Projeced Learning

Title of Project :

MMCOE

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| **Sr.No** | **Name of Students** | **PRN No** |
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**Date: Faculty In-Charge**

# Research :

# State the research questions or objectives.

# Review existing research on the code and its applications.

# Discuss the theoretical foundations and concepts related to the code.

# Describe the research design and approach used to analyze the code

# Explain the data collection methods and tools used.

# Discuss the data analysis techniques and software used.

Typing tutors are tools or software designed to help users improve their typing speed, accuracy, and overall proficiency. These tools are commonly used by beginners learning to type or individuals seeking to enhance their skills for professional or personal efficiency.

The project requires a programming language c, libraries for time management and string manipulation and a user interface to collect input.It’s essential to understand The basic principles of c programming and how to interact with standard input and output . setting up the test this involves variables to store the text for the typing test,user input,start and end times, and calculated time taken.

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# Analysis :

Typing tutors are essential tools designed to improve typing speed, accuracy, and proficiency. They serve educational purposes for beginners and also help advanced users refine their skills. Below is an analysis of the components, benefits, limitations, and enhancements related to typing tutors.

A typing tutor is a powerful tool for developing and honing typing skills. By analyzing the current features and limitations, it is clear that modern typing tutors can benefit from:

* Enhanced real-time feedback.
* Personalization and adaptability.
* Gamification and data-driven insights.
* **Core Features**:
  + **Typing Speed Test**: Measures words per minute (WPM).
  + **Accuracy Analysis**: Identifies and reports typing errors.
  + **Progress Tracking**: Keeps a record of performance over time.
  + **Lesson Plans**: Structured practice from basic to advanced levels.
* **User Interaction**:
  + Intuitive interface with clear instructions.
  + Real-time feedback for errors and speed.
* **Metrics**:
  + **Words Per Minute (WPM)**: Calculated based on typed words and time taken.
  + **Error Rate**: The percentage of errors in the typed text.
  + **Accuracy**: The ratio of correct characters/words to total characters/words.
* **Technology**:
  + Algorithms for speed and accuracy measurement.
  + Use of precise timing methods like clock() or time() in C or higher resolution timers in other languages.

# Ideate :

To create an engaging, effective, and versatile typing tutor, here are innovative ideas spanning features, design, and technology to address the needs of diverse users:

**Adaptive Learning Paths**

* **Concept**: Lessons adapt dynamically based on the user's performance.
* **Features**:
  + Initial skill assessment test.
  + Tailored lessons focusing on weak areas (e.g., specific letters or punctuation).
  + Difficulty adjusts automatically (e.g., faster prompts for advanced users).
* **User Benefit**: Personalized experience, making learning efficient and engaging.

**Real-Time Feedback and Error Highlighting**

* **Concept**: Provide instant feedback while the user types.
* **Features**:
  + Highlight errors in red as they occur.
  + Show alternative finger positions for correction.
  + Real-time WPM and accuracy display.
* **User Benefit**: Immediate corrections help build muscle memory faster.

**Typing Analytics and Reports**

* **Concept**: Track progress over time with data insights.
* **Features**:
  + Heatmaps of frequently used keys.
  + Error analysis (e.g., common typos or misplaced keys).
  + Speed and accuracy trends.
* **User Benefit**: Helps users identify patterns and monitor improvements.

**Certifications and Rewards**

* **Concept**: Provide certifications to validate typing skills.
* **Features**:
  + Online tests with verifiable certificates for WPM and accuracy.
  + Digital badges for achievements.
  + Career-related typing certifications (e.g., transcriptionist level).
* **User Benefit**: Adds value by providing proof of skill for job applications.

**Benefits of a Typing Tutor Program**

1. **Skill Development**:
   * Enhances typing speed and accuracy.
   * Teaches proper hand placement and posture.
2. **Efficiency in Work and Communication**:
   * Saves time in professional and academic tasks requiring typing.
3. **Progressive Learning**:
   * Builds confidence through structured lessons and incremental challenges.
4. **Personalized Experience**:

Adapts to the user’s skill level for targeted practice.

# Build :

# A typing tutor helps build a variety of skills that are valuable not only for typing itself but also for improving overall productivity and mental agility. Below are the key skills developed through consistent use of a typing tutor:

# 1. Typing Proficiency

# Speed: Increases words per minute (WPM), enabling faster communication and task completion.

# Accuracy: Reduces typing errors, improving overall quality and precision.

# 2. Hand-Eye Coordination

# Typing tutors improve the ability to coordinate visual input with finger movements.

# This skill is essential for various tasks, including gaming, coding, and other computer-based activities.

# 3. Focus and Concentration

# Typing practice requires attention to detail and sustained focus, enhancing cognitive engagement.

# Users learn to minimize distractions, which benefits other areas of life and work.

# 4. Time Management

# By improving typing speed, users complete typing-related tasks more efficiently.

# Builds a sense of urgency and the ability to work within time constraints.

# 5. Reading and Comprehension

# Many typing exercises involve reading and reproducing text, improving reading speed and comprehension.

# Helps in understanding sentence structures and grammar.

# 6. Cognitive Skills

# Memory: Strengthens the brain’s ability to remember letter positions and repetitive actions.

# Problem-Solving: Encourages quick adjustments and corrections when errors occur.

# Decision-Making: Teaches how to manage speed vs. accuracy trade-offs effectively.

# 7. Multitasking Ability

# Typing tutors train users to think, read, and type simultaneously, fostering multitasking skills.

# Especially useful in scenarios like note-taking during meetings or writing emails while referencing other material.

# 8. Confidence and Self-Esteem

# Achieving measurable progress (e.g., higher WPM or perfect accuracy) boosts self-confidence.

# Encourages a positive attitude towards skill development and learning new technologies.

# 10. Adaptability

# Advanced typing tutors teach users to switch between different keyboard layouts (e.g., QWERTY, Dvorak) or languages.

# Prepares users for diverse professional or personal typing scenarios.

# Test:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Test case id | Test case desc | Test date | Expected date | Status (pass/fail) | Additional notes |
| TCO1 | Practice test1 | 2024-01-5 | 2024-01-10 | PASS | Matches |
| TC02 | Practice test 2 | 2024-08-9 | 2024-08-15 | PASS | Matches |
| TCO3 | Final test | 2024-02-8 | 2024-02-14 | PASS | Matches |

# Implement

# A typing tutor can be simple to create but very effective in improving typing speed and accuracy. With features like timed typing lessons, real-time feedback, and progress tracking, it becomes an engaging and educational tool. You can further expand the project by adding more advanced features like voice typing, multi-language support, or a database to track progress over time.

# It is software application or tool designed to help users improve their typing speed and accuracy

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