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A Research paper on Typing Speed Tester Game using Python & Tkinter

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Abstract: ***In this Python project , our goal is to build a game in which user can check and even improve typing speed. For a graphical user interface, we will be going to use the Tkinter library in Python which is used for working with graphics. A typing speed test help you to check your typing speed and improve it with regular practice. With the python project, learn to build an application using Tkinter library that can detect typing speed of user with accuracy. The project contains only the user side. It is a simple typing challenge game project. This is like a game, one-by-one random word will pop up on your screen and you have to type as many given words as you can, within 60 seconds. The design of this project is pretty simple so that the user won't find any difficulties while working on it.***
Keywords: spelling difficulties; word approximations; writing support

I. INTRODUCTION

In this Python project idea, we are going to build an exciting project through which you can check and even improve your typing speed. For a graphical user interface, we are going to use the tkinter module which is used for working with graphics. We will draw the images and text to be displayed on the screen.

II. METHODOLOGY & PROCEDURE

Python is a popular programming language. It was created by Guido van Rossum, and released in 1991.
It is used for:
web development (server-side),
software development,
mathematics,
system scripting.

A. Python

Python is a general purpose, dynamic, high-level, and interpreted programming language. It supports Object Oriented programming approach to develop applications. It is simple and easy to learn and provides lots of high-level data structures. Python is easy to learn yet powerful and versatile scripting language, which makes it attractive for Application Development.Python's syntax and dynamic typing with its interpreted nature make it an ideal language for scripting and rapid application development.Python supports multiple programming pattern, including object-oriented, imperative, and functional or procedural programming styles.Python is not intended to work in a particular area, such as web programming. That is why it is known as multipurpose programming language because it can be used with web, enterprise, 3D CAD, etc.

B. Tkinter

Python has a lot of GUI Framework, but Tkinter is the only framework that's built into the Python standard library. Tkinter has several strengths. It's cross-platform, so the same code works on Windows, macOS, and Linux. Visual elements are rendered using native operating system elements, so applications built with Tkinter look like they belong on the platform where they're run.Although Tkinter is considered the de-facto Python GUI framework, it's not without criticism. One notable criticism is that GUIs built with Tkinter look outdated. If you want a shiny, modern interface, then Tkinter may not be what you're looking for.However, Tkinter is lightweight and relatively painless to use compared to other frameworks. This makes it a compelling choice for building GUI applications in Python, especially for applications where a modern sheen is unnecessary, and the top priority is to build something that's functional and cross-platform quickly.

C. Tkinter Widget

There are various widgets like button, canvas, checkbutton, entry, etc. that are used to build the python GUI applications.
Button,Canvas,Checkbutton,Entry,Frame,Label,Listbox,Menubutton,Menu,Message,Radiobtton,Scale,Scrollbar,Text,Toplevel, Spinbox,PanedWindow,labelframe,MessageBox.

D. Project

The Speed Typing Test Python Project is written in python programming language, This Speed Typing Test Python project idea, we are going to build an exciting project through which you can check and even improve your typing speed. For a graphical user interface(GUI), we are going to use the Tkinter library which is used for working with graphics.

E. Front-End

In the project for front-end, we have used the tkinter. we use tkinter widget Tk,that work To create a main window, tkinter offers a method 'Tk(screenName=None, baseName=None, className='Tk', useTk=1)'. To change the name of the window, you can change the className to the desired one. canvas widget-It is used to draw pictures and other complex layout like graphics, text and widgets. Entry widget- It is used to input the single line text entry from the user.. For multi-line text input, Text widget is used. Label widget- It refers to the display box where you can put any text or image which can be updated any time as per the code. mainloop() widget- There is a method known by the name mainloop() is used when your application is ready to run. mainloop() is an infinite loop used to run the application, wait for an event to occur and process the event as long as the window is not closed. Button widget- To add a button in your application, this widget is used. **w=Button(master, option=value)**master is the parameter used to represent the parent window.There are number of options which are used to change the format of the Buttons. Number of options can be passed as parameters separated by commas.

F. Back-End

In the project for Back-end, we have used the Python. and use python function,Who work in our project like this as function def labelSlider()- It is showing the label of the project on display.(Label- 'Welcome to Typing speed tester game') and we use time() function Which is working like this It has a show time of up to 60 seconds In this, the color of the count remains white for 50 seconds. As soon as it is 10, the color becomes red.It has used 3 variables - time left, score, miss.Along with this, 1 more label has been given in it. that dispaly (Type word and hit enter button) and we use StartGame() function Which is working like this It starts the game. As soon as we enter, the game starts and all the functions start working. These variables also work in it- count, score, miss, time ..... It also generate warning messages Like that "MissMatch"

III. MATERIALS AND EQUIPMENT

A laptop computer with Microsoft Windows 7,8,10 (1.2 GHz) was used for the Mouse Con- trol Screening and the main study. and I-3 Processor, 4GB RAM, some spaces ROM/Hard-disk. Software specification are Anaconda/python IDLE.

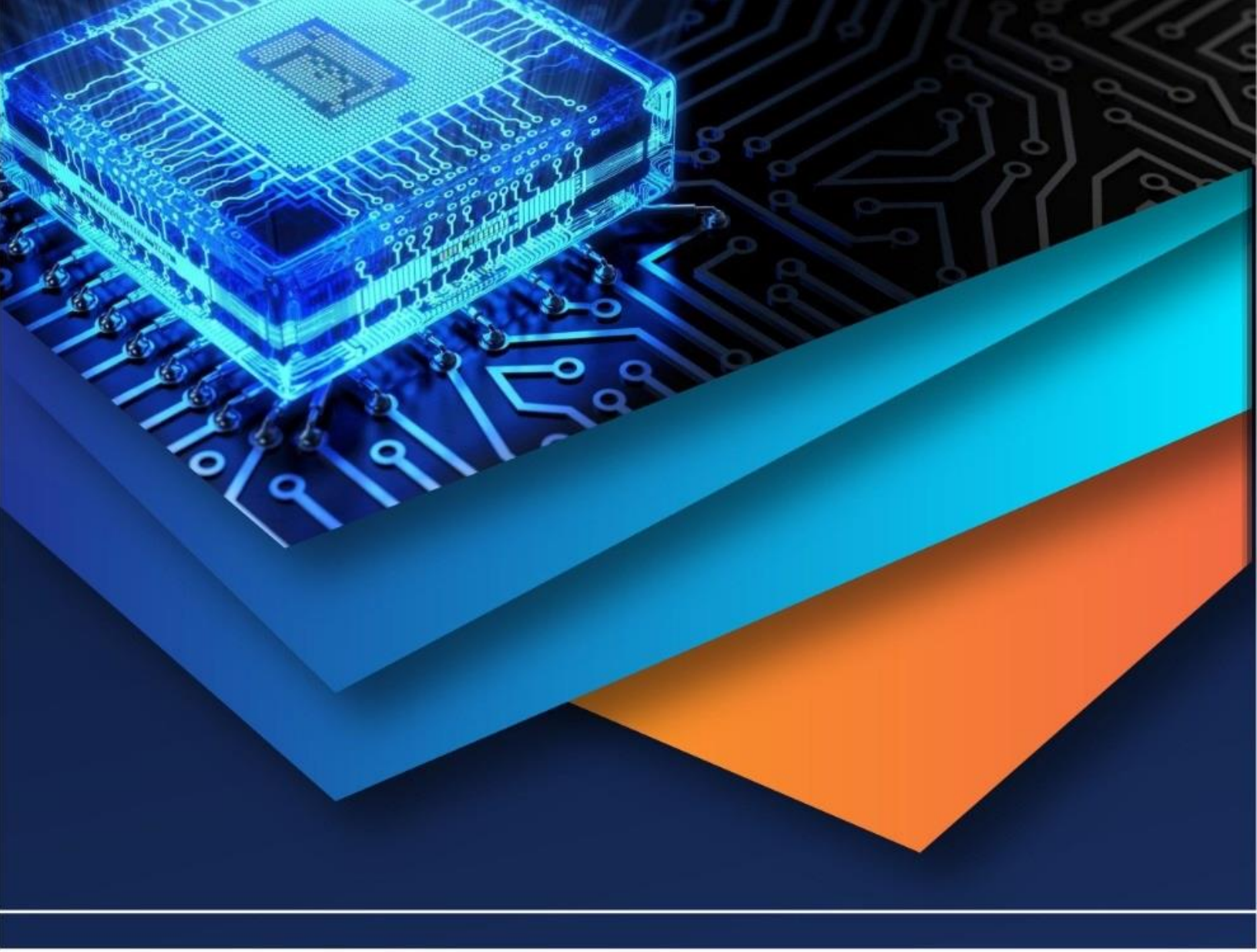
IV. RESULT & CONCLUSION

Will play the game first. This will open a pop-up window. As soon as we play, the All functionality will start working. And the timing will start on playing. The timing is up to 60 seconds, so we will keep spelling for 60 seconds. And as the time comes at 10 seconds, the color of the time will be red. If our spelling is correct then the match will be done. So the correct spelling point will be counted in the score.And if the spelling is wrong, then there will be a miss-match and the warning will be generated.And as soon as 60 seconds are over, the game will stop. Then the score will show. It will have a hit, miss and total score show. And then you can retry and restart the game.

A Python Typing Speed Test is good for the student or beginners to improve their typing test skills, and also in this Python Typing Game is good for the beginners in python programming world, because the syntax is easy to learn and to understand.

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