

Problem Statement

While typing speed and accuracy remain critical elements in the modern digital workplace, few users are aware of their current metrics or possess easily accessible tools to practice and track their progress. The problem is to provide a simple, immediate, and accessible tool for users to measure their typing speed in Words Per Minute and their accuracy within a command-line environment, motivating continuous improvement.

Overview of the Project

The project, Command-Line Typing Speed Tester, is scoped to deliver the core functionality of a typing test within a terminal interface.

Inclusions:

- Random selection and display of a motivational text prompt.
- Accurate timing of the duration of the user input.
- Calculation and display of Words Per Minute (WPM) and basic accuracy.
- Ability to retry the test.

Exclusions:

- A Graphical User Interface (GUI).
- User authentication or maintaining profiles, or saving performance history data.
- Advanced accuracy metrics, such as character-level error tracking and complex error handling.
- Online leaderboards or networking capabilities.

Target Users

The following are the target users of this project:

- Students/Developers: Those who use the command line very often and want a fast, distraction-free solution to practice typing.
- Beginner Programmers: Users whose main focus is to understand the basics of Python, such as time measurement, manipulation of strings, and basic input/output.
- Basic skill assessment users: Any user interested in just a simple, straightforward measure of their current typing speed.

High-Level Features

The system offers three high-level capabilities, aligning with the three major functional modules requirement:

1. Text Provision & Input Module

- o Function: This program should randomly choose a typing prompt and then handle user text input.
- o High-Level Feature: Randomly present the user with a source paragraph and capture their corresponding input text.

2. Performance Measurement Module

- o recognizes the test time and calculates the rate metrics that
- o High-Level Feature: Show an exact timing of the length of the user's typing session and calculate a WPM score;

3. Result Calculation & Display Module

- o compares the user's input against the source text and displays the final results.
- o High-Level Feature: Calculate a set-based accuracy percentage and present all performance metrics - Time, WPM, Accuracy - to the user in a clear, formatted output.