CS151 Lab Assignment 1

Team members: Kevin Bennett and Becca Levenson

Command Lists:

(Kevin -- director)

Pen up

Pen goto point (10,10)

Pen down

Pen goto point (10,15)

Pen turn right 1 angular unit

Pen goto point (20,15)

Pen turn right 1 angular unit

Pen forward 1 linear unit

Pen turn right one angular unit

Pen goto point (10,14)

Pen goto point (10,11)

Pen goto point (20,11)

Pen up

Pen goto point (0,0)

Pen turn right 1 angular unit

(Becca -- director)

Pen goto point (20,10)

Pen turn right 1 angular unit

Pen goto point (20,2)

Pen turn right 1 angular unit

Pen goto point (10,2)

Pen turn right 1 angular unit

Pen goto point (10,9)

Pen turn right 1 angular unit

Pen goto point (19,9)

Pen turn right 1 angular unit

Pen goto point (19,3)

Pen up

Pen goto point (10,10)

Pen turn right 1 angular unit

Pen turn right 1 angular unit

Writeup Questions:

Did the artist draw the shape you expected for the first task? If yes, what shared knowledge permitted that to occur? If not, why not?

Kevin: No. My instructions were too vague about where the squares should be placed on the image. Also, I did not specify what size to make the design.

Becca: Almost. Because I did not specify what area I wanted the shaded triangle to be in; it did not come out exactly as I had pictured it.

Besides the set of instructions, what assumptions, or knowledge did you have to share between yourself and your partner for the first two tasks? After seeing the artist's rendering of your commands, did you feel like there was information missing?

We assumed the other was aware what constituted a "triangle," "square," or "circle." Not to mention terms like "inscribed, "cross" and "shaded." Size and rotation were obvious missing components.

How much flexibility, or ambiguity existed in your first two instruction sets compared to the later command sets? How much ambiguity can a computer handle?

The later command sets contained little to no ambiguity, while the first two had a lot. This makes sense considering that a computer cannot handle any ambiguity.

Describe how much information was given from one person to another for task 3 compared to task 4. Was there a difference? Why?

The same amount was given. It was only the 15 commands and assigning a value to one linear unit and one angular unit.

Did the idea of labeling a set of commands make it easier to make more complex scenes or multiple copies of the shape? Why?

Yes. Obviously when you compress a whole list into one command, it simplifies the process. This way, making multiple copies of shapes/several different shapes in one command sequence was reduced to a few definitions/execute commands.

What do you think would happen if a set of commands tried to execute itself?

If, by that question, you mean "what would happen if you included an execute command of a shape in the definition of itself then attempted to execute it," I think it would just keep repeating the commands in the definition before the execute command "Shape-whatever" over and over because it will reach that point in the definition and refer back to itself and repeat.

For the third task, your list of commands could create only one shape. How many different shapes could you create with the last version of your shape command list using variables?

An infinite number because the variable can be any value.

In the last task, if you changed your Shape D, would you need to change your Shape E? Does Shape E care what list of commands it calls?

No. Assuming you have defined Shape D as part of the command list for Shape E, it should change Shape E when you change Shape D. Shape E does not care what list of commands it calls.

What was the most challenging aspect of getting your shapes to draw in python?

Defining and executing the commands using the correct syntax was the most difficult thing for us. Not to mention creating shapes of the correct size so that they wold be visible in the window.

Files:

(Becca's folder)

shapeA.py -- Task 3

shapeB.py -- Task 4

shapes.py -- Task 5

shapes2.py -- Task 6

extension.py -- Extension