

# **GAUHATI UNIVERSITY INSTITUTE OF SCIENCE AND TECHNOLOGY**



## **SYPNOSIS FOR PROJECT WORK**

**(Course Code: IT 323)**

**PROJECT NAME: Typing speed recognition system using  
Python.**

### **SUBMITTED BY:**

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## ● **INTRODUCTION:**

Typing speed is a critical skill in today's digital age, with increasing demands for fast and efficient typing in a variety of fields. However, there is a lack of accurate and accessible tools for measuring typing speed and providing feedback to individuals looking to improve their typing proficiency. To address this gap, this project aims to develop a typing speed recognition system using Python. The system will accurately measure a user's typing speed, provide a typing speed score, and present the results in a user-friendly interface. The project will utilize Python's keyboard library, time module, and GUI library, and will store typing speed scores and other relevant data for future analysis and improvement. The end goal is to create a tool that can be used by individuals and organizations looking to assess and improve their typing speed and efficiency.

## ● **OBJECTIVE:**

To measure a user's typing speed by recording the time it takes for them to type a given text passage. It will then provide the user with a typing speed score, which can be used to assess their typing proficiency.

## ● **PROPOSED METHODOLOGY:**

The proposed methodology can be as follows:

1. Acquire text passages: Gather a set of text passages that will be used to measure typing speed. This can be done by using a corpus of existing text, such as a news article or book, or by generating random text using a text generator.
2. Input capturing: Implement a mechanism to capture keyboard input from the user as they type the text passage. This can be done using the keyboard module in Python.

3. Timestamp capturing: Store the time at which each keystroke is made, along with the corresponding key that was pressed. This can be done using the time module in Python.
4. Speed calculation: Calculate the typing speed by dividing the total number of characters typed by the total time taken to type the text passage. The result can be displayed in words per minute (WPM) or characters per minute (CPM).
5. User interface: Create a user-friendly interface to display the typing speed score, along with the text passage used for testing and the corresponding timestamps for each keystroke. This can be done using a GUI library such as Tkinter or PyQt.
6. Data storage: Optionally, implement a mechanism to store the typing speed scores for each user, along with the corresponding text passages and timestamps, so that they can be retrieved and analyzed later. This can be done using a database or file system.
7. Testing: Test the system with a set of users to assess its accuracy and identify any potential bugs or improvements that can be made.

## ● **TOOLS AND TECHNOLOGIES:**

The following tools and technologies can be used:

1. Python programming language: The main language used to develop the system, which provides various libraries and modules for processing keyboard input, measuring time, and presenting results.
2. Keyboard library: A library in Python that provides a way to capture keyboard input from the user.
3. Time module: A built-in module in Python that provides functions for measuring time and tracking the passage of time.
4. GUI library: A library in Python that provides a way to create a user-friendly interface for displaying results and collecting user input. Some popular options include Tkinter and PyQt.

5. Database or file system: A tool for storing and retrieving typing speed scores and other data generated by the system. Options include SQL databases (e.g., SQLite, MySQL, or PostgreSQL) or file-based systems (e.g., CSV or JSON files).

- **IMPLEMENTATION:**

We first create the speed testing window using Tkinter. The function is defined for calculating and function is defined for calculating and printing the correct output after the user input. A specific list of words is provided to the user to type and test the speed of typing. For that we provide a list of words and generate them with a random function.

- **EXPECTED OUTCOME:**

The outcome of the project will be a reliable and user-friendly typing speed recognition system that can help individuals and organizations improve their typing skills and become more productive and efficient in their work. The system will provide an accurate measurement of the user's typing speed by capturing keyboard input and storing timestamps, and then calculating the typing speed score. It will present the typing speed score in a user-friendly interface, making it easy for users to understand and use. The system will store typing speed scores and other relevant data, allowing for future analysis and improvement.