

LECTURE 40

GUIs WITH TKINTER 3

MCS 260 Fall 2020

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REMINDERS

- Worksheet 14 and solutions available
- Quiz 14 (the last one!) available, due Monday
- Project 4 submissions open in Gradescope

IDLE

Idle is a graphical code development environment (or integrated development environment, IDE) for Python.

It is the officially-supported IDE for Python.

Idle is written in Python using tkinter! ([docs](#), [source](#))

PLAN FOR TODAY

Continue working on the GUI for the letter rotation code we developed in [Lecture 36](#) & [Lecture 38](#).

So far: Built GUI controls, set up one callback.

Remaining: More callbacks to make slider display and slider work.

REVIEW

`tkinter` has its own variable classes (`StringVar`, `IntVar`, `DoubleVar`) with `.get()`, `.set(...)`.

Widgets support these, e.g. with `Label` widget's `textvariable` constructor argument.

Can ask to call a function of three arguments when a variable is changed:

```
varobj.trace_add("write", func_to_call)
```

WINDOW TITLE

`tkinter.Tk` has a method `.title(s)` which sets the window title to `s`.

The window title is usually shown in the window's top bar, and possibly in a dock/taskbar as well.

SCALE WIDGET

This widget's constructor accepts many args, including:

- `from_` — minimum value
- `to` — maximum value
- `variable` — variable in which to store slider value
- `command` — function to call on change

NOT COVERED

A big topic we didn't discuss is adding **menus** to tkinter applications.

TkDocs has a nice [discussion and tutorial](#).

REFERENCES

- [Official tkinter documentation](#)
- [The Tk docs tutorial](#) demonstrates lots of features, and shows Python code for all its examples.
- [Unofficial reference manual by John Shipman](#)

REVISION HISTORY

- 2020-11-25 Additional reminders
- 2020-11-24 Initial publication

