



DSA Project Documentation

Terminal Typing Master

- **Objective:**

To develop a terminal-based typing test application. The application tests the user's typing speed by presenting a list of random words from a selected category and measures metrics like words per minute (WPM).

- **Prerequisites:**

1. Python 3.x installed
2. Basic understanding of file I/O, data structures (list, dictionaries), and JSON format.

- **Specifications:**

- **Input:**

1. Username for the leaderboard.
2. Option to start the typing test, show the leaderboard, or exit.

- **Output:**

1. A set of random words for the user to type.
2. Typing Metrics: Words Typed, Time Taken, Words Per Minute.

- **Rules:**

1. Users must type the words exactly as shown.
2. Users can quit the game by pressing 'Ctrl + Q' at any time.

- **Guidelines:**

1. On starting, the user is prompted to enter a username.
2. The user then chooses an option to either start the typing test, show the leaderboard, or exit.
3. Once the test starts, metrics like words typed and WPM are measured.

- **Code Structure:**

- **update_leaderboard Function:** Updates and sorts the leaderboard stored in a JSON file.
- **show_leaderboard Function:** Displays the leaderboard from the JSON file.
- **load_words_from_json Function:** Loads words from a JSON file into a Python dictionary.
- **get_user_input Function:** Captures user input from the terminal.
- **main Function:** Contains the main game logic.

- **Future Perspective:**

1. Add more typing categories.
2. Implement a time-based challenge mode.