WOMEN WHO CODE PYTHON

✨Python Libraries 101✨
Session 8

Hi, we are

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WOMEN WHO CODE PYTHON

Our Mission

Inspiring women to excel in technology careers.

WOMEN WHO CODE PYTHON

Our Vision

A world where diverse women are better represented as engineers and tech leaders

WOMEN WHO CODE PYTHON

Our Target

Engineers with two or more years of experience looking for support and resources to strengthen their influence and levelup in their careers.

WOMEN WHO CODE PYTHON

Code of Conduct

WWCode is an inclusive community, dedicated to providing an empowering experience for everyone who participates in or supports our community, regardless of gender, gender identity and expression, sexual orientation, ability, physical appearance, body size, race, ethnicity, age, religion, socioeconomic status, caste, creed, political affiliation, or preferred programming language(s).

Our events are intended to inspire women to excel in technology careers, and anyone who is there for this purpose is welcome. We do not tolerate harassment of members in any form. Our Code of Conduct applies to all WWCode events and online communities.

Read the full version and access our incident report form at
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WOMEN WHO CODE PYTHON

Soumya Vemuri

Computer Science and Engineering Major

Lead at Women Who Code Python

Today's Agenda

1. Graphical User Interfaces
2. tkinter
    a. Introduction
    b. Widgets and their Functions
3. QnA
4. Hands-on Coding!
5. References
6. Upcoming Events

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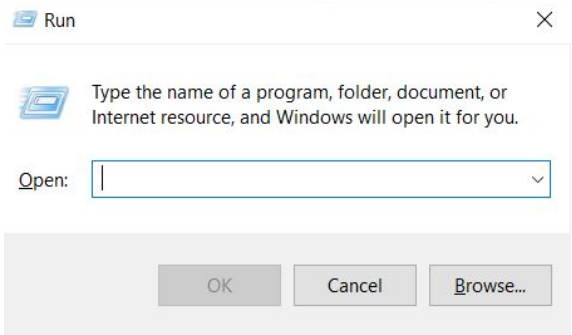
Graphical User Interfaces (GUI)

Graphical User Interfaces (GUI)

- A graphical user interface is a way to communicate what you want to the computer application or operating system without typing the instructions in.
- Allow users to **interact with electronic devices through graphical icons and audio indicators** instead of text-based user interfaces, typed command labels or text navigation



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tkinter

tkinter

- tkinter is Python's standard GUI package
- It is a cross-platform, stable, reliable and easy-to-learn package
- It has a variety of commonly used GUI elements like buttons, menus, labels, and entry boxes that can be used to build the interface

Syntax:

import tkinter as tk

tkinter

- In order to create the GUI interface, we need to create an instance of the tkinter frame - Tk()
- It helps to display the root window and manages all the other components of the tkinter application.

tkinter

- Few important methods are:
  - mainloop(): an infinite loop used to run the application
  - title(): Window title
  - geometry(): resize the window, place it at a specified location
  - pack(), grid(), place(): allow us to manage and modify where an element goes on the window
  - destroy(): destroys and element of the window

tkinter widgets

Widgets and their Functions

- Widgets are the building blocks of GUI programming
- Used to display information or get input from the user
- Examples: buttons, labels, entry boxes, scrollbars

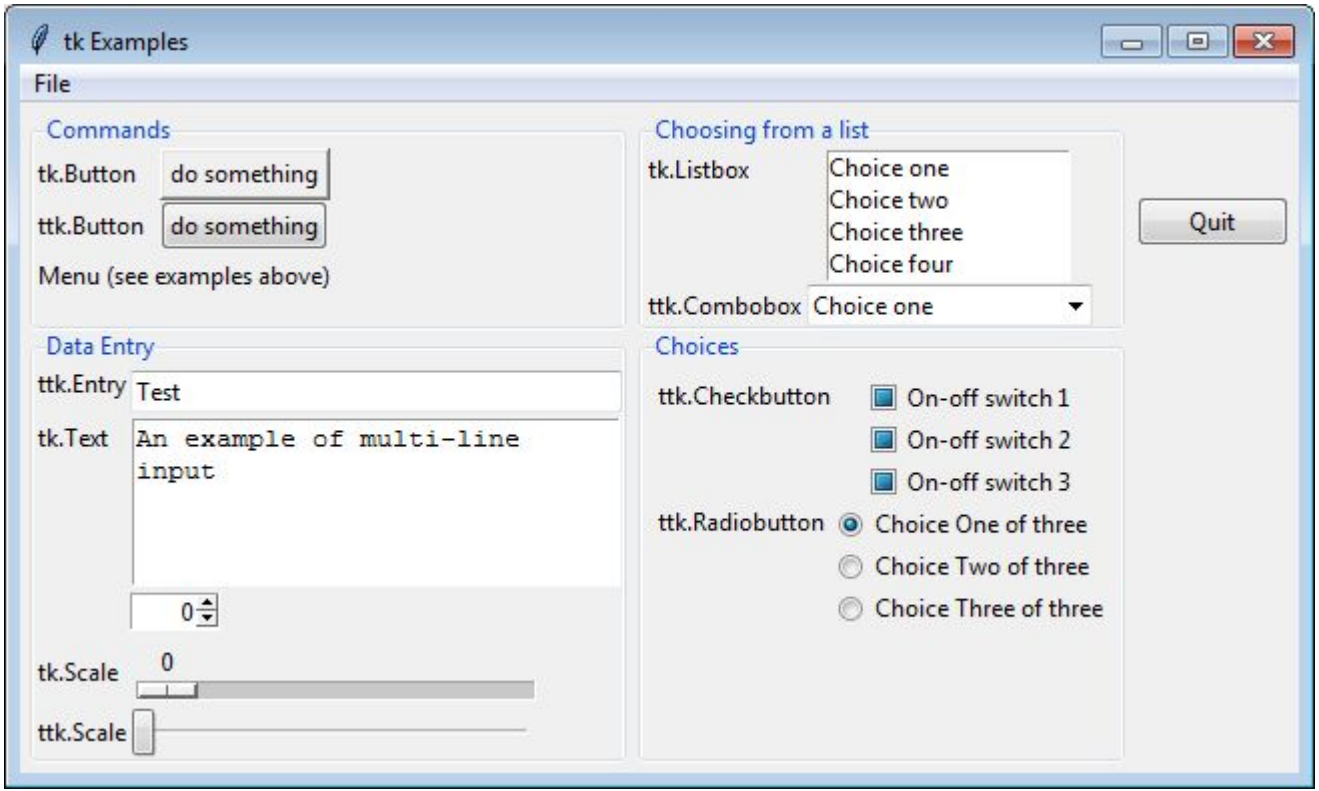
Widgets and their Functions

- **Frame:** Used to contain other widgets
- **Label:** Display text or images
- **Button:** Used to call a function when clicked
- **Checkbutton:** Used to create checkboxes
- **Radiobutton:** Used to create a radio button

Widgets and their Functions

- **Entry:** Used for single line text entry which can be edited
- **Text:** Contains multiple lines of text that can be edited
- **Combobox:** Single line text entry with a drop down box
- **Canvas:** Draw lines, circles, arcs, ovals, and rectangles
- **Message:** A pop-up box with a message being displayed along with a title

Widgets


tk Examples
File
Commands
tk.Button
do something
ttk.Button
do something
Menu (see examples above)
Choosing from a list
tk.Listbox
Choice one
Choice two
Choice three
Choice four
ttk.Combobox
Choice one
Quit
Data Entry
ttk.Entry
Test
tk.Text
An example of multi-line input
0
tk.Scale
0
ttk.Scale
Choices
ttk.Checkbutton
On-off switch 1
On-off switch 2
On-off switch 3
ttk.Radiobutton
Choice One of three
Choice Two of three
Choice Three of three

QnA Time!

Let's Code!

References

- https://docs.python.org/3/library/tkinter.html
- https://www.youtube.com/watch?v=YXPyB4XeYLA
- https://www.youtube.com/watch?v=yQSEXcf6s2I
- Python Programming by Reema Thareja
- Our Github Repo: https://github.com/WomenWhoCode/WWCodePython/tree/master/Python%20Libraries%20Series

Upcoming Events

FRI
08
OCT

LeetCode Series Study Group *Featured, Recurring*

Online | Python | 5:30 AM - 7:00 AM IST (UTC+0530)

Register

SAT
09
OCT

Python Libraries 101 *Featured, Recurring*

Online | Python | 7:30 PM - 8:30 PM IST (UTC+0530)

Register

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Thank you!

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Let us know how we're doing!