

# LECTURE 40

## GUIS WITH TKINTER 3

MCS 260 Fall 2021

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# 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 password generator we started in lecture 38.

So far: Built GUI controls.

Remaining: Connect controls to program logic.

# TKINTER VARIABLES

`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)
```

# 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

- 2020-11-23 Initial publication