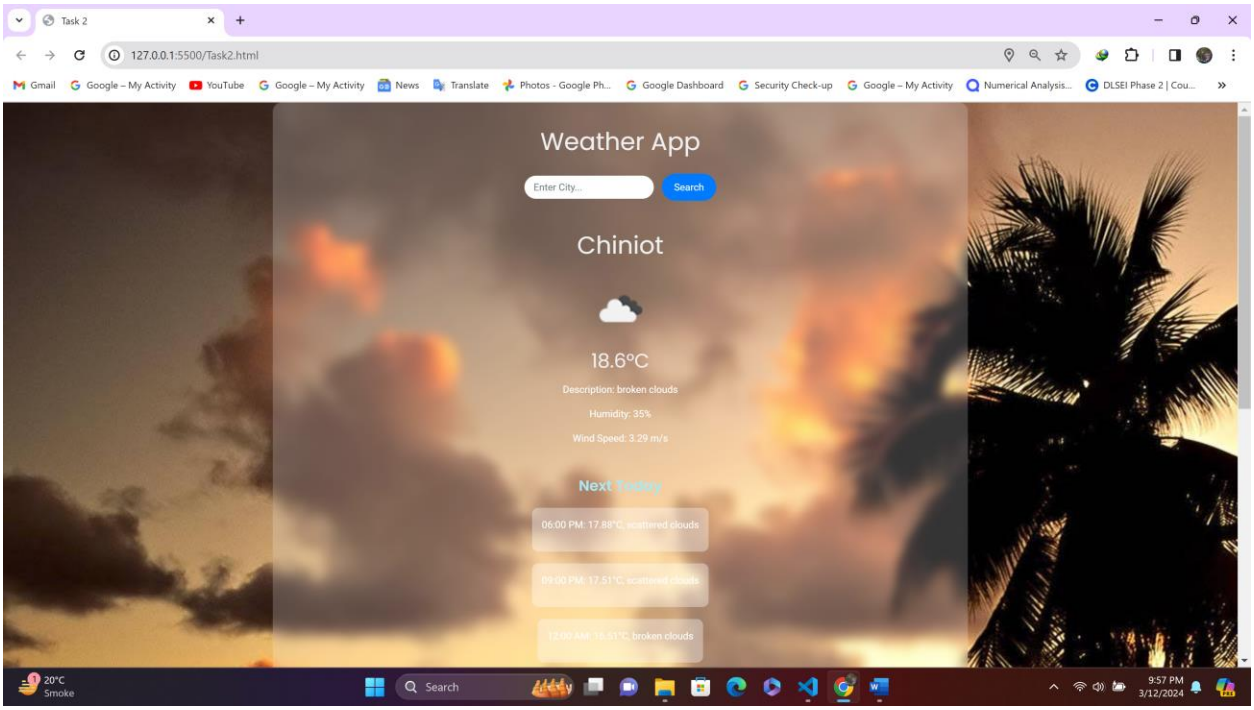
```
        fetchCurrentWeather(city, apiKey);
      fetchForecast(city, apiKey);

document.getElementById("weather-info").classList.add("visible");

    }
}

const debouncedWeatherDetails = debounce(WeatherDetails, 800);

document.getElementById("search-city").addEventListener("input",
debouncedWeatherDetails);


      function fetchCurrentWeather(city, apiKey) {
          const url =
`https://api.openweathermap.org/data/2.5/weather?q=${city}&appid=${apiKey}&units=
metric`;

        const httpRequest = new XMLHttpRequest();
        httpRequest.onreadystatechange = function () {
          if (this.readyState === 4 && this.status === 200) {
            const data = JSON.parse(this.responseText);
            const iconUrl =
`http://openweathermap.org/img/wn/${data.weather[0].icon}.png`; // Constructing
the URL for the icon
            document.getElementById("weather-info").innerHTML = `
                <div class="current-weather mb-4 text-center">
                    <h1>${data.name}</h1>
                    <img src="${iconUrl}" alt="Weather icon"
title="${data.weather[0].description}"> <!-- Weather icon -->
                    <h2>${data.main.temp}°C</h2>
                    <p>Description: ${data.weather[0].description}</p>
                    <p>Humidity: ${data.main.humidity}%</p>
                    <p>Wind Speed: ${data.wind.speed} m/s</p>
                </div>
            `;
          }
        };
        httpRequest.open("GET", url, true);
        httpRequest.send();
      }

      function fetchForecast(city, apiKey) {
```

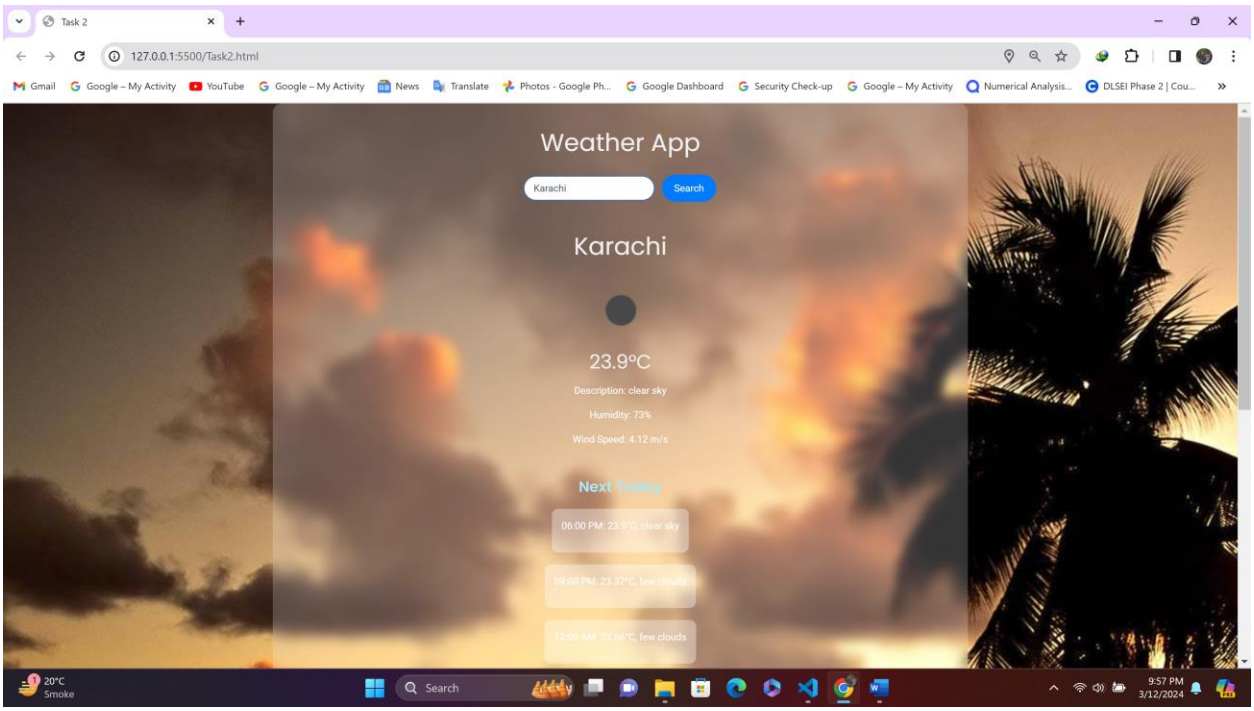
```
        const url =
`https://api.openweathermap.org/data/2.5/forecast?q=${city}&appid=${apiKey}&units
=metric`;
        const httpRequest = new XMLHttpRequest();
        httpRequest.onreadystatechange = function () {
          if (this.readyState === 4 && this.status === 200) {
            const data = JSON.parse(this.responseText);
            const hourlyHTML = data.list
              .slice(0, 5)
              .map(
                (forecast) => `
                <div class="forecast-item">
                    <p>${new Date(forecast.dt_txt).toLocaleTimeString([], {
                      hour: "2-digit",
                      minute: "2-digit",
                    })}: ${forecast.main.temp}°C, ${
                  forecast.weather[0].description
                }</p>
                </div>
            `
              )
              .join("");

            document.getElementById(
              "hourly-forecast"
            ).innerHTML = `<h4>Next Today</h4>${hourlyHTML}`;

            const dailyHTML = data.list
              .filter((_, index) => index % 8 === 0)
              .slice(0, 5)
              .map(
                (forecast) => `
                <div class="forecast-item">
                    <p>${new Date(forecast.dt_txt).toLocaleDateString()}: ${
                  forecast.main.temp
                }°C, ${forecast.weather[0].description}</p>
                </div>
            `
              )
              .join("");

            document.getElementById(
              "daily-forecast"
            ).innerHTML = `<h4>Next 5 Days</h4>${dailyHTML}`;
          }
```

```
        };
        httpRequest.open("GET", url, true);
        httpRequest.send();
      }

async function fetchWeather(lat, lon) {
        const apiKey = "dd39413e316a2ab84efa29d9fb1f8bd1";
        const url =
`https://api.openweathermap.org/data/2.5/weather?lat=${lat}&lon=${lon}&appid=${ap
iKey}&units=metric`;

        const response = await fetch(url);
        const data = await response.json();
        fetchCurrentWeather(data.name, apiKey);
        fetchForecast(data.name, apiKey);
      }

      function getLocation() {
        if (navigator.geolocation) {
          navigator.geolocation.getCurrentPosition(showPosition, null);
        }
      }

      function showPosition(position) {
        var latitude = position.coords.latitude;
        var longitude = position.coords.longitude;
        fetchWeather(latitude, longitude);
      }
```

Output


Task 2
127.0.0.1:5500/Task2.html
http://127.0.0.1:5500 wants to
Know your location
Allow
Block
Weather App
Enter City...
Search
Developed By Saad Rehman
20°C
Smoke
Search
9:57 PM
3/12/2024


Task 2
127.0.0.1:5500/Task2.html
Weather App
Enter City...
Search
Chiniot
18.6°C
Description: broken clouds
Humidity: 35%
Wind Speed: 3.29 m/s
Next Today
06:00 PM: 17.88°C, scattered clouds
09:00 PM: 17.51°C, scattered clouds
12:00 AM: 18.51°C, broken clouds
20°C
Smoke
Search
9:57 PM
3/12/2024



Task 3

Task3.html

```
<!DOCTYPE html>
<html lang="en">
<head>
  <title>Task 3</title>
  <link rel="stylesheet" href="Task3.css">
</head>
<body>
  <div class="container">
    <div id="welcome-screen" class="welcome-screen">
      <h1>Welcome to the Digital Clock App</h1>
      <p>Click the button below to view the current time.</p>
      <button id="view-time-btn" class="btn">View Time</button>
    </div>

    <div id="clock-screen" class="clock-screen" style="display: none;">
```

```
      <div id="time-status" class="time-status">Current Running Time:</div>
      <div class="clock">
        <div class="display">
          <div class="digit" id="hours">00</div>
          <div class="separator">:</div>
          <div class="digit" id="minutes">00</div>
          <div class="separator">:</div>
          <div class="digit" id="seconds">00</div>
        </div>
      </div>
    </div>
  </div>

  <script src="https://code.jquery.com/jquery-3.6.0.min.js"></script>
  <script src="Task3.js"></script>
</body>
</html>
```

Task3.css

```
body {
    font-family: Arial, sans-serif;
    background-color: #222;
    display: flex;
    justify-content: center;
    align-items: center;
    height: 100vh;
    margin: 0;
  }

  .container {
    text-align: center;
  }

  .welcome-screen, .clock-screen {
    display: flex;
    flex-direction: column;
    align-items: center;
    justify-content: center;
  }

  .welcome-screen h1, .welcome-screen p {
    color: #fff;
  }
```

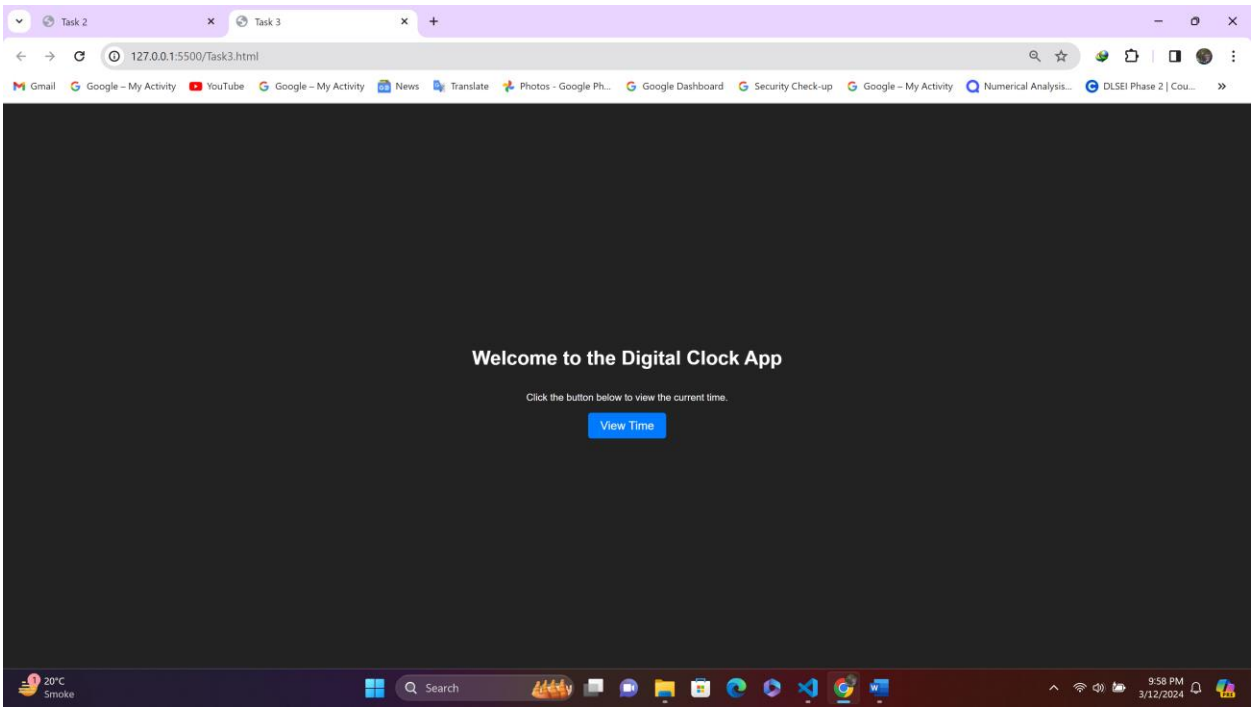
```css
.btn {
  padding: 10px 20px;
  font-size: 1.2rem;
  cursor: pointer;
  background-color: #007bff;
  color: #fff;
  border: none;
  border-radius: 5px;
  transition: background-color 0.3s ease;
}

.btn:hover {
  background-color: #0056b3;
}

.clock {
  display: inline-block;
  background-color: #333;
  border-radius: 10px;
  padding: 20px;
  box-shadow: 0 0 20px rgba(0, 0, 0, 0.3);
  transform: rotateX(20deg); /* Apply 3D rotation */
}

.display {
  display: flex;
  align-items: center;
  justify-content: center;
}

.digit {
  font-size: 3rem;
  color: #fff;
  padding: 10px;
  border-radius: 5px;
  margin: 0 5px;
  background-color: #555;
}

.separator {
  font-size: 3rem;
  color: #fff;
  margin: 0 5px;
}
```

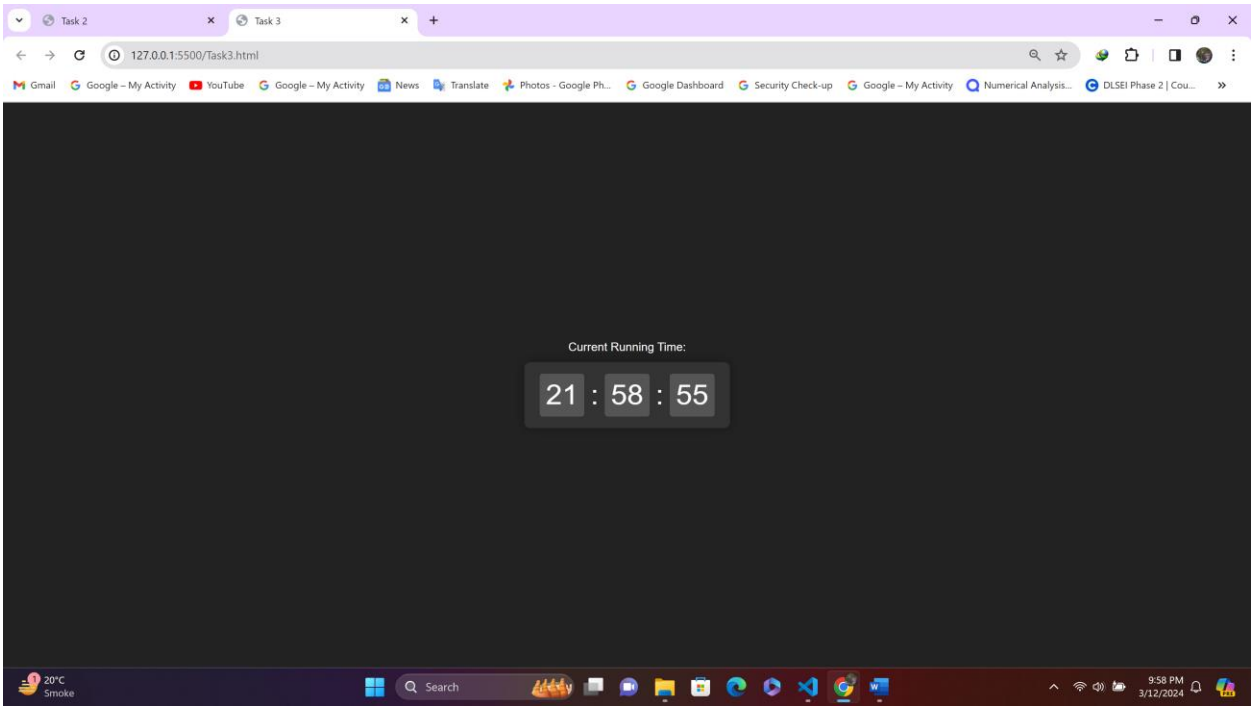
```
  .time-status {
    font-size: 1.2rem;
    color: #fff;
    margin-bottom: 10px;
  }
```

Task3.js

```
$(document).ready(function() {
    $("#view-time-btn").click(function() {
      $("#welcome-screen").fadeOut(500); // Fade out the welcome screen
      $("#clock-screen").fadeIn(1000); // Fade in the clock screen

      updateTime(); // Update the time immediately
      setInterval(updateTime, 1000); // Update the time every second
    });

    function updateTime() {
      var now = new Date();
      var hours = formatTime(now.getHours());
      var minutes = formatTime(now.getMinutes());
      var seconds = formatTime(now.getSeconds());

      $("#hours").text(hours);
      $("#minutes").text(minutes);
      $("#seconds").text(seconds);
    }

    function formatTime(time) {
      return time < 10 ? "0" + time : time;
    }
  });
```

Output





Task 4

Task4.html

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

```
  <title>Task 4</title>
  <link rel="stylesheet" href="Task4.css">
</head>
<body>
  <div id="start-screen" class="container">
    <h1>Welcome to Rock Paper Scissors!</h1>
    <p>Enter your name and click start to begin playing.</p>
    <form id="start-form">
      <input type="text" id="player-name" class="input-field" placeholder="Enter
your name" autocomplete="off">
      <label for="player-name" class="input-label">Your Name</label>
      <button type="submit" class="btn">Start</button>
    </form>
  </div>

  <div id="game-screen" class="container" style="display: none;">
    <h1>Rock Paper Scissors</h1>
    <div class="options">
      <img src="rock.png" class="choice" id="rock" alt="Rock">
      <img src="paper.png" class="choice" id="paper" alt="Paper">
      <img src="scissor.jpeg" class="choice" id="scissors" alt="Scissors">
    </div>
    <div class="result-container">
      <div id="result" class="result"></div>
      <div id="score">Score: <span id="score-value">0</span></div>
    </div>
  </div>

  <script src="https://code.jquery.com/jquery-3.6.0.min.js"></script>
  <script src="Task4.js"></script>
</body>
</html>
```

Task4.css

```
body {
    font-family: Arial, sans-serif;
    margin: 0;
    padding: 0;
    background-color: #f3f3f3;
    perspective: 1000px;
  }

  .container {
```

```
  max-width: 800px;
  margin: 20px auto;
  text-align: center;
  padding: 50px;
}

h1 {
  margin-bottom: 20px;
}

p {
  margin-bottom: 30px;
}

.input-field {
  padding: 10px;
  font-size: 16px;
  margin-bottom: 10px;
  width: 100%;
  border: 2px solid #ddd;
  border-radius: 5px;
  transition: border-color 0.3s ease;
}

.input-field:focus {
  outline: none;
  border-color: #007bff;
}

.input-label {
  display: none;
}

.btn {
  padding: 10px 20px;
  font-size: 16px;
  cursor: pointer;
  background-color: #007bff;
  color: #fff;
  border: none;
  border-radius: 5px;
  transition: background-color 0.3s ease;
}

.btn:hover {
```

```
  background-color: #0056b3;
}

.options {
  margin-bottom: 20px;
}

.choice {
  width: 150px;
  height: 150px;
  margin: 0 10px;
  cursor: pointer;
  border-radius: 50%;
  transition: all 0.3s ease;
  transform-style: preserve-3d;
}

.choice:hover {
  transform: scale(1.1) rotateY(10deg);
}

.result-container {
  margin-top: 30px;
}

.result {
  font-size: 24px;
  font-weight: bold;
  margin-bottom: 20px;
}

#score {
  font-size: 18px;
  font-weight: bold;
  color: #333;
}

#score-value {
  color: #007bff;
}
```

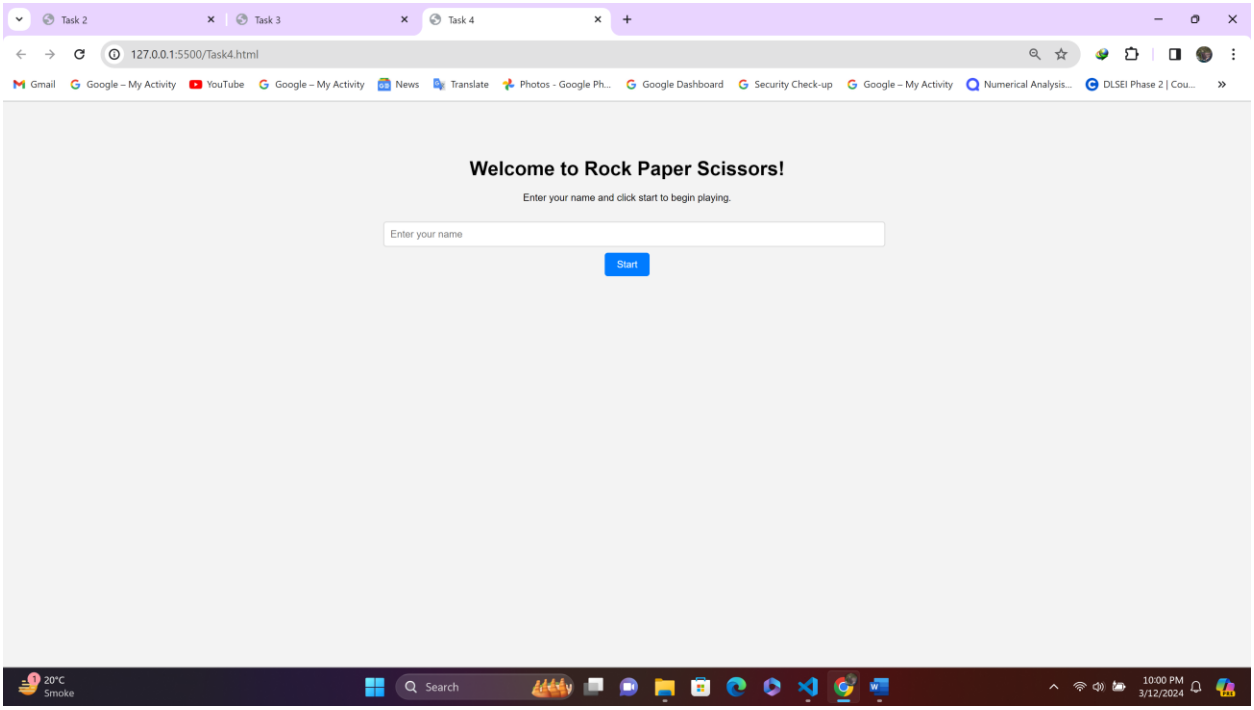
Task4.js

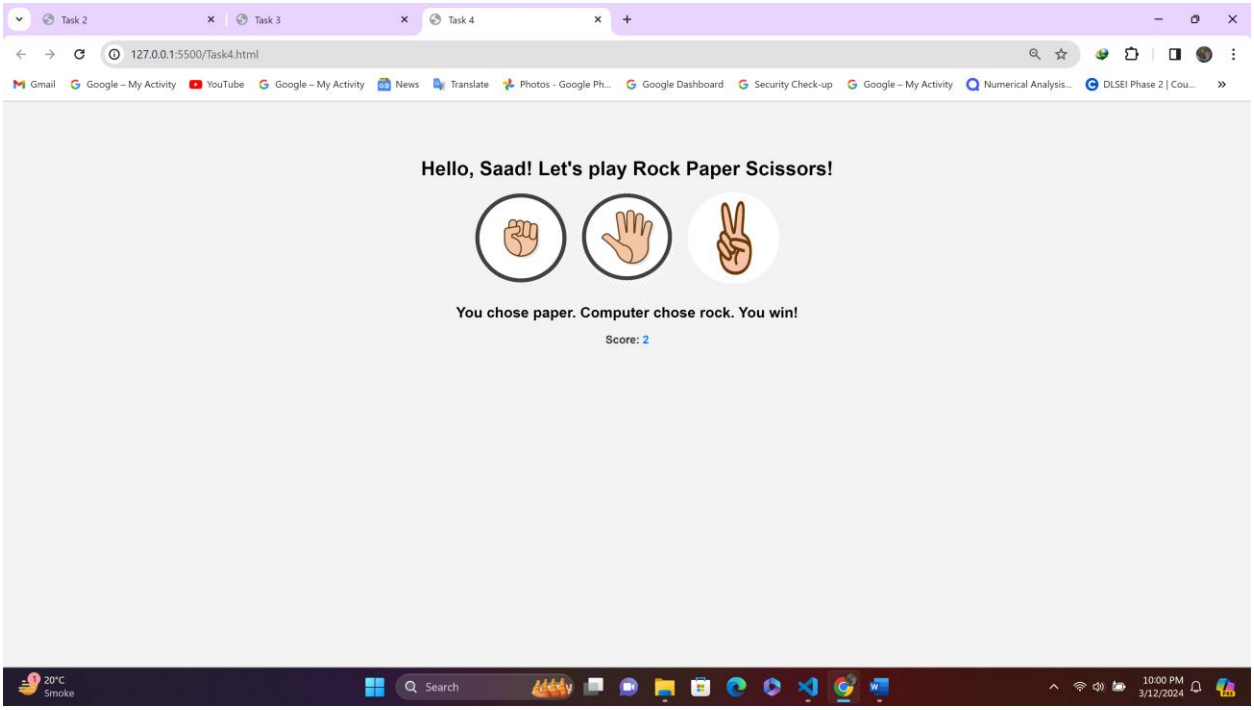
```
$(document).ready(function() {
```

```
    $("#start-form").submit(function(event) {
      event.preventDefault();
      var playerName = $("#player-name").val().trim();
      if (playerName !== "") {
        $("#start-screen").hide();
        $("#game-screen").show();
        $("#game-screen h1").text("Hello, " + playerName + "! Let's play Rock
Paper Scissors!");
      }
    });

    var choices = ["rock", "paper", "scissors"];
    var score = 0;

    $(".choice").click(function() {
      var userChoice = $(this).attr("id");
      var computerChoice = choices[Math.floor(Math.random() * choices.length)];

      var result = getResult(userChoice, computerChoice);
      updateScore(result);

      $("#result").text("You chose " + userChoice + ". Computer chose " +
computerChoice + ". " + result);
    });

    function getResult(user, computer) {
      if (user === computer) {
        return "It's a tie!";
      } else if ((user === "rock" && computer === "scissors") ||
                 (user === "paper" && computer === "rock") ||
                 (user === "scissors" && computer === "paper")) {
        return "You win!";
      } else {
        return "Computer wins!";
      }
    }

    function updateScore(result) {
      if (result === "You win!") {
        score++;
      } else if (result === "Computer wins!") {
        score--;
      }
      $("#score-value").text(score);
    }
```

```
});
```

Output


Task 2
Task 3
Task 4
127.0.0.1:5500/Task4.html
Welcome to Rock Paper Scissors!
Enter your name and click start to begin playing.
Enter your name
Start


Task 2
Task 3
Task 4
127.0.0.1:5500/Task4.html
Hello, Saad! Let's play Rock Paper Scissors!
You chose paper. Computer chose rock. You win!
Score: 2

THE END