Jason Vessella

CSC 201

Program 1 Report

**Introduction**

The objective of this program is to print various shapes such as pyramids, parabolas, and a circle into the Python shell window, using characters entered by the user as the “building blocks”.

**Methods**

To make life a little easier, the program is divided up into functions, even though they were not required. The most important specific variable used in this program would be the symbols variable. It is placed before the for loop in each function as an empty string, so that it can be manipulated within the loop. The loops add characters to the string, so that the proper shape can be printed into the Python shell. Each function is named exactly what they print. The half pyramid is simple, and just adds one typed character per level of pyramid. The full pyramid was a little more difficult, and it adds spaces before typing the required characters. The amount of spaces depends on the levels asked for, and results in a perfectly symmetrical pyramid. The parabola multiplies i and then divides it by 4, setting that = to the y variable, and prints a period for the parabola’s values.

**Discussion**

The most challenging part of this program was the circle, as I never actually got it to work, but I have left my unfinished code within the file. The only bug I have found in this program is that if you carefully look at the parabola, the end dots on the right do not line up, and I am not really sure how to fix this, but other than that it runs well.

**Report Questions**

1. The program does still work if a string of characters is entered, as long as they are entered in quotations. The pyramid simply gets wider faster, as it prints the string of characters every time it would only print one.
2. The symmetrical pyramid does not work if you enter multiple characters in the string, instead it becomes a horrendously lopsided structure. The function does not account for proper spacing on the left side of the pyramid if multiple characters are used.