VISVESVARAIYA TECHNOLOGICAL UNIVERSITY
JNANASANGAMA, BELAGAVI - 590018

A Project Report On

"Fast Typing Game"

Submitted in partial fulfilment of the requirement for the award of the

Degree of Bachelor of Engineering

in

Computer Science & Engineering

Submitted by

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BANGALORE- 560024

2021-2022

ATRIA INSTITUTE OF TECHNOLOGY

Department of Compute Science &Engineering

BANGALORE-560024

CERTIFICATE

Certified that the project work entitled **" Speed Typing Game "**, carried Out by **V Nagaraj(1AT19CS123), N Harsha Vardhan Reddy (1AT19CS071), N Anil Kumar (1AT19CS072), Sunil R B (1AT19CS115),** bonafide students Of **Atria Institute of Technology,** in partial fulfilment for the award of Bachelor ofEngineering in **Computer Science & Engineering of Visvesvaraya TechnologicalUniversity, Belgaum** during the academic year 2021-2022. It is certified that allcorrections/suggestions indicated for Internal Assessment have been incorporatedin the Report deposited in the departmental library. The project report has beenapproved as it satisfies requirement in respect of project work prescribed for thesaid degree.

Signature of Guide	**Signature of HOD**	**Signature of Principal**
Krishnamurthy H	**Dr. Aishwarya P**	**Dr. T.N Sreenivasa**

External Viva

Name of the Examiners **Signature with date**

1._____ _____

2._____ _____

DECLARATION

V NAGARAJ, student of VI semester B.E in Computer Science & Engineering at Atria Institute of Technology, hereby declare that the project work entitled "Speed Typing Game" has been carried out under the supervision of Prof. Krishnamurthy H, Assistant Professor, Dept. of CS&E, Atria Institute of Technology and submitted in partial fulfilment of the course requirements for the award of degree in B.E in Computer Science & Engineering of Visvesvaraya Technological University, Belagavi during the year 2021-2022. We further declare that the report has not been submitted to any other University for the award of any other degree.

Place: Bangalore

Date: Signature of Student

DECLARATION

N Harshavardhan Reddy, student of VI semester B.E in Computer Science& Engineering at Atria Institute of Technology, hereby declare that the project work entitled "Speed Typing Game" has been carried out under the supervision of Prof. Krishnamurthy H, Assistant Professor, Dept. of CS&E,
Atria Institute of Technology and submitted in partial fulfilment of the course requirements for the award of degree in B.E in Computer Science &Engineering of Visvesvaraya Technological University, Belagavi during the year 2021-2022. We further declare that the report has not beensubmitted to any other University for the award of any other degree.

Place: Bangalore

Date: Signature of Student

DECLARATION

N ANIL KUMAR, student of VI semester B.E in Computer Science & Engineering at Atria Institute of Technology, hereby declare that the project work entitled "Speed Typing Game" has been carried out under the supervision of Prof. Krishnamurthy H, Assistant Professor, Dept. of CS&E, Atria Institute of Technology and submitted in partial fulfilment of the course requirements for the award of degree in B.E in Computer Science & Engineering of Visvesvaraya Technological University, Belagavi during the year 2021-2022. We further declare that the report has not been submitted to any other University for the award of any other degree.

Place: Bangalore

Date: Signature of Student

DECLARATION

SUNIL R B, student of VI semester B.E in Computer Science & Engineering at Atria Institute of Technology, hereby declare that the project work entitled "Speed Typing Game" has been carried out under the supervision of Prof. Krishnamurthy H, Assistant Professor, Dept. of CS&E, Atria Institute of Technology and submitted in partial fulfilment of the course requirements for the award of degree in B.E in Computer Science & Engineering of Visvesvaraya Technological University, Belagavi during the year 2021-2022. We further declare that the report has not been submitted to any other University for the award of any other degree.

Place: Bangalore

Date: Signature of Student

ACKNOWLEDGEMENT

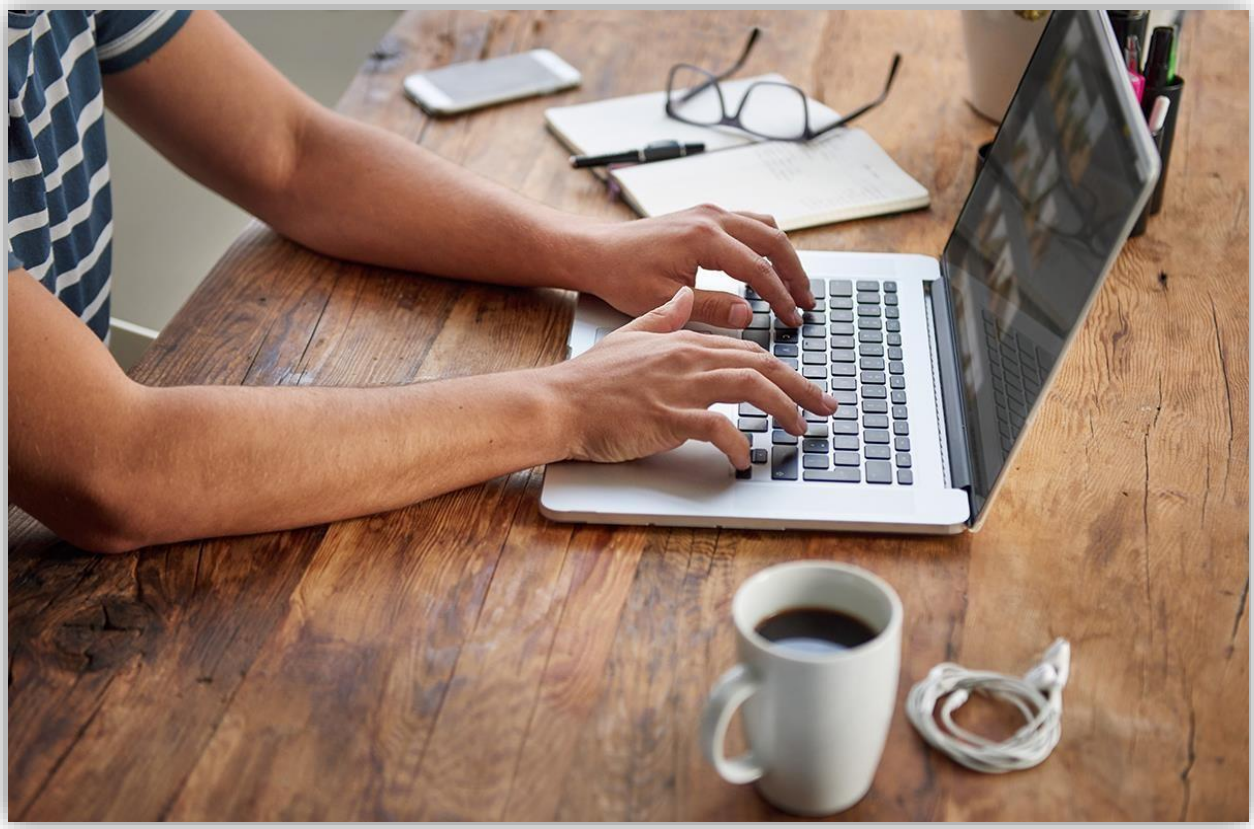
We express gratitude to our institution and management for providing us with good infrastructure, laboratory, facilities and inspiring staff, and whose gratitude was of immense help in completion of this project successfully.

We express our sincere gratitude to **Dr.T.N SREENIVASA,** Principal, Atria Institute of Technology, for providing us the required environment and for his valuable suggestion.

Our sincere thanks to **Dr. AISHWARYA P,** Head of the Dept. Computer Science and Engineering, Atria Institute of Technology, for her valuable support and for rendering us resources for this project work.

We express our gratitude to **Prof. KRISHNAMURTHY H,** Assistant Professor, Dept. of Computer Science and Engineering, Atria Institute of Technology, who guided us with valuable suggestions in completing this project at every stage.

Last but not the least, the project would not have been a success without the support of our **parents** and **friends**. Our sincere thanks should be rendered to everyone who helped us in all possible ways.



“Speed Typing Game”

CHAPTER I

INTRODUCTION

1.1 HTML Introduction

HTML stands for Hyper Text Markup Language, which is the most widely used language on
Web to develop web pages.
HTML was created by Berners-Lee in late 1991 but "HTML 2.0" was the first standard HTML
specification which was published in 1995. HTML 4.01 was a major version of HTML and it
was published in late 1999. Though HTML 4.01 version is widely used but currently we are having HTML-5 version which is an extension to HTML 4.01, and this version was published
in 2012.

1.1.1 What is HTML?

- HTML stands for Hyper Text Markup Language
- HTML is the standard markup language for creating Web pages
- 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 label pieces of content such as "this is a heading", "this is a paragraph", "this is a link", etc.

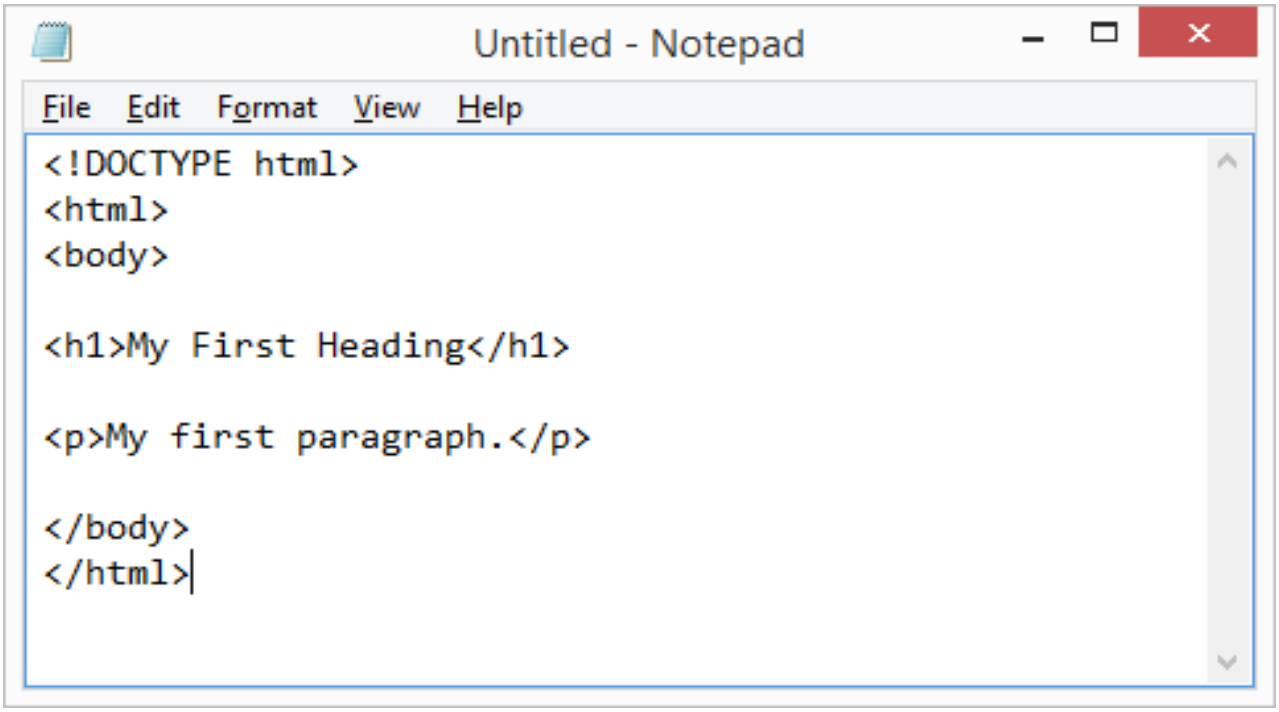
Prerequisites

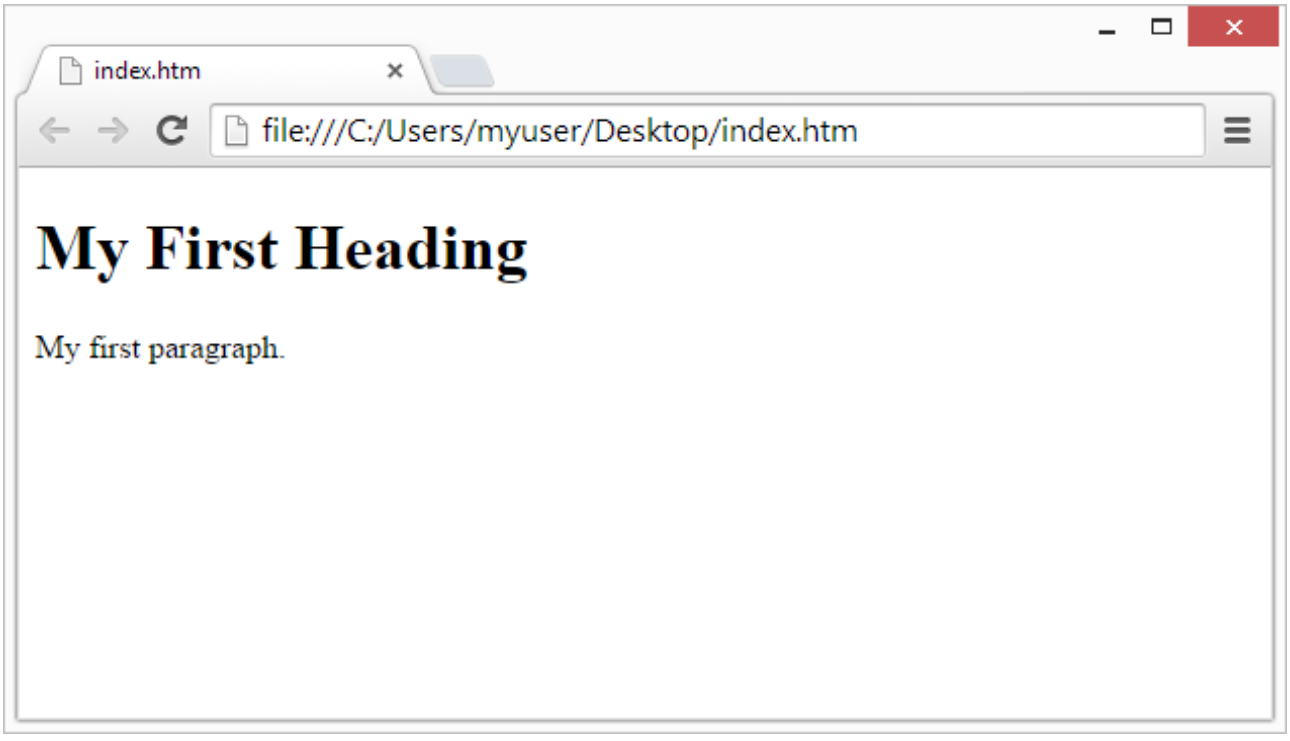
Before proceeding with this project (Fast Typing Game) you should have a basic working knowledge with

Windows or Linux operating system, additionally you must be familiar with:▪ Experience with any text editor like notepad, notepad++, or Edit plus etc.

- How to create directories and files on your computer.
- How to navigate through different directories.
- How to type content in a file and save them on a computer.
    - Understanding about images in different formats like JPEG, PNG format

A Simple HTML Document





Output :

USED TAGS IN THIS PROJECT:

In This project we used some of the tags that are:

<!DOCTYPE html>

<html>

<meta>

<link>

<title>

<head>

<body>

HEADER:

<h1> <h2> <h3> <h4> <h5> <h6>

<p>

<button>

<form>

<label>

<select>

<script>

<input type>

<option>

<html>

An HTML tag is a piece of markup language used **to indicate the beginning and end of an HTML element in an HTML document**. As part of an HTML element, HTML tags help web browsers convert HTML documents into web pages

EX:

```
<!DOCTYPE html>
    <html>
        …….

    </html>
```

<body>

The <body> tag **defines the document's body**. The <body> element contains all the contents of an HTML document, such as headings, paragraphs, images, hyperlinks, tables, lists, etc.

EX:

```
<!DOCTYPE html>
<html>
    <body>
        ……
    </body>

</html>
```

HEADER:

<h1> <h2> <h3> <h4> <h5> <h6>

The h1, h2, h3, h4, h5, h6 tags are used **to create text headers for a document**. They can display the header text in one of six different sizes.

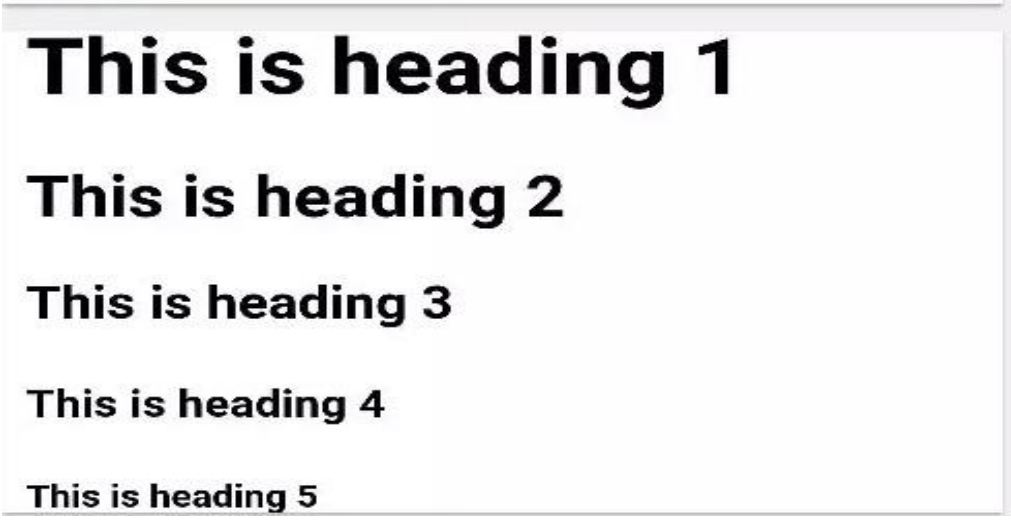
<h1> to <h6> tags are used to define HTML headings.

<h1> defines the most important heading. <h6> defines the least important heading.

EX:

```
<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>
```

```
<html>
<body>
<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>
</body>
</html>
```

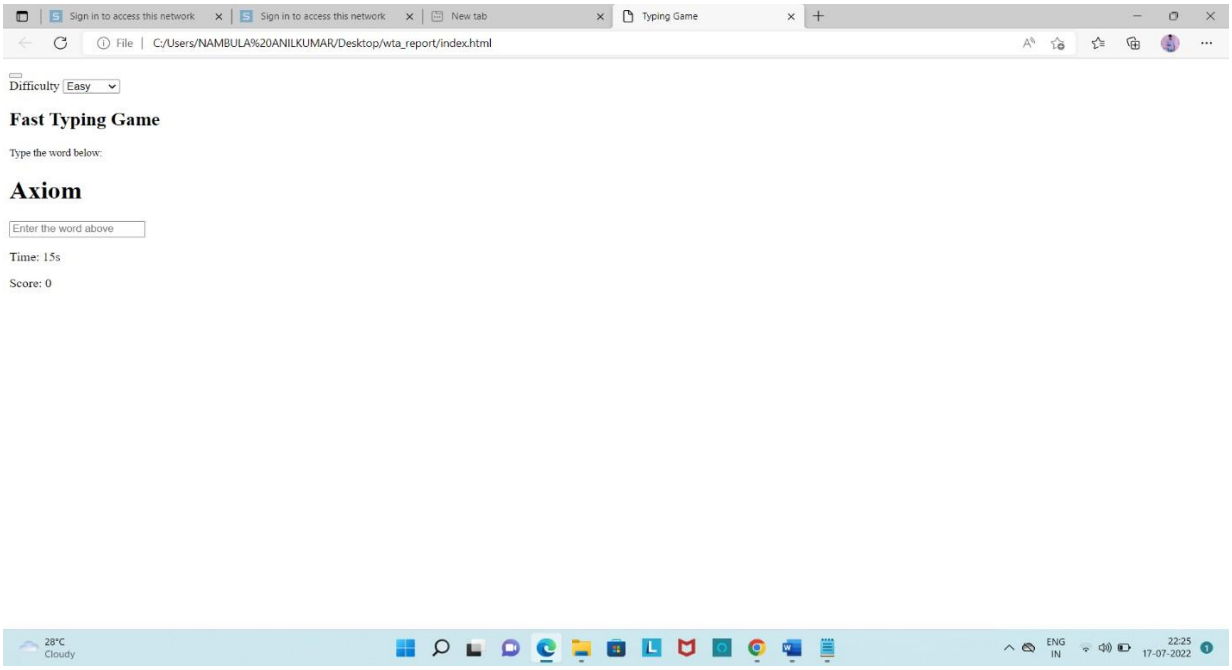


<p>

The <p> tag **defines a paragraph**. Browsers automatically add a single blank line before and after

HTML Code:

Output



CSS

“CASCADING STYLE SHEET”

What is CSS?

Cascading Style Sheets, fondly referred to as CSS, is a simple design language intended to simplify the process of making web pages presentable.

CSS handles the look and feel part of a web page. Using CSS, you can control the color of the text, the style of fonts, the spacing between paragraphs, how columns are sized and laid out, what background images or colors are used, as well as a variety of other effects.

CSS is easy to learn and understand but it provides a powerful control over the presentation of an HTML document. Most commonly, CSS is combined with the markup languages HTML

CSS is used to control the style of a web document in a simple and easy way. CSS stands for Cascading Style Sheets. This documentation report covers the version CSS3 basic understanding of CSS, starting from its basics to advanced concepts.

- CSS is the language we use to style an HTML document.
- CSS describes how HTML elements should be displayed.

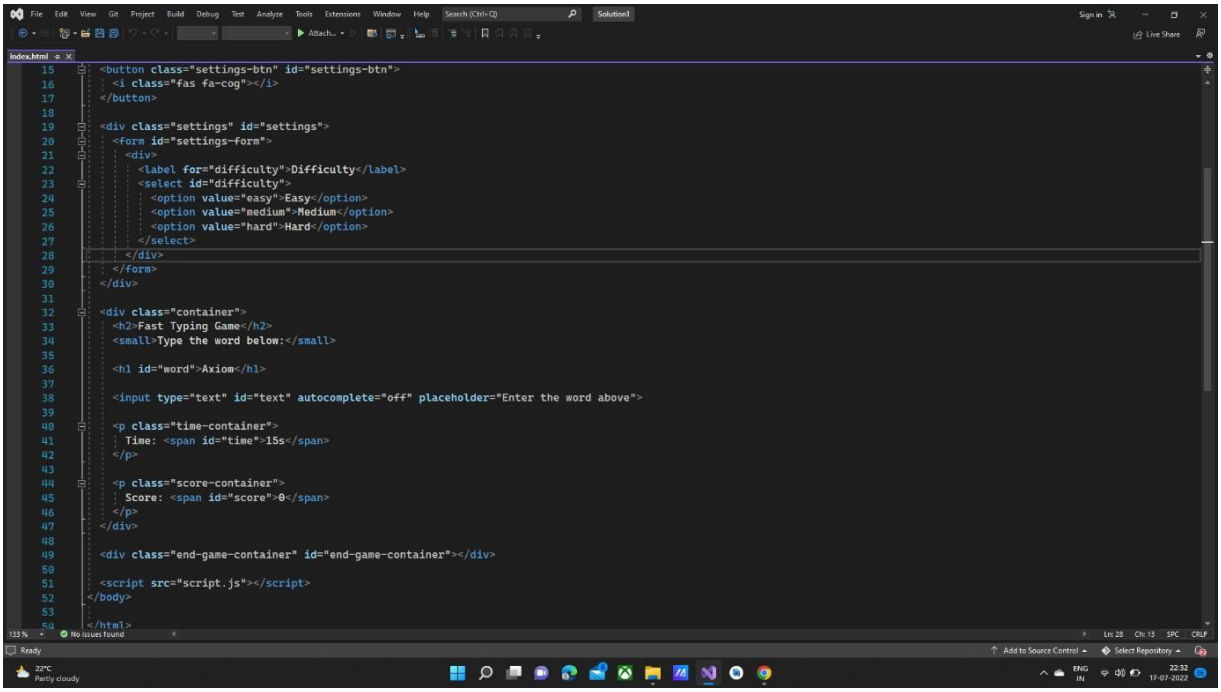
Advantages of CSS

 CSS saves time - You can write CSS once and then reuse the same sheet in multiple HTML pages. You can define a style for each HTML element and apply it to as many web pages as you want.

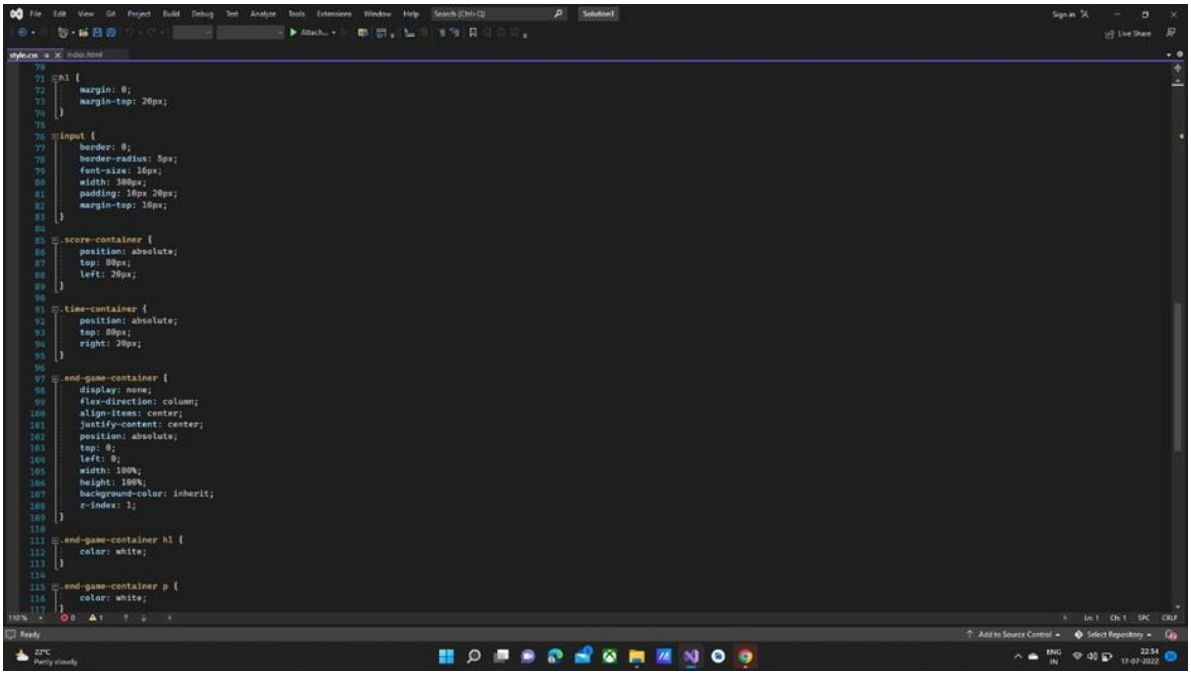
 Pages load faster - If you are using CSS, you do not need to write HTML tag attributes every time. Just write one CSS rule of a tag and apply it to all the

These are the Elements which play an Important Role In this project

CSS is Mostly Used to align the Text, Buttons in center, Time Counter is Placed at Left Side and For Background-color.



```
<button class="settings-btn" id="settings-btn">
  <i class="fas fa-cog"></i>
</button>

<div class="settings" id="settings">
  <form id="settings-form">
    <div>
      <label for="difficulty">Difficulty</label>
      <select id="difficulty">
        <option value="easy">Easy</option>
        <option value="medium">Medium</option>
        <option value="hard">Hard</option>
      </select>
    </div>
  </form>
</div>

<div class="container">
  <h2>Fast Typing Game</h2>
  <small>Type the word below:</small>

  <h1 id="word">Axiom</h1>

  <input type="text" id="text" autocomplete="off" placeholder="Enter the word above">

  <p class="time-container">
    Time: <span id="time">15s</span>
  </p>

  <p class="score-container">
    Score: <span id="score">0</span>
  </p>
</div>

<div class="end-game-container" id="end-game-container"></div>

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

</html>
```



```
h1 {
    margin: 0;
    margin-top: 20px;
}

input {
    border: 0;
    border-radius: 5px;
    font-size: 16px;
    width: 300px;
    padding: 10px 20px;
    margin-top: 10px;
}

.score-container {
    position: absolute;
    top: 80px;
    left: 20px;
}

.time-container {
    position: absolute;
    top: 80px;
    right: 20px;
}

.end-game-container {
    display: none;
    flex-direction: column;
    align-items: center;
    justify-content: center;
    position: absolute;
    top: 0;
    left: 0;
    width: 100%;
    height: 100%;
    background-color: inherit;
    z-index: 1;
}

.end-game-container h1 {
    color: white;
}

.end-game-container p {
    color: white;
}
```

JAVASCRIPT

JavaScript is a lightweight, interpreted programming language. It is designed for creating network-centric applications. It is complimentary to and integrated with Java. JavaScript is very easy to implement because it is integrated with HTML. It is open and cross-platform.

Audience

This tutorial has been prepared for JavaScript beginners to help them understand the basic functionality of JavaScript to build dynamic web pages and web applications.

Prerequisites

JAVASCRIPT – SYNTAX

the end of the HTML comment as a piece of JavaScript code. Next, we call a function document.write which writes a string into our HTML document.

This function can be used to write text, HTML, or both. Take a look at the followingco

```
 var1 = 10
 var2 = 20
//-->
</script>
```

But when formatted in a single line as follows, you must use semicolons:

```
<script language="javascript" type="text/javascript">
<!--
var1 = 10; var2 = 20;
//-->
</script>
```

Note: It is a good programming practice to use semicolons.

Case Sensitivity

JavaScript is a case-sensitive language. This means that the language keywords, variables, function names, and any other identifiers must always be typed with a consistent capitalization of letters.

So the identifiers Time and TIME will convey different meanings in JavaScript.

RESERVE WORDS:

const

let

if

FUNCTIONS:

document.getElementById()

localStorage.getItem()

focus()

setInterval()

clearInterval()

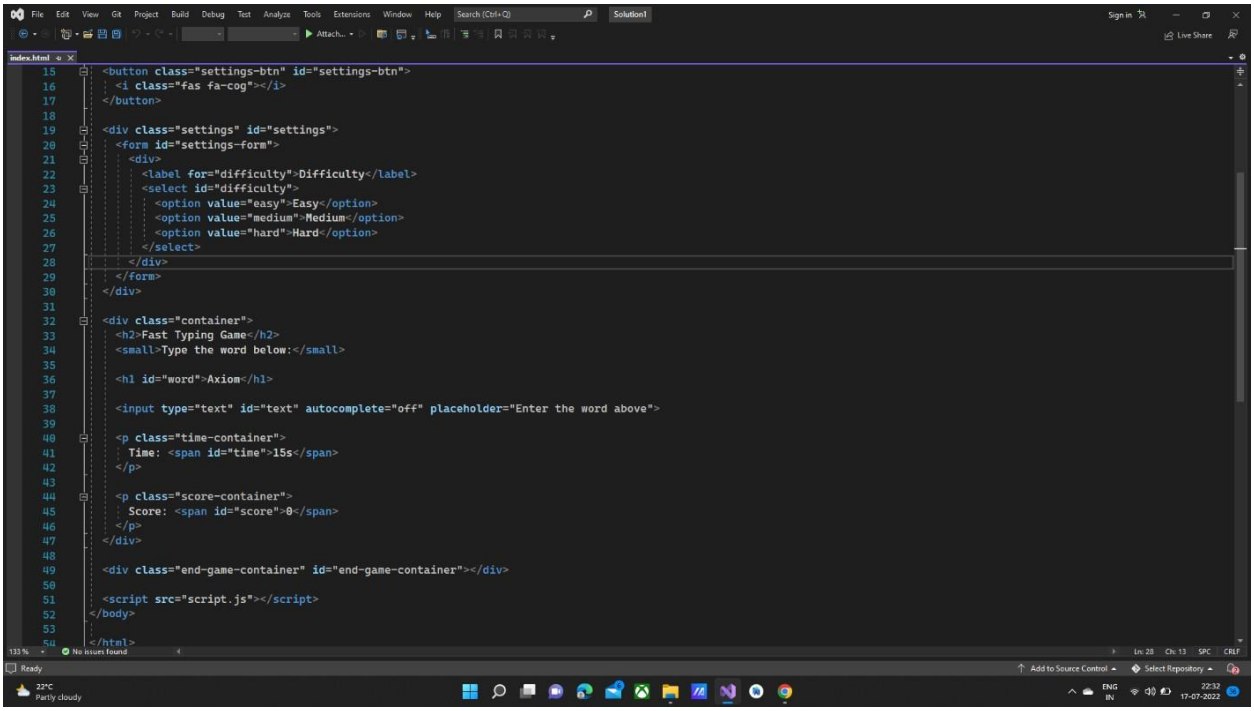
another block of code can be executed.

The if/else statement is a part of JavaScript's "Conditional" Statements, which are used to perform different actions based on different conditions.

In JavaScript we have the following conditional statements:

- Use **if** to specify a block of code to be executed, if a specified condition is true
- Use **else** to specify a block of code to be executed, if the same condition is false
- Use **else if** to specify a new condition to test, if the first condition is false

---



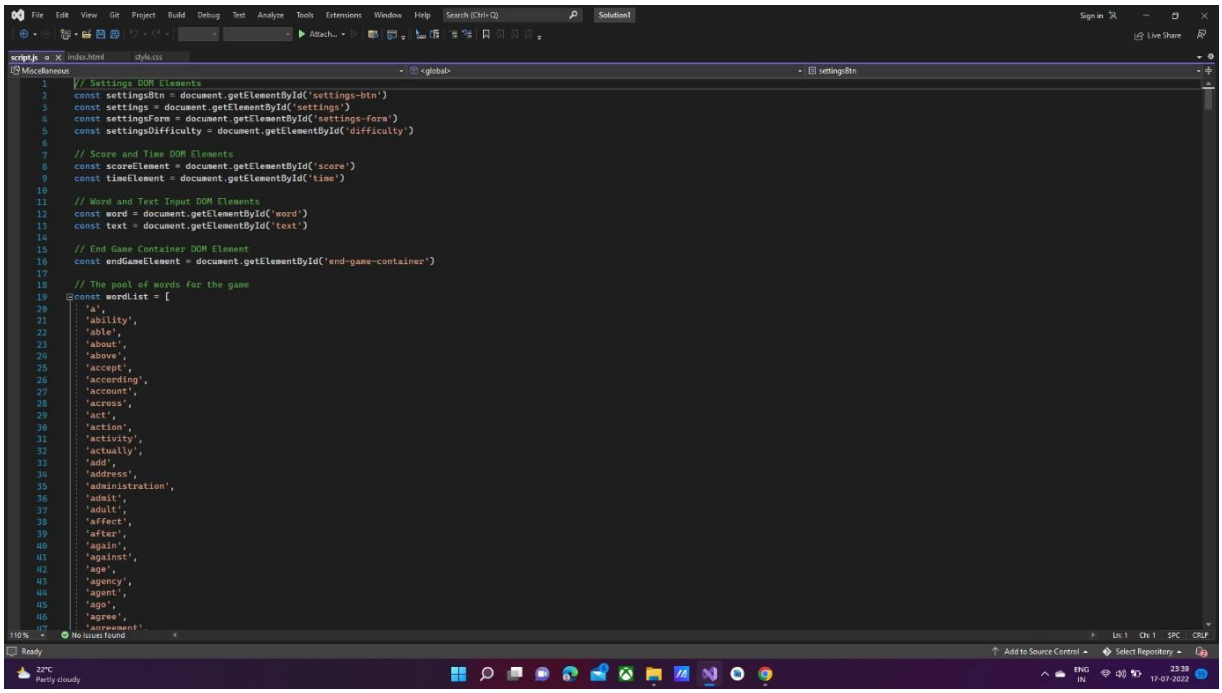
- Use **switch** to select one of many blocks of code to be execute

2.1 Syntax :

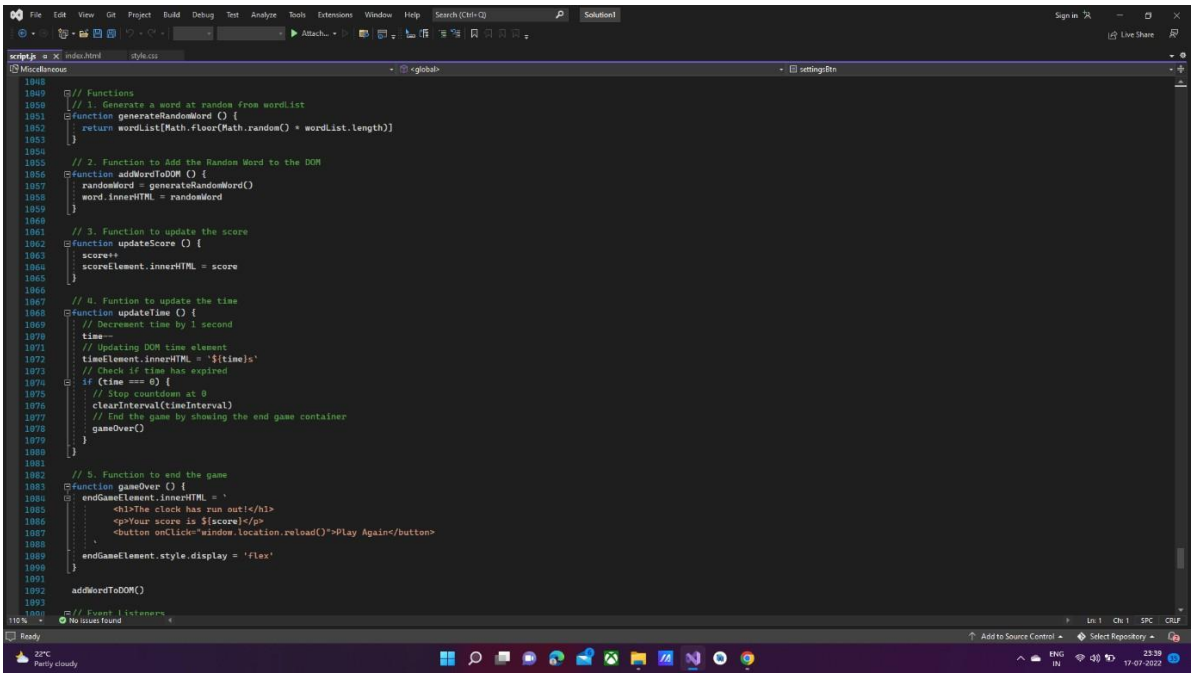
The **if** statement specifies a block of code to be executed if a condition is true:

if (*condition*) {

- **We used Javascript in this project/Game to generate the words Randomly as per Levels, score and Timing**



```
// Settings DOM Elements
const settingsBtn = document.getElementById('settings-btn')
const settings = document.getElementById('settings')
const settingsForm = document.getElementById('settings-form')
const settingsDifficulty = document.getElementById('difficulty')

// Score and Time DOM Elements
const scoreElement = document.getElementById('score')
const timeElement = document.getElementById('time')

// Word and Text Input DOM Elements
const word = document.getElementById('word')
const text = document.getElementById('text')

// End Game Container DOM Element
const endGameElement = document.getElementById('end-game-container')

// The pool of words for the game
const wordList = [
  'a',
  'ability',
  'able',
  'about',
  'above',
  'accept',
  'according',
  'account',
  'across',
  'act',
  'action',
  'activity',
  'actually',
  'add',
  'address',
  'administration',
  'admit',
  'adult',
  'affect',
  'after',
  'again',
  'against',
  'age',
  'agency',
  'agent',
  'ago',
  'agree',
  'agreement'
```



```
// Functions
// 1. Generate a word at random from wordList
function generateRandomWord () {
  return wordList[Math.floor(Math.random() * wordList.length)]
}

// 2. Function to Add the Random Word to the DOM
function addWordToDOM () {
  randomWord = generateRandomWord()
  word.innerHTML = randomWord
}

// 3. Function to update the score
function updateScore () {
  score++
  scoreElement.innerHTML = score
}

// 4. Funtion to update the time
function updateTime () {
  // Decrement time by 1 second
  time--
  // Updating DOM time element
  timeElement.innerHTML = `${time}s`
  // Check if time has expired
  if (time === 0) {
    // Stop countdown at 0
    clearInterval(timeInterval)
    // End the game by showing the end game container
    gameOver()
  }
}

// 5. Function to end the game
function gameOver () {
  endGameElement.innerHTML = `
      <h1>The clock has run out!</h1>
      <p>Your score is ${score}</p>
      <button onClick="window.location.reload()">Play Again</button>
  `
  endGameElement.style.display = 'flex'
}

addWordToDOM()

// Event Listeners
```

CODE:

HTML:

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

<head>
  <meta charset="UTF-8">
  <meta name="viewport" content="width=device-width, initial-scale=1.0">
 <!-- <link rel="stylesheet" href="style.css">
  <link rel="stylesheet" href="https://cdnjs.cloudflare.com/ajax/libs/font-awesome/5.15.1/css/all.min.css"
    integrity="sha512-
+4zCK9k+qNFUR5X+cKL9EIR+ZOhtIloNl9GIKS57V1MyNsYpYcUrUeQc9vNfzsWfV28IaLL3i96P9sd
NyeRssA=="
    crossorigin="anonymous" />-->
  <title>Typing Game</title>
</head>

<body>
  <button class="settings-btn" id="settings-btn">
    <i class="fas fa-cog"></i>
  </button>
  <div class="settings" id="settings">
    <form id="settings-form">
      <div>
        <label for="difficulty">Difficulty</label>
        <select id="difficulty">
          <option value="easy">Easy</option>
          <option value="medium">Medium</option>
          <option value="hard">Hard</option>
        </select>
      </div>
    </form>
```

```
  <div class="container">
    <h2>Fast Typing Game</h2>
    <small>Type the word below:</small>

    <h1 id="word">Axiom</h1>

    <input type="text" id="text" autocomplete="off" placeholder="Enter the word above">

    <p class="time-container">
      Time: <span id="time">15s</span>
    </p>

    <p class="score-container">
      Score: <span id="score">0</span>
    </p>
  </div>

  <div class="end-game-container" id="end-game-container"></div>

 <!-- <script src="script.js"></script>-->
</body>

</html>
```

CSS :

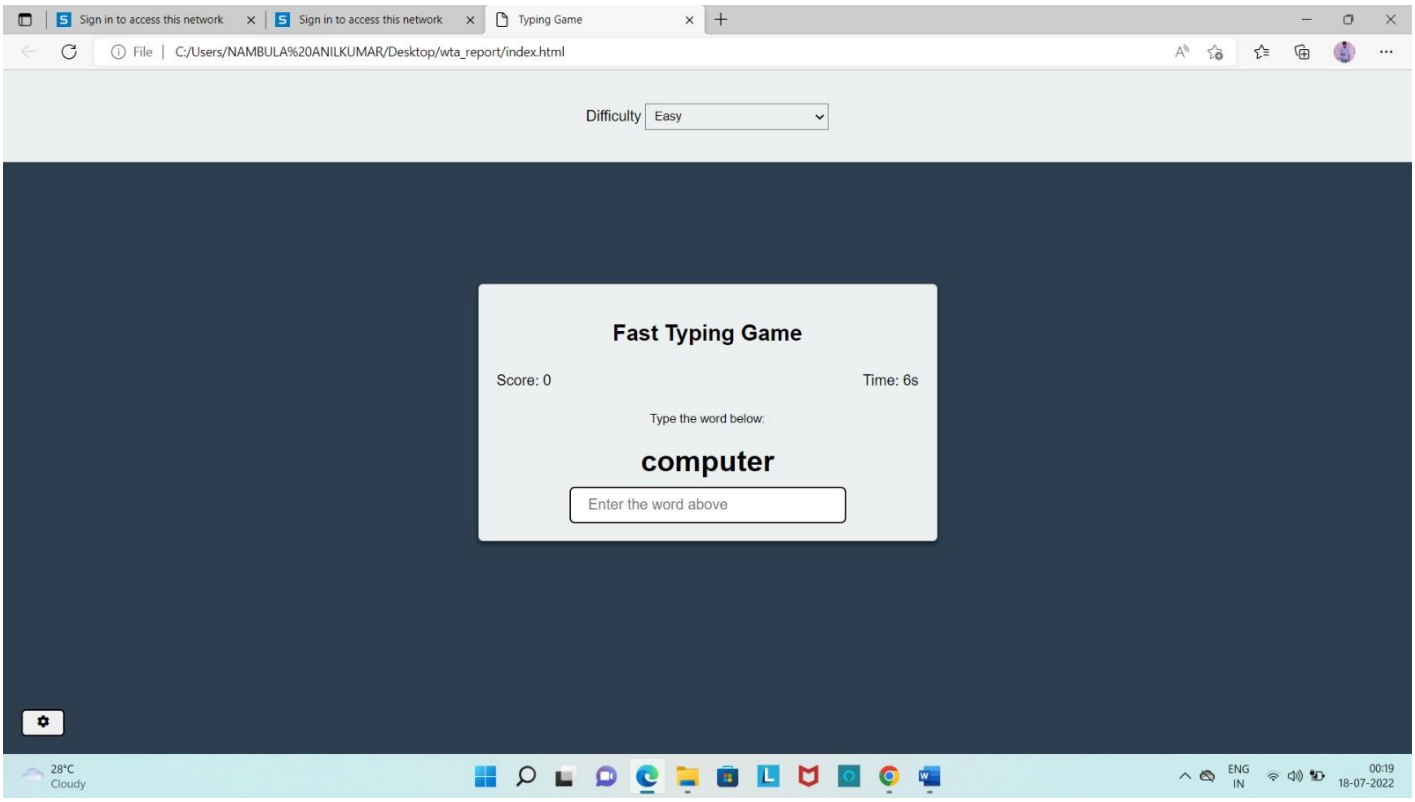
```
                                    * {
    box-sizing: border-box;
}

body {
    background-color: #2c3e50;
    display: flex;
    align-items: center;
    justify-content: center;
    min-height: 100vh;
```

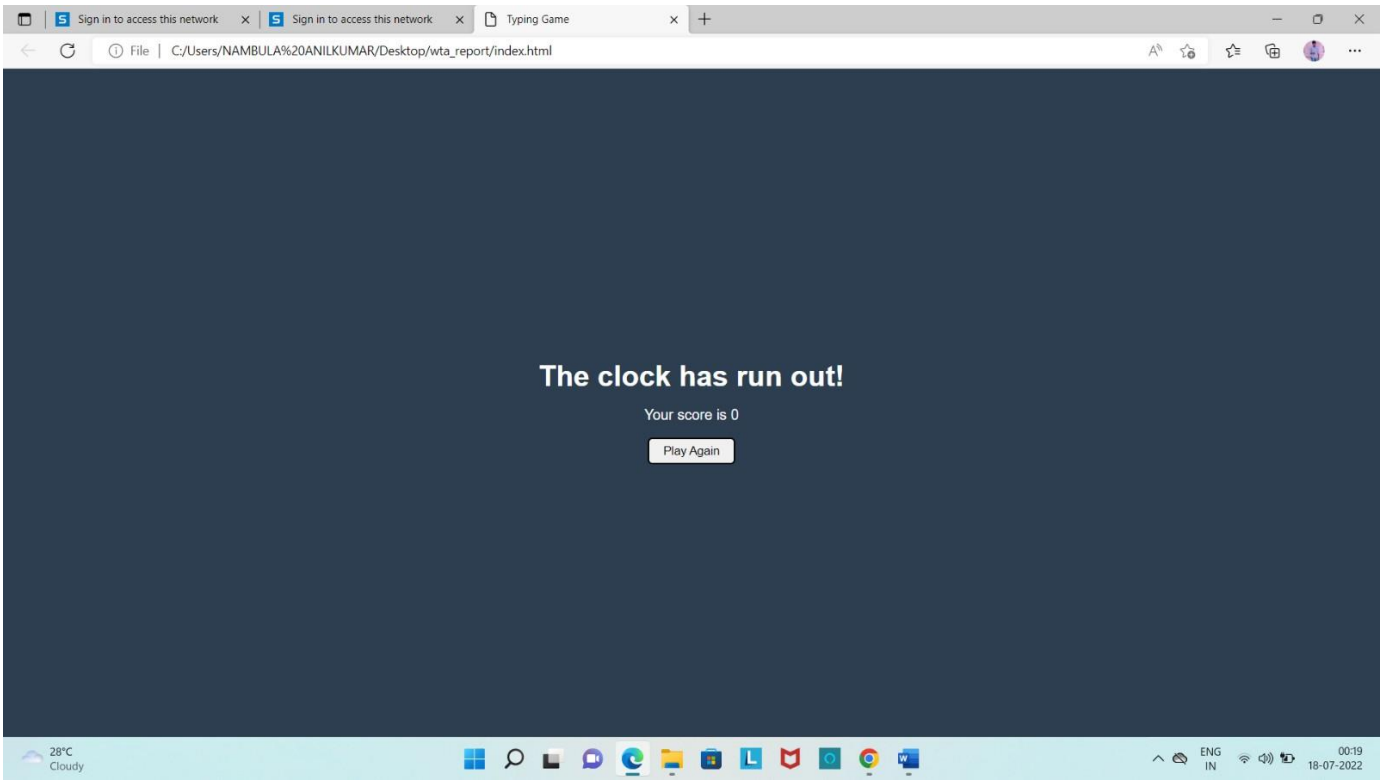
```
    margin: 0;
    font-family: Arial, Helvetica, sans-serif;


    margin-bottom: 70px;
  }

  h1 {
    margin: 0;
    margin-top: 20px;
  }

  input {
    border: 0;
    border-radius: 5px;
    font-size: 16px;
    width: 300px;
    padding: 10px 20px;
    margin-top: 10px;
  }

  .score-container {
    position: absolute;
    top: 80px;
    left: 20px;
  }

  .time-container {
    position: absolute;
    top: 80px;
    right: 20px;
  }

  .end-game-container {
    display: none;
    flex-direction: column;
    align-items: center;
    justify-content: center;
    position: absolute;
    top: 0;
    left: 0;
    width: 100%;
    height: 100%;
    background-color: inherit;
    z-index: 1;
  }

  .end-game-container h1 {
    color: white;
  }

  .end-game-container p {
```

```
// Score and Time DOM Elements
const scoreElement = document.getElementById('score')
const timeElement = document.getElementById('time')

// Word and Text Input DOM Elements
const word = document.getElementById('word')
const text = document.getElementById('text')

// End Game Container DOM Element
const endGameElement = document.getElementById('end-game-container')

// The pool of words for the game
const wordList = [
  'a',
  'ability',
  'able',
  'about',
  'above',
  'accept',
  'according',
  'account',
  'across',
  'act',
  'action',
  'activity',
  'actually',
  'add',
  'address',
  'administration',
  'admit',
  'adult',
  'affect',
  'after',
  'again',
  'against',
  'age',
  'agency',
  'agent',
  'ago',
  'agree',
  'agreement',
  'ahead',
  'air',
  'all',
  'allow',
  'almost',
  'alone',
  'along',
  'already',
  'also',
  'although’
```

```
// Initialize Variables
// 1. Initialize word to display
let randomWord

// 2. Initialize time
let time = 15

// 3. Initialize score
let score = 0

// 4. Initialize difficulty
let difficulty =
  localStorage.getItem('difficulty') !== null
    ? localStorage.getItem('difficulty')
    : 'easy'

settingsDifficulty.value =
  localStorage.getItem('difficulty') !== null
    ? localStorage.getItem('difficulty')
    : 'easy'

// On page load, focus on the text input so user can type
text.focus()

// Start the countdown of the timer
const timeInterval = setInterval(updateTime, 1000)

// Functions
// 1. Generate a word at random from wordList
function generateRandomWord () {
  return wordList[Math.floor(Math.random() * wordList.length)]
}

// 2. Function to Add the Random Word to the DOM
function addWordToDOM () {
  randomWord = generateRandomWord()
  word.innerHTML = randomWord
}

// 3. Function to update the score
function updateScore () {
score++
  scoreElement.innerHTML = score
}
```

```
// 4. Funtion to update the time
function updateTime () {
  // Decrement time by 1 second
  time--
  // Updating DOM time element
  timeElement.innerHTML = `${time}s`
  // Check if time has expired
  if (time === 0) {
    // Stop countdown at 0
    clearInterval(timeInterval)
    // End the game by showing the end game container
    gameOver()
  }
}

// 5. Function to end the game
function gameOver () {
endGameElement.innerHTML = `
        <h1>The clock has run out!</h1>
        <p>Your score is ${score}</p>
        <button onClick="window.location.reload()">Play Again</button>
    `
  endGameElement.style.display = 'flex'
}

addWordToDOM()

// Event Listeners
// 1. Event Listener on Text Input
text.addEventListener('input', e => {
  // Get the value from the user input
  const typedText = e.target.value

  // Check if user input matches random word
  if (typedText === randomWord) {
    // Display a new word
    addWordToDOM()
    // Update the Score
    updateScore()
    // Clear the input field
    e.target.value = ''
    // Add more time to the clock based on difficulty
    if (difficulty === 'easy') {
      time += 5
    } else if (difficulty === 'medium') {
      time += 3
    } else {
      time += 1
    }
    updateTime()
```


Sign in to access this network
Sign in to access this network
Typing Game
File | C:/Users/NAMBULA%20ANILKUMAR/Desktop/wta_report/index.html
Difficulty
Easy
Fast Typing Game
Score: 0
Time: 6s
Type the word below:
computer
Enter the word above
28°C
Cloudy
ENG
IN
00:19
18-07-2022


Sign in to access this network
Sign in to access this network
Typing Game
File | C:/Users/NAMBULA%20ANILKUMAR/Desktop/wta_report/index.html
The clock has run out!
Your score is 0
Play Again
28°C
Cloudy
ENG
IN
00:19
18-07-2022

REFERENCES

- ` Html
  https://www.w3schools.com/html/default.asp
- CSS
  https://www.w3schools.com/css/default.asp
- Javascript
  https://www.w3schools.com/js/default.asp
- Game
  https://www.codebrainer.com/

FUTURE ENHANCEMENTS

- Storing Previous Entered words and results in database to Enhance the user interests Developing User Interface
- Game Modes Improvement such as Typing against AI.
- Improving Users Interact, By Showing Previous Played Statistics.