Lab 3-1 - Print Triangles

Goals

Practice using a while loop

Setup

- In PyCharm, create a new project or open an existing one (such as Labs)
- Create a new Python file using the following naming convention:

```
ITP115_L3_1_LastName_FirstName
```

(replace LastName with your last/family name and FirstName with your first name)

• Your new file must begin with comments in the following format (replace the *name* and *email* with your actual information):

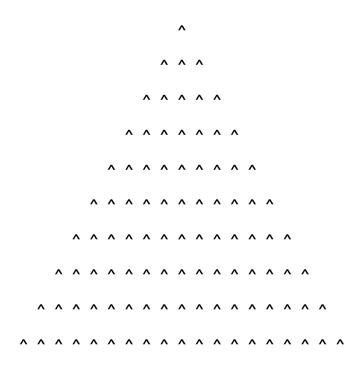
```
# Name, USC email
# ITP 115, Spring 2020
# Lab 3-1
```

Requirements

Your program must perform the following:

- Write a program that uses a while loop to produce a triangle.
- Triangle should be 10 lines tall
- In order to **center** the triangle, you will need to include initial spaces on each line
- Bottom row of triangle has 19 ^ symbols
- Between every ^ symbols is a single **space**
- Hint #1:
 - You can use the * to repeat strings. For example, print("hello" * 4)
 will print hellohellohello
- Hint #2:
 - You need at least one while loop to control how many rows to print
 - You will most likely need two counters:
 - numSpaces to track initial spaces on each line
 - numSymbols to track how many symbols are printed on each line

Sample Output



Here is an alternate way to visualize the triangle. The initial spaces are represented as \pm symbols and the inner spaces are represented as \pm

++++++++++++++++++-^
++++++++++++++-^_^
++++++++++++-^_^_^_^
++++++++++-^_^_^_^_^_^
+++++++++-^_^_^_^_^_^_^_^
+++++++-^_^_^_^_^_^_^_^_^
+++++_^_^_^_^_^_^_^_^_^
++++_^_^_^_^_^
++_^_^_^_^_^

Deliverables and Submission Instructions

- Create a zip file containing your Python code. This cannot be done within PyCharm. Find the file or folder on your computer and compress it.
 - a. Windows:
 - 1. Using File Explorer, select your lab file
 - 2. Right click
 - 3. Send to ->
 - 4. Compressed (zipped) folder
 - b. Mac OSX:
 - 1. Using Finder, select your lab file
 - 2. Right click
 - 3. Compress "FileName"
- Upload the zip file to your Blackboard section:
 - 1. On Blackboard, click on the Labs item in the course menu on the left.
 - 2. Click on the specific item for this assignment (starts with L and a number).
 - 3. Click on the Browse My Computer button and select your zip file.
 - 4. Click the Submit button.