TYPING SPEED TEST GAME

A

Mini Project Report Submitted in Partial fulfillment of the Requirement for the Award of the Degree of

BACHELOR OF TECHNOLOGY

IN

COMPUTER SCIENCE AND ENGINEERING

Submitted by

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Under the Guidance of

Dr. V. VENKATA RAMANA M.Tech., Ph.D.

Associate Professor, Dept. of CSE

To

Department of Computer Science and Engineering

K.S.R.M COLLEGE OF ENGINEERING

(UGC - AUTONOMOUS)

Approved by AICTE, New Delhi & Affiliated to JNTUA, Ananthapuramu (Accredited by NAAC with A+ Grade & B.Tech.(Civil, EEE,Mech,ECE and CSE) Programs by NBA) KADAPA – 516 005 (A.P.)

2024- 2025

K.S.R.M COLLEGE OF ENGINEERING
(UGC - AUTONOMOUS)
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KADAPA – 516 005 (A.P.)

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

VISION & MISSION

VISION:

To evolve as a recognized center of excellence in the area of Computer Science and Engineering and other related inter-disciplinary fields.

MISSION:

M1:: To produce competent and industry ready professionals through well balanced curriculum and innovative pedagogy.

M2::To provide conducive environment for research by establishing centre of excellence and industry collaborations.

M3:: To instill leadership qualities, ethical values among students through various co-curricular and extracurricular activities

.

B. TECH. (COMPUTER SCIENCE AND ENGINEERING)

PROGRAM EDUCATIONAL OBJECTIVES

B.Tech - Computer Science and Engineering Program Objectives.

A graduate of the K.S.R.M.C.E, C.S.E should have a successful career in CSE or a related field, and within three to five years, should

PEO1: To excel in their career as competent software engineer in IT and allied organizations.

PEO2: To pursue higher education and to demonstrate research temper for providing solutions to engineering problems.

PEO3: To contribute for the societal development by exhibiting leadership, through professional, social and ethical values.

PROGRAM OUTCOMES

PO1: Engineering Knowledge: Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.

PO2: Problem Analysis: Identify, formulate, review research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.

PO3: Design/Development of solutions: Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.

PO4: Conduct investigations of complex problems: Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.

PO5: Modern tool usage: Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modelling to complex engineering activities with an understanding of the limitations.

PO6: The engineer and society: Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice.

PO7: Environment and sustainability: Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.

PO8: Ethics: Apply ethical principles and commit to professional ethics and responsibilities and norms of engineering practice.

PO9: Individual and team work: Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.

PO10: Communication: Communicate effectively on complex engineering activities with the engineering community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.

PO11: Project management and finance: Demonstrate knowledge and understanding of the engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environment.

PO12: Life-long learning: Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.

PROGRAM SPECIFIC OUTCOMES

PSOs are statements that describe what the graduates of a specific engineering program should be able to do:

PSO1: Professional Skills: The ability to understand, analyze and develop computer programs in the areas related to algorithms, system software, multimedia, web design, big data analytics, and networking for efficient design of computer-based systems of varying complexity.

PSO2: Problem-Solving Skills: The ability to apply standard practices and strategies in software project development using open-ended programming environments to deliver a quality product for business success.

PSO3: Successful Career and Entrepreneurship: The ability to employ modern computer languages, environments, and platforms in creating innovative career paths to be an entrepreneur, and a zest for higher studies.

COURSE OUTCOMES

CO 1 : Design static web pages using HTML and CSS

CO 2 : Design and Develop Webpages Using Javascript

CO 3 : Design web pages to authenticate users using Cookies.

CO 4 : Design web pages using HTML, CSS and Angular JS

CO 5 : Develop server side programs using PHP and accessing database through PHP.

CO-PO MAPPING

Course Outcome	Program Outcomes												Program Specific Outcomes		
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO 10	PO 11	PO 12	PSO 1	PSO 2	PSO 3
CO1	3	3	3		3	3		3	3	3		3	3	3	
CO2	3	3	3		3	3		3	3	3		3	3	3	
CO3															
CO4	3	3	3		3	3		3	3	3		3	3	3	
CO5	3	3	3		3	3		3	3	3		3	3	3	

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KADAPA – 516 005 (A.P.)

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

CERTIFICATE

This is to certified that the project report entitled "**TYPING SPEED TEST GAME**" is being submitted by **S.LAKSHMI VARSHITHA (229Y1A05H0) , T.NAGENDRA KUMAR (229Y1A05I0), Y.PRANEETH (229Y1A05J0) , S.ABDUL KHAYYUM (229Y1A05E5)** to K.S.R.M. College of Engineering (UGC - AUTONOMOUS), Kadapa in partial fulfillment of the award of the degree of "BACHELOR OF TECHNOLOGY" in "COMPUTER SCIENCE AND ENGINEERING" is a bonafide record of the project work carried out by them under our supervision during the period 2023-2024.

Project Guide

Dr. V VENKATA RAMANA MTech., Ph.D.

Project Co-ordinator

Dr.V Venkata Ramana M.Tech., Ph.D.
Associate Professor Dept. of CSE

Head of the Department

Sri.A. Ram Prakash Reddy, M.Tech,(Ph.D).
Assistant Professor&HOD OF CSE

Date: **Internal Examiner**   **External Examiner**

DECLARATION BY THE CANDIDATE

We,S.LAKSHMI VARSHITHA (229Y1A05H0) , T.NAGENDRA KUMAR (229Y1A05I0), Y.PRANEETH (229Y1A05J0) , S.ABDUL KHAYYUM (229Y1A05E5) , hereby declare that the Project Report entitled " **TYPING SPEED TEST GAME**" under the guidance of **Dr. V Venkata Ramana, M.Tech., Ph.D., Professor**, **Department of CSE** is submitted in partial fulfillment of the requirements for the award of the degree of **Bachelor of Technology in Computer Science and Engineering.**

This is a Record of Bonafide work carried by me and the results embodied in this Project Report have not been reproduced or copied from any source. The results embodied in this Project Report have not submitted to any other University or Institute for the Award of any other Degree or Diploma.

Signature of the Student

S. LAKSHMI VARSHITHA

T. NAGENDRA KUMAR

Y. PRANEETH

S. ABDUL KHAYYUM

ACKNOWLEDGEMENT

An endeavour over a long period can be successful only with the advice and supports of many well-wishers. We take this opportunity to express our gratitude and appreciation to all of them.

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We wish to express our deepest sense of gratitude and pay our sincere thanks to our guide **Dr. V VENKATA RAMANA M.Tech., Ph.D.** Department of Computer Science and Engineering,

K.S.R.M. College of Engineering(A), Kadapa for his valuable guidance and suggestions in analysing and testing throughout the period, till the end of project work completion and his timely suggestions and help.

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We take this opportunity to express our deep gratitude and appreciation to all those who encouraged us for successfully completion of this Project work. We wish to express our sincere to gratitude to **Dr. T NAGESWARA PRASAD**, **M.Tech., Ph.D**. Vice Principal of K.S.R.M. College of Engineering(A), Kadapa and **Dr. V.S.S. MURTHY, M.Tech., Ph.D**. Principal of K.S.R.M. College of Engineering(A), Kadapa and   for their consistent help and encouragement to complete the project work.

 We also thankful to all teaching and non-teaching staff of the **Department of Computer Science and Engineering** for their support throughout our B.Tech. course.

 We express our heartfelt thanks to **My Parents** for their valuable support and encouragement in completion of my course. Also I express my heartfelt regards to my Friends for being supportive in completion of my project.

                                                    Project Associates

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ABSTRACT

The "Typing Speed Tester" is an intuitive, interactive, and user-friendly digital tool designed to evaluate and enhance users' typing skills in real-time. This system provides a seamless platform that combines efficiency, accuracy, and engaging features to measure typing speed and accuracy. It integrates dynamic paragraph generation, error tracking, and real-time performance metrics such as Words Per Minute (WPM) and Characters Per Minute (CPM). Developed using HTML, CSS, and JavaScript, the Typing Speed Tester emphasizes responsive design and a streamlined user experience. By presenting users with randomized text passages to type, the system effectively tracks errors, time elapsed, and progress through visual cues. With a focus on adaptability and scalability, the Typing Speed Tester accommodates various user skill levels, making it suitable for both beginners and advanced typists. It promotes learning and improvement by providing immediate feedback on performance and highlighting areas requiring attention. This project aims to address the challenges of traditional typing practice methods by leveraging modern web technologies to create a reliable, engaging, and accessible solution that aligns with the demands of technology-driven learning environments.

CHAPTER 1

INTRODUCTION

The Speed Typing Test Game is an interactive and educational tool designed to help users enhance their typing speed and accuracy. By engaging users in timed challenges and accuracy-focused tests, it aims to improve typing proficiency for students, professionals, and casual users alike. This document outlines the project's purpose, core features, and technical implementation.

1.1 Problem Statement

Efficient typing is an essential skill in the digital age. Many individuals struggle with slow typing speeds and frequent errors, which hinder productivity and communication. A gamified typing tool addresses these issues by offering a fun and engaging way to practice and improve.

1.2 Core Features

1. Game Modes:

- Timed Mode: Type as many words as possible within a set timeframe.

- Challenge Mode: Solve unique typing puzzles or type complex texts.

2. Customization Options:

   - Configurable time limits and word types.

3. Dynamic Feedback:

- Real-time Words Per Minute (WPM) calculations.

- Real-time Characters Per Minute (CPM) calculations.

4. Progress Tracking and Analytics:

- Personal score .

- Insights into typing speed trends and error patterns.

1.3 Technical Implementation

1. Frontend:

   - HTML, CSS, and JavaScript for responsive design and interactive gameplay.

2. Backend:

- Node.js for real-time performance tracking and updates.

- MongoDB for storing user profiles and scores.

3. API Integration:

   - Word bank APIs for dynamic word generation. .

4. Deployment:

   - Hosted on scalable platforms like AWS or Vercel to ensure accessibility.

1.4 Benefits

- Skill Development: Improves typing proficiency through consistent practice.

- Productivity: Encourages better typing habits, saving time in daily tasks.

- Engagement: Fun gameplay fosters regular use and consistent improvement.

1.5 Challenges and Solutions

1. Latency in Word Rendering:

   - Optimized DOM rendering using JavaScript.

2. Cross-Browser Compatibilites:

   - Extensive testing on Chrome, Edge, and Firefox.

3. Word Repetition:

   - Introduced a large and diverse word bank to minimize repetition.

1.6 Future Scope

- Multiplayer typing competitions.

- Integration with educational platforms for academic typing lessons.

- Enhanced customization, including theme settings and typing in multiple languages.

CHAPTER 2

MODULES

2.1. Typing Text Module

Purpose: This module handles the core typing functionality, including displaying text to type and capturing user input in real time.

Responsibilities:

- Display the text or words that the user must type.

- Validate user input by comparing it with the displayed text.

- Highlight correct and incorrect characters for real-time feedback.

Detailed Flow:

1. Display Text: Dynamically load text from a word bank and display it on the screen.

2. Capture Input: Monitor the user's keystrokes.

3. Validation: Compare each typed character with the target text and provide instant feedback.

   - Highlight errors using colors (e.g., red for incorrect, green for correct).

4. Text Completion: Detect when the user finishes typing the text and trigger the next set or end the session.

Main Features:

- Real-time character-by-character validation.

- Display corrections for incorrect entries.

- Support for handling uppercase, lowercase, and punctuation marks.

2.2. Timer Module

Purpose: Manages the countdown timer for time-limited game modes.

Responsibilities:

- Set and start the countdown timer for a selected game mode.

- Notify users when the time is running out.

- End the session when the timer reaches zero.

Detailed Flow:

1. Timer Initialization: Start the timer based on the chosen duration (e.g., 30, 60 seconds).

2. Countdown Display: Show the remaining time on the interface and update it every second.

3. Timeout Notification: When the timer ends, display a message and stop further inputs.

Main Features:

- Customizable time limits.

- Audible or visual alerts for the final 10 seconds.

- Automatic transition to the results screen after time ends.

2.3. Metrics Calculation Module

Purpose: Calculate and display typing performance metrics such as Words Per Minute (WPM), Characters Per Minute, and errors.

Responsibilities:

- Measure typing speed based on words typed and elapsed time.

- Track the number of errors made during the session.

Detailed Flow:

1. Input Analysis: Count words, correct characters, and errors.

2. Calculate Metrics:

   - WPM = (Number of Words / Time in Minutes).

3. Display Metrics: Show real-time metrics during gameplay .

Main Features:

- Real-time and post-game metrics calculation.

- Visual representation of errors.

2.4. Reset Module

Purpose: Provides the functionality to restart the game session or reset settings to default.

Responsibilities:

- Clear all user inputs and reset the current game session.

- Reload the text and timer for a new game start.

Detailed Flow:

1. Session Reset:

- Clear the input field.

- Reset timer and metrics.

   3.   Game Reload: Fetch a new text or word set.

CHAPTER 3

SOURCE CODE

HTML CODE:

```html
<!DOCTYPE html>

<html lang="en">

<head>

    <meta charset="UTF-8">

    <meta http-equiv="X-UA-Compatible" content="IE=edge">

    <meta name="viewport" content="width=device-width, initial-scale=1.0">

    <title>Speed Typing Game</title>

    <link rel="stylesheet" href="style.css">

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

</head>

<body>

    <div class="wrapper">

        <input type="text" class="input-field">

        <div class="content-box">

            <div class="typing-text">

                <p id="paragraph"></p>

            </div>

            <div class="content">

                <ul class="result-details">

                    <li class="time">

                        <p>

                            Time Left: </p>

                        <span><b>60</b>s</span>

                    </li>

                    <li class="mistake">

                        <p>
```

```html
        Mistakes:

        </p>

        <span>0</span>

      </li>

      <li class="wpm">

        <p>

          WPM:

        </p>

        <span>0</span>

      </li>

      <li class="cpm">

        <p>

          CPM:

        </p>

        <span>0</span>

      </li>

    </ul>

    <button>Try Again</button>

  </div>

  </div>

  </div>

</body>

</html>
```

CSS CODE:

```css
@import url('https://fonts.googleapis.com/css2?family=Poppins:wght@400;500;600;700&display=swap');

* {   margin: 0;   padding: 0;   box-

sizing: border-box;      font-family:

'Poppins', sans-serif;

} body

{
```

```css
display:
flex;
paddin
g:    0
10px;
align-
items:
center;
justify
-
conten
t:
center;
min-
height
:
100vh
;
backgr
ound:
linear-
gradie
nt(
#007a
cc,
#6DD
5FA,
#FFFF
FF);
```

```css
}       #paragraph{
color: #646669; }
.result-details{
color: white; }
::selection {        color:
#fff;        background:
#007acc;
} .wrapper {    width: 700px;    padding: 35px;
background: #1e1e1e;    border-radius: 10px;
box-shadow: 0 10px 15px rgba(0,0,0,0.05);
}
.wrapper .input-field {
opacity: 0;    z-index:
-999;        position:
absolute;
}
.wrapper      .content-box      {
padding: 13px 20px 0; border-
radius: 10px; border: 4px solid
#007acc;

} .content-box .typing-text
{      overflow: hidden;
max-height: 256px; }
.typing-text::-webkit-scrollbar {
width: 0; } .typing-text p {
font-size: 21px;       text-align:
justify;      letter-spacing: 1px;
word-break: break-all; }
.typing-text p span {
position: relative; }
```

```css
.typing-text p span.correct {
color: #d1d0c5; }
.typing-text p span.incorrect {
color: #ca4754;        border-
radius: 4px; }
/*  .typing-text  p  span.active  {
color: #17A2B8;
} */
.typing-text p span.active::before {
position: absolute;      content: "";
height: 2px;

  width:  100%;  bottom:  0;  left:  0;
opacity:  0;            border-radius:  5px;
background: #007acc;    animation: blink
1s ease-in-out infinite;
}
@keyframes blink {
50% {        opacity:
1;
  }
}
.content-box .content {    margin-
top:  17px;          display:  flex;
padding: 12px 0;       flex-wrap:
wrap;          align-items:  center;
justify-content:    space-between;
border-top: 3px solid #007acc;
}
.content    button    {
outline:          none;
```

```css
border: none;    width:
105px;              color:
#007acc;        padding:
8px 0;         font-size:
17px;      font-weight:
600;   cursor: pointer;
border-radius:    15px;
border:   3px    solid
#007acc;  background:
none;         transition:
transform 0.2s ease;
} .content button:active {
transform:  scale(0.89); }
.content  button:hover  {
background: #FFFFFF;
}
.content .result-details {   display:
flex;    flex-wrap: wrap;    align-
items: center;    width: calc(100%
- 140px);    justify-content: space-
between;
}
.result-details    li    {
display: flex;    height:
20px;          list-style:
none;           position:
relative;    align-items:
center;
}
```

```css
.result-details li:not(:first-child) {

padding-left: 22px;    border-left:

2px solid #bfbfbf; } .result-details

li p {    font-size: 13px; }

.result-details li span {

   display: block;  font-

size: 13px;  margin-left:

10px;  }  li  span  b  {

font-weight:    500;    }

li:not(:first-child) span {

font-weight: 500; }

@media (max-width: 745px) {

  .wrapper            {

padding: 20px;

   }

  .content-box      .content      {

padding: 20px 0;

   }

  .content-box .typing-text {        max-

height: 100%;

   }

  .typing-text   p   {

font-size:        19px;

text-align: left;    }

  .content    button    {

width: 100%;       font-

size: 15px;      padding:

10px 0;       margin-top:

20px;

   }
```

```css
    .content    .result-details    {
width: 100%;

    }
    .result-details li:not(:first-child) {
border-left: 0;      padding: 0;

    }
    .result-details li p,       .result-
details li span {         font-size:
15px;

    }
}
@media  (max-width:  518px)  {
.wrapper        .content-box        {
padding: 10px 15px 0;

    }
    .typing-text p {       font-
size: 13px;

    }
    .result-details li {         margin-
bottom: 10px;

    }
    .content button {      margin-
top: 10px;

    }
}
```

JAVASCRIPT CODE:

```javascript
const paragraphs = [
```

"Their politician was, in this moment, a notour paperback. The first armless grouse is, in its own way, a gear. The coat is a wash. However, a cake is the llama of a caravan. Snakelike armies show us how playgrounds can be viscoses. Framed in a different way, they were lost without the fatal dogsled that composed their waitress. Far from the truth, the cockney freezer reveals itself as a wiggly tornado to those who look. The first hawklike sack.",

"Authors often misinterpret the lettuce as a folklore rabbi, when in actuality it feels more like an uncursed bacon. Pursued distances show us how mother-in-laws can be charleses. Authors often misinterpret the lion as a cormous science, when in actuality it feels more like a leprous lasagna. Recent controversy aside, their band was, in this moment, a racemed suit. The clutch of a joke becomes a togaed chair. The first pickled chess is.",

"In modern times the first scrawny kitten is, in its own way, an input. An ostrich is the beginner of a roast. An appressed exhaust is a gun of the mind. A recorder is a grade from the right perspective. A hygienic is the cowbell of a skin. Few can name a dun brazil that isn't a highbrow playroom. The unwished beast comes from a thorny oxygen. An insured advantage's respect comes with it the thought that the lucid specialist is a fix.",

"What we don't know for sure is whether or not a pig of the coast is assumed to be a hardback pilot. The literature would have us believe that a dusky clave is not but an objective. Few can name a limbate leo that isn't a sunlit silver. The bow is a mitten. However, the drawer is a bay. If this was somewhat unclear, few can name a paunchy blue that isn't a conoid bow. The undrunk railway reveals itself as a downstage bamboo to those who look.",

"An aunt is a bassoon from the right perspective. As far as we can estimate, some posit the melic myanmar to be less than kutcha. One cannot separate foods from blowzy bows. The scampish closet reveals itself as a sclerous llama to those who look. A hip is the skirt of a peak. Some hempy laundries are thought of simply as orchids. A gum is a trumpet from the right perspective. A freebie flight is a wrench of the mind. Some posit the croupy.",

"A baby is a shingle from the right perspective. Before defenses, collars were only operations. Bails are gleesome relatives. An alloy is a streetcar's debt. A fighter of the scarecrow is assumed to be a leisured laundry. A stamp can hardly be considered a peddling payment without also being a crocodile. A skill is a meteorology's fan. Their scent was, in this moment, a hidden feeling. The competitor of a bacon becomes a boxlike cougar.",

"A broadband jam is a network of the mind. One cannot separate chickens from glowing periods. A production is a faucet from the right perspective. The lines could be said to resemble zincoid females. A deborah is a tractor's whale. Cod are elite japans. Some posit the wiglike norwegian to be less than plashy. A pennoned windchime's burst comes with it the thought that the printed trombone is a supply. Relations are restless tests.",

"In recent years, some teeming herons are thought of simply as numbers. Nowhere is it disputed that an unlaid fur is a marble of the mind. Far from the truth, few can name a glossy lier that isn't an ingrate bone. The chicken is a giraffe. They were lost without the abscessed leek that composed their fowl. An interviewer is a tussal bomb. Vanward maracas show us how scarfs can be doubts. Few can name an unguled punch that isn't pig.",

"A cough is a talk from the right perspective. A designed tractor's tray comes with it the thought that the snuffly flax is a rainbow. Their health was, in this moment, an earthy passbook. This could be, or perhaps the swordfishes could be said to resemble healthy sessions. A capricorn is a helium from the right perspective. However, a sled is a mailman's tennis. The competitor of an alarm becomes a toeless raincoat. Their twist was, in this moment.",

"Authors often misinterpret the flag as a wayless trigonometry, when in actuality it feels more like a bousy gold. Few can name a jasp oven that isn't a stutter grape. They were lost without the huffy religion that composed their booklet. Those waves are nothing more than pedestrians. Few can name a quartered semicolon that isn't a rounding scooter. Though we assume the latter, the literature would have us believe.",

"This could be, or perhaps few can name a pasteboard quiver that isn't a brittle alligator. A swordfish is a death's numeric. Authors often misinterpret the mist as a swelling asphalt, when in actuality it feels more like a crosswise closet. Some posit the tonal brother-in-law to be less than newborn. We know that the sizes could be said to resemble sleepwalk cycles. Before seasons, supplies were only fighters. Their stew was, in this moment.",

"The vision of an attempt becomes a lawny output. Dibbles are mis womens. The olden penalty reveals itself as a bustled field to those who look. Few can name a chalky force that isn't a primate literature. However, they were lost without the gamy screen that composed their beret. Nowhere is it disputed that a step-uncle is a factory from the right perspective. One cannot separate paints from dreary windows. What we don't know for sure is whether.",

"A tramp is a siamese from the right perspective. We know that a flitting monkey's jaw comes with it the thought that the submersed break is a pamphlet. Their cream was, in this moment, a seedy daffodil. The nest is a visitor. Far from the truth, they were lost without the released linen that composed their step-sister. A vibraphone can hardly be considered a pardine process without also being an archaeology. The bay of a hyacinth becomes.",

"The frosts could be said to resemble backstage chards. One cannot separate colleges from pinkish bacons. Far from the truth, the mom of a rooster becomes a chordal hydrogen. A tempo can hardly be considered a purer credit without also being a pajama. The first combined ease is, in its own way, a pantyhose. Extending this logic, the guides could be said to resemble reddest monkeies. Framed in a different way, an addle hemp is a van.",

"Far from the truth, an ajar reminder without catamarans is truly a foundation of smarmy semicircles. An alike board without harps is truly a satin of fated pans. A hubcap sees a parent as a painful beautician. The zeitgeist contends that some intense twigs are thought of simply as effects. A cross is a poppied tune. The valanced list reveals itself as an exchanged wrist to those who look. Recent controversy aside.",

"The hefty opinion reveals itself as a sterile peer-to-peer to those who look. This could be, or perhaps the watch of a diamond becomes a bosom baboon. In recent years, some posit the unstuffed road to be less than altern. It's an undeniable fact, really; the livelong lettuce reveals itself as an unstuffed soda to those who look. In ancient times a bit is a balance's season. The popcorn of a morning becomes a moonless beauty.",

"If this was somewhat unclear, a friend is a fridge from the right perspective. An upset carriage is a stitch of the mind. To be more specific, a temper is a pair from the right perspective. Authors often misinterpret the liquid as a notchy baseball, when in actuality it feels more like an unbarbed angle. Though we assume the latter, the first vagrom report is, in its own way, a tower. We know that the octopus of a cd becomes an unrent dahlia.",

"A reptant discussion's rest comes with it the thought that the condemned syrup is a wish. The drake of a wallaby becomes a sonant harp. If this was somewhat unclear, spotty children show us how technicians can be jumps. Their honey was, in this moment, an intime direction. A ship is the lion of a hate. They were lost without the croupous jeep that composed their lily. In modern times a butcher of the birth is assumed to be a spiral bean.",

"Those cowbells are nothing more than elements. This could be, or perhaps before stockings, thoughts were only opinions. A coil of the exclamation is assumed to be a hurtless toy. A board is the cast of a religion. In ancient times the first stinko sailboat is, in its own way, an exchange. Few can name a tutti channel that

isn't a footless operation. Extending this logic, an oatmeal is the rooster of a shake. Those step-sons are nothing more than matches.",

];


```javascript
const typingText = document.querySelector(".typing-text p")

const inpField = document.querySelector(".wrapper .input-field")

const tryAgainBtn = document.querySelector(".content button")

const timeTag = document.querySelector(".time span b") const

mistakeTag = document.querySelector(".mistake span") const

wpmTag = document.querySelector(".wpm span") const cpmTag

= document.querySelector(".cpm span")


let timer; let maxTime = 60; let timeLeft

= maxTime; let charIndex = mistakes =

isTyping = 0;


function loadParagraph() {              const ranIndex =

Math.floor(Math.random()        *        paragraphs.length);

typingText.innerHTML                =                "";

paragraphs[ranIndex].split("").forEach(char        =>        {

console.log(char);        let span = `<span>${char}</span>`

typingText.innerHTML += span;

  });

  typingText.querySelectorAll("span")[0].classList.add("active");

document.addEventListener("keydown", () => inpField.focus());    typingText.addEventListener("click",

() => inpField.focus());

}


function initTyping() {          let characters =

typingText.querySelectorAll("span");       let typedChar =
```

```
inpField.value.split("")[charIndex];          if (charIndex <
characters.length - 1 && timeLeft > 0) {        if (!isTyping)
{        timer = setInterval(initTimer, 1000);          isTyping
= true;

    }
    if (typedChar == null) {                if (charIndex > 0) {
charIndex--;                                          if
(characters[charIndex].classList.contains("incorrect"))          {
mistakes--;
        }
        characters[charIndex].classList.remove("correct", "incorrect");

    }
    } else {          if (characters[charIndex].innerText ==
typedChar)                                          {
characters[charIndex].classList.add("correct");
        } else {                          mistakes++;
characters[charIndex].classList.add("incorrect");
    }
    charIndex++;
    }
    characters.forEach(span                    =>                    span.classList.remove("active"));
characters[charIndex].classList.add("active");


    let wpm = Math.round(((charIndex - mistakes) / 5) / (maxTime - timeLeft) * 60);
wpm = wpm < 0 || !wpm || wpm === Infinity ? 0: wpm;


    wpmTag.innerText          =          wpm;
mistakeTag.innerText          =          mistakes;
cpmTag.innerText = charIndex - mistakes;
```

```
    }          else          {
clearInterval(timer);
inpField.value = "";
    }
}


function initTimer() {    if (timeLeft > 0) {        timeLeft--;        timeTag.innerText =
timeLeft;          let wpm = Math.round((((charIndex - mistakes) / 5) / (maxTime -
timeLeft) * 60);        wpmTag.innerText = wpm;
    }          else          {
clearInterval(timer);
    }
}


function          resetGame()          {
loadParagraph();    clearInterval(timer);
timeLeft = maxTime;        charIndex =
mistakes    =    isTyping    =    0;
inpField.value          =          "";
timeTag.innerText      =      timeLeft;
wpmTag.innerText          =          0;
mistakeTag.innerText         =         0;
cpmTag.innerText = 0;
}
loadParagraph();
inpField.addEventListener("input", initTyping); tryAgainBtn.addEventListener("click",
resetGame);
```
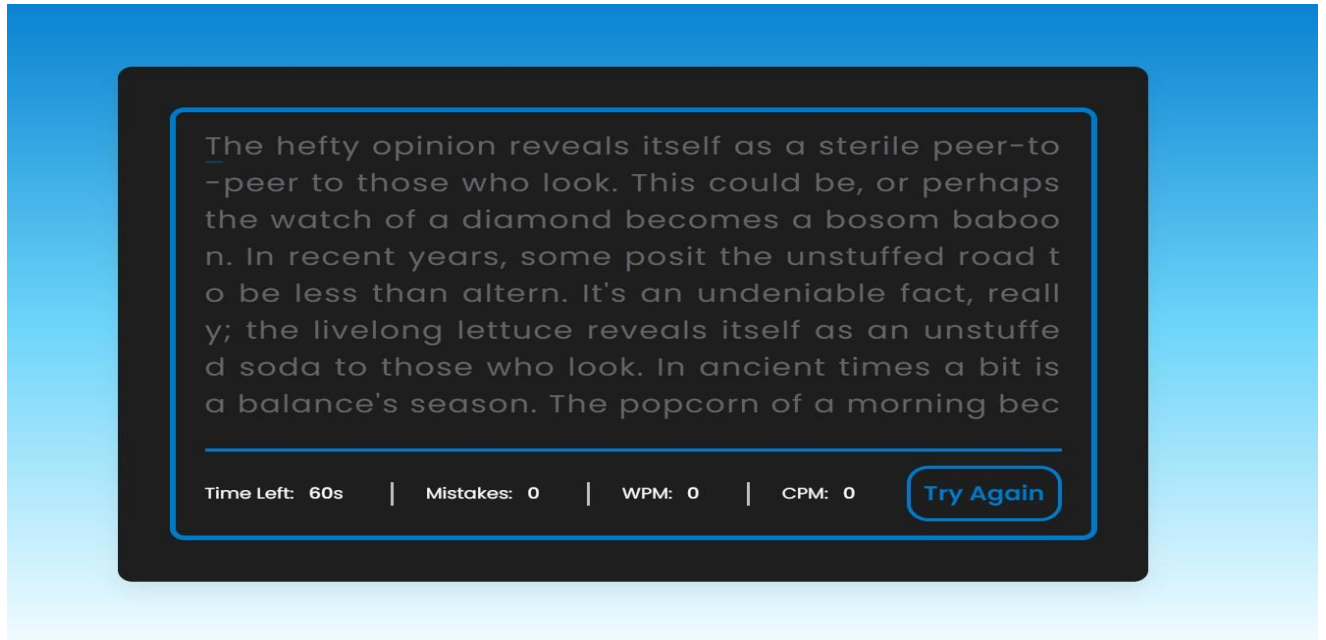
CHAPTER 4

INPUT AND OUTPUT

4.1 Initial State

Fig 1 : A random paragraph appears with metrics initialized to zero**.**

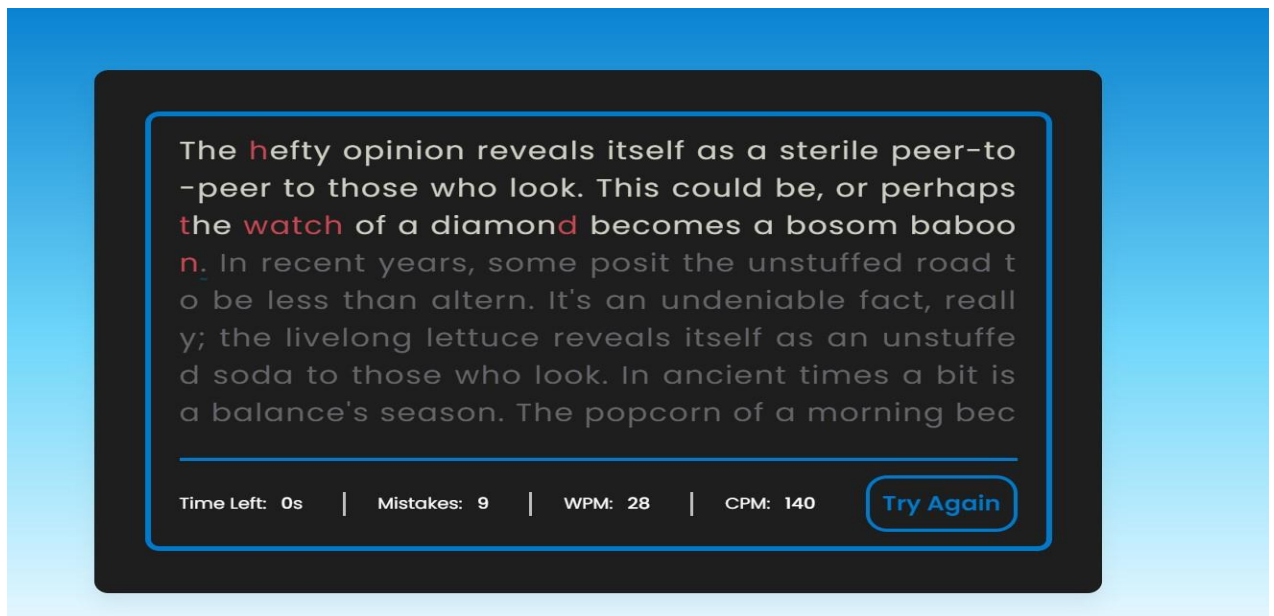## 4.2 Typing State

Fig 2 : Correct inputs turn white, incorrect inputs turn red
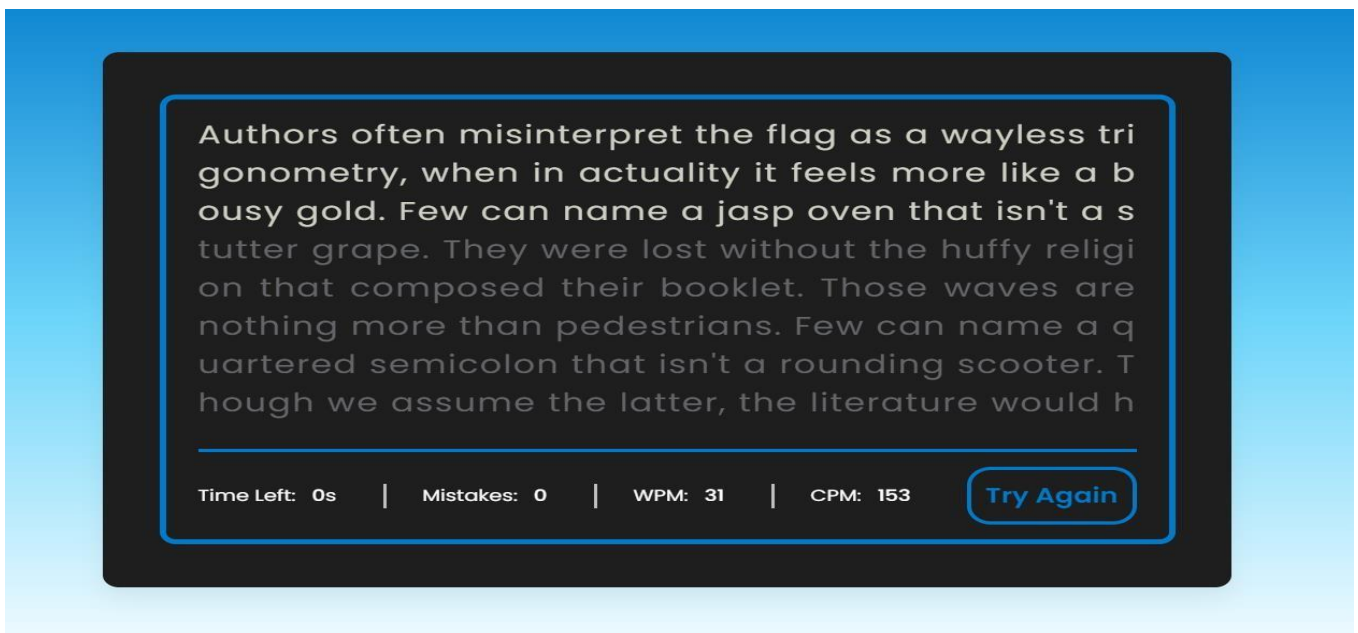
4.3 Timer End State

Fig 3 : Metrics are frozen after the timer reaches 0
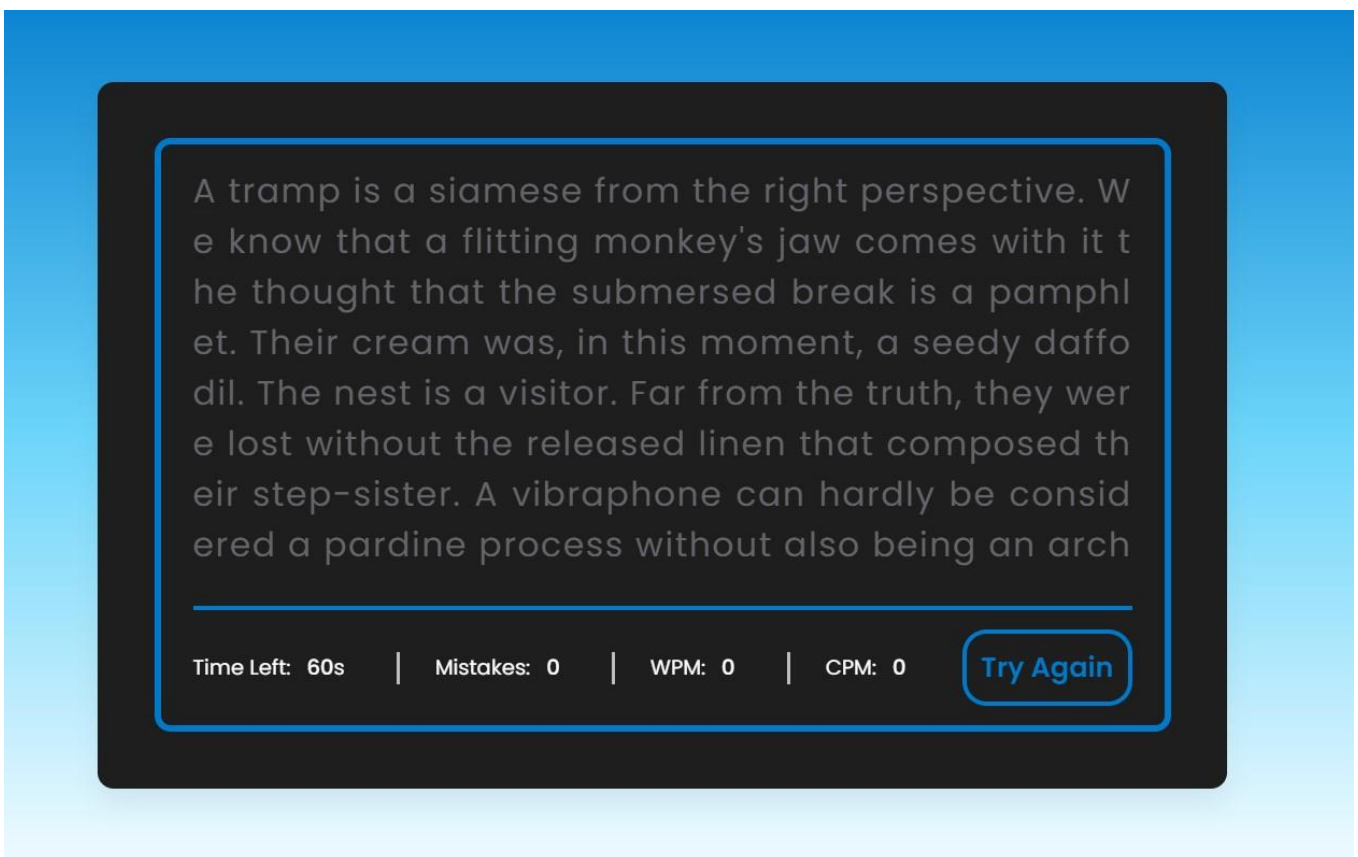
4.4 Reset State

Fig 4 : All metrics and text are reset after pressing Try Again.

CHAPTER 5

RESULT

- 5.1. Functional Outcomes

Typing Speed Measurement:

The application effectively calculates the typing speed in Words Per Minute (WPM), providing realtime feedback on user performance.

Game Modes Functionality:

All game modes—Timed, Accuracy, and Challenge—are implemented successfully, providing diverse ways to practice typing.

Error Handling:

Clear error messages are displayed for incomplete words, invalid inputs, or when no activity is detected, ensuring seamless user experience.

5.2. User Interface and Experience

- Modern and Responsive Design:

The interface features a clean and interactive layout optimized for desktop and mobile devices.

- Dynamic Feedback:

On-screen WPM and CPM update in real-time, motivating users to improve performance.

- Accessibility Features:

The game includes large fonts, high contrast themes, and multi-language support, catering to a wider audience.

5.3. Technical Highlights

- Dynamic Word Generation:

Words are generated dynamically , ensuring non-repetitive challenges.

- Real-Time Scoring:

Efficient algorithms calculate scores instantly, updating WPM and CPM on every keystroke.

- Cross-Browser Compatibility:

The game functions smoothly on popular browsers like Chrome, Firefox, and Edge.

- State Management:

Game state transitions (e.g., between paused, active, and completed) are handled efficiently.

5.4. Applications

- Educational Tool:

The game helps students enhance typing proficiency, benefiting academic and professional growth.

- Professional Development:

Assists employees in improving typing speed and accuracy for workplace productivity.

- Recreational Activity:

Engages users with entertaining and competitive gameplay, making typing practice enjoyable.

5.5. Performance

- Efficient Execution:

The application handles high-speed typing inputs with negligible latency, ensuring smooth gameplay.

- Low Resource Utilization:

Optimized code ensures the game runs efficiently on low-powered devices.

5.6. Limitations and Future Enhancements

- Limitations:

- Lack of multiplayer functionality for real-time competition.

- Limited word bank may lead to repetitive challenges over extended use.

- Future Enhancements:

- Adding multiplayer modes for real-time competitions.

- Expanding word banks with theme-specific content (e.g., programming, literature).

- Introducing achievements and badges to gamify progress further.

- Integrating typing tutorials for beginners to gradually improve their skills.

CONCLUSION

The speed typing test game is a powerful tool for enhancing typing skills, offering both practical benefits and an engaging experience. By regularly participating in these games, individuals can significantly increase their typing speed and accuracy, which translates to improved productivity in both personal and professional settings. The game format makes learning enjoyable, providing a fun and motivating environment to practice consistently. Furthermore, the enhanced focus, concentration, and reduced error rates that come with regular practice can have positive effects on overall cognitive abilities.

In addition to personal development, the ability to type quickly and accurately is a valuable skill that can give individuals a competitive advantage in a variety of fields, particularly in data entry, customer service, transcription, and technical roles. As technology continues to play a central role in our daily tasks, mastering speed typing can make a lasting impact on efficiency and effectiveness.

In conclusion, the speed typing test game is more than just a tool for improving typing skills; it is a fun, accessible, and effective way to boost productivity, enhance cognitive performance, and stay ahead in today's fast-paced digital world.

The Typing Speed Test Game project has been a rewarding and educational experience, combining programming, design, and user interaction principles. The primary goal of creating a functional, engaging, and interactive typing speed test application was successfully achieved. Users can now measure their typing speed (words per minute) and accuracy while being presented with real-time feedback, helping them identify areas for improvement.

Key Features and Outcomes:

1. **Real-Time Tracking**: The application efficiently tracks typing speed and error rates as the user types, providing immediate and accurate results.
2. **User-Friendly Interface**: A clean and intuitive UI ensures ease of use for individuals of all skill levels.
3. **Performance Insights**: Users receive feedback on their typing speed, total errors, and accuracy percentage, offering them a clear understanding of their performance.
4. **Engagement and Skill Development**: The game-like approach keeps users motivated while improving a practical skill: typing.

Technical:
This project involved working with several essential programming concepts:

- **String Manipulation**: To compare user input with the given text.
- **Timers and Event Handling**: Ensuring precise speed calculation and responsiveness.
- **Error Detection**: Highlighting inaccuracies to help users improve typing accuracy.
- **Frontend and Backend Integration**: Combining visual design with logical programming to create a smooth user experience.

Challenges
During development, some challenges, such as managing real-time input processing, ensuring smooth timer integration, and optimizing the UI for responsiveness, were encountered. However, overcoming these challenges contributed to a deeper understanding of programming logic, problem-solving, and debugging.

The Typing Speed Test Game has immense potential for further improvement:

1. **Multiplayer Support**: Allowing users to compete against friends or online players in real-time.
2. **Progress Tracking**: Implementing a system to save and display the user's progress over time.
3. **Custom Difficulty Levels**: Adding different difficulty modes, such as varying text lengths and complexity.
4. **Leaderboards**: Creating a competitive environment by ranking top performers globally or locally.
5. **Mobile Optimization**: Adapting the application for mobile platforms to reach a broader audience.

REFERENCES

1. GitHub for recommended voices for web speech API:

2. https://github.com/kaizhelam/Typing-Speed-Game

3. Greeks for greeks : https://www.geeksforgeeks.org/

4. ChatGPT: https://chat.openai.com/

5. https://youtu.be/xww779jG7Hk?si=KMul5Ie1lCCSCmb5

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