COMP 141

intro to simplegraphics

Rhodes College

1

Announcements

Reminders:

Program 2 – due tomorrow night by 11:55pm

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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

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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.

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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.
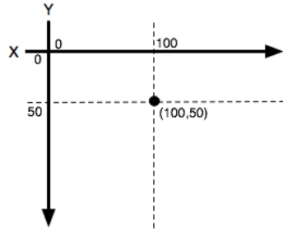
SimpleGraphics

- 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 the 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.

```python
from simplegraphics import *

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