Intro to Python

Assignment

Exercise : Right Triangle

Choices

This exercise is designed to give you experience with using if statements to choose which action to take. You should have completed the Box exercise before starting this one.

Your program will also use loops and ask the user for information.

Right Triangles

Your program must draw a right triangle with the straight edge on the right, using text output. For example, a right triangle that is 5 rows high looks like this:

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

Your program should ask the user how tall to make the right triangle. Then, it should draw the triangle.

Things You Should Know Already

Look at the Box exercise to remember how to ask for user input, how to display output and how to use loops to repeat actions.

Things You Should Know About If Statements

If statements are used to allow your program to choose which action to take. For example, to have the program choose which message to display, based on the input from a user we could:

```python
num = input("Number please? ")
if num > 9:
    print "Nice! Double digits."
else:
    print "Single digits are OK."
```

Note the `if` and `else` in the code. This is where we tell the program to choose one of two options.

In this exercise, you probably want to have your program choose between displaying a space or an asterisk, depending on what part of the line you are on. This code will display spaces on the left side of a line and asterisks on the right side of a line.

```python
for j in range(5):
    if j >= 3:
        print "*",
    else:
        print " ",
```

Tasks:

- Edit `right_triangle.py` to make a program that will draw a right triangle of any height specified by the user.
- The sample program uses the `*` character to draw the shape, 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 triangle, instead of having it filled?
- Can you draw an isosceles triangle like this?
Isosceles triangle:

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

Download

- Right Triangle