**Mark Eatough**

**CSIS 2430 9:00 Class**

**Programming Project 1**

**Factorial Program**

**Assignment objective:**

With your newly chosen programming language, your goal is to implement factorial for a prompted integer.

**What Worked?:**

In this first program I was able to figure out how to take user input, and then manipulate it using a method. My factorial method worked with all of the numbers I tested. Using a while statement that used a Boolean value to test for the exit condition worked will in place of a do while loop. Nesting my factorial method inside of my while loop worked well for this assignment.

**What did not work?:**

The only programming languages I had used prior to writing this assignment were Java and C++ so in my first attempts to write code I was trying syntax used for both of these languages to no avail. First I tried to put my code written for methods, looping statements and if statements in between curly braces which failed. When I figured out that this was improper syntax for python I then indented the code within my methods, loops and if statements, but forgot to put a “:” after the headers. Another thing I tried that did not work was a do while loop which is not available in python. The last thing I tried that did not work was putting my initial comments(name, program title, brief program explanation etc.) between a “/\*” and a “\*\.”

**Comments:**

This was a good first programming assignment. The program was fairly simple enough to write, yet still challenging because I had obviously never used python before and I needed to work to get the correct syntax for the language

'''  
\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*   
 \* Discrete Structures  
 \* Factorial Program  
 \* Programmer: Mark Eatough  
 \* Course: CSIS 2430   
 \* Created August 25, 2013  
   
 \*This program Prompts the user to enter an integer, and  
 \*then outputs the factorial of that integer. The program  
 \*will continuously prompt the user and output the factorial  
 \*until a negative number is entered  
 \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*  
'''  
  
#condition tested for exiting loop  
exit = False  
#tell the user what the program will do  
print "This program finds the factorial of integer you will enter\n\n"  
  
#Beginning of what is effectively a do while loop  
while exit == False:  
 #prompt user to enter a number  
 num = input("Please enter a positive integer(enter negative number to exit program): ")  
 #check to see of number is negative  
 if num < 0:  
 #change exit variable to true if number is negative  
 exit = True  
 print "\n\n\nGoodbye"  
 #if number is positive find factorial  
 else:  
 #factorial function  
 def factorial(n):  
 temp = n-1  
 while temp > 0:  
 n \*= temp  
 temp-=1   
 return n  
 #end factorial function  
 #print statement to output user number and factorial of that number  
 print "\nThe factorial of ", num, " is ", factorial(num), "\n\n"  
#End of "do while" loop

