Intro to Python

Assignment

Exercise: Box

Loops

This exercise is designed to give you experience in using loops to repeat actions. You will also have to ask the user for information and receive it.

Boxes

Your program must draw a rectangle using text output. For example, a rectangle that is 4 characters wide and 6 lines high looks like this:

* * * *
* * * *
* * * *
* * * *
* * * *
* * * *

Your program should ask the user how wide and how high to make the rectangle. Then, it should draw the rectangle.

Things You Should Know About User Input

You can ask the user for numbers and receive them using the `input()` command. For example, you can do this to ask for the width of the rectangle:

```python
width = input("How wide is the rectangle? ")
```

This will cause the message in quotes to be displayed, and the program will pause until the user types a number and hits the enter key. After that, the number typed by the user will be stored in the `width` variable.

Things You Should Know About User Output

You can show messages to the user with the `print` command. For example, you can say hello to the user like this:

```python
print "Hello"
```

This will display a line of output with the message in the quotes. If you want to display part of a message, but not complete the line, you can add a comma at the end of the statement, like this:

```python
print "Hello",
```

This will display the message in the quotes, followed by a space, but the line will not be ended.

Things You Should Know About Loops

Loops are used to repeat the same commands many times. For example, to say hello to the user 3 times, we could use this loop:

```python
for i in range(3):
    print "Hello"
```

Note the 3, in the line of code. This tells the program how many times to repeat the `print` command.

In this problem, you probably want to repeatedly repeat some printing. That’s OK. Just indent a loop inside of a loop to have the loop be repeated.
for j in range(4):
    for j in range(3):
        print "+(+),
        print "="

Tasks:

- Edit `box.py` to make a program that will draw a rectangle of any size specified by the user.
- The sample box uses the `*` character to draw the rectangle, you can use whatever you want. However, spaces don't look very impressive.
- Can you find how to use `raw_input()` to let the user specify the character to use?
- Can you just show the outline of the box, instead of having it filled?

Download

- Box