COMP 141

intro to simplegraphics

Rhodes College

1

Announcements

Reminders:

Program 2 – due tomorrow night by 11:55pm

2

Practice from Last Time

1. **Modify singHappyBirthday.py**
   – You no longer have a twin. Now you have a sibling that is two years older than you, but you share the same birthday.
   – Edit code so that sing_song now will print the lyrics but also print how old the person is.
   – Add a second parameter to sing_song called age.
   – Edit main() to ask for your age, as well as your name and sibling's name.
   – Edit the two calls to sing_song so appropriate ages are passed as arguments.
2. **Write a new Python program that asks the user to input 2 numbers and outputs the sum of those numbers.**
   – Use 2 functions
     • `main():` - Prompts the user to enter 2 numbers and calls `sum()`
   • `sum():` - Takes in 2 parameters and outputs the sum of those numbers

3

Using Graphics in Python

• Many programming languages include a *library* for computer graphics
  – A library is a pre-written collection of functions usually centered around a theme (graphics, networking, math, sound, etc.)
  – Using libraries (rather than starting from scratch) enables you to write programs faster
  – Libraries are centered around functions because we know functions are abstractions of algorithms.

4

The canvas

- All graphics in Python are drawn in a separate window called the *canvas*.
- The canvas is laid out similarly to the Cartesian plane, but with a flipped y-axis.
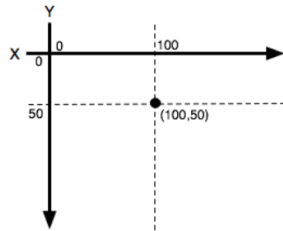
SimpleGraphics

- We learned about Turtle
  - Many other graphics libraries available
- Introducing simplegraphics
  - Not a built-in library
  - You need to have 2 files in the same folder as your program
    - simplegraphics.py
    - cs1graphics.py

Your First Graphics Program

- Go to my Box.com code directory and copy **simplegraphics.py** and **cs1graphics.py** files into your own folder (same folder you save the rest of your python files).
- Make a new Python file and type in the following program.
- If you see the picture on the right, you're all set.
- Experiment with other functions on the handout.
- Try writing programs that draw the following:
  - a landscape (mountains, trees, houses, a cityscape, or something like that)
  - a self-portrait
  - A depiction of the solar system
  - the Mona Lisa
  - something else of your choice

```
from simplegraphics import *

def main():
  open_canvas(500, 500)
  draw_circle(250, 250, 100)
  close_canvas_after_click()

main()
```