Honors Computer Science Python
Mr. Clausen
Program 1A, 1B

Program 1A Comments And Output (15 points)

Write a program to identify the owner of the program using comments and print statements. Use a DocString (multi-line comment) at the beginning of the program and use print statements to display your output. To see a model for this program look at the source code for the program "taxform.py" in the network directory titled: "HnrCSPythonFiles". Look in the folder "Student Data Files" and "Ch_02_Student_Files".

1. Use a DocString at the beginning of the program for your comments. Type comments to display the following information. Include your Name, School I.D. Number, Program Number, Program Name, Honors Computer Science Python, Period Number, Starting Date, Due Date, and a description of the program in the comment section. Format your comments to follow the example shown below:

```
"""
*******************************************************************************
*                                                                             *
* Your Name Here Your ID Number Here                                          *
*                                                                             *
* Program 1A    Comments and Output                                           *
*                                                                             *
* Honors Computer Science Python      Period ?                                *
*                                                                             *
* Starting Date: ?/?/20?? Due Date: ?/?/20??                                  *
*                                                                             *
* This program will identify the owner of this source code                    *
* through the use of comments. It will also identify                          *
* who the output belongs to through the use of print statements.              *
* This is an Python Template for use in future HTML Projects.                 *
* This is a DocString in Python                                               *
*******************************************************************************
"""
```

2. Leave a blank line after the DocString.

3. Type the following single line comment:
   #--------------------------Display My Information--------------------------
   Type "print statements" to display the following information. Include your Name, School I.D. Number, Program Number, Program Name, Honors Computer Science Python, and Period Number. Format your output to look nice, be readable, include the asterisks, and not take up more than 8-10 lines just like the example below. Do not use the tab key when formatting your output, use the spacebar instead, otherwise the output will not "line up". As you type all your programs this year, try not to type past the 80-column line whenever possible.

```
****************************************************************
*                                                              *
*   Your Name Here              Your ID Number Here            *
*                                                              *
*   Program 1A                  Comments and Output            *
*                                                              *
*   Honors Computer Science Python                             *
*                                                              *
****************************************************************
```

4. Leave a blank line after the print statements listed above.

5. Finish your program with these last 2 lines of code.
    print ("")
    input("Press enter to quit the program")

6. Save your program as LastNameFirstNameP1A.py.

7. When you are finished with your program, have tested it thoroughly to make sure that your
    program is correct, and are sure that you don't need to make any changes, then save your
    program in the "T" network mapping, in the Program 1A folder.

8. Use this program as a "template" for all future programs. **Include this style of comments and
    output for every program throughout the class.**

Program 1B Circle (15 points)

Write a program to calculate the diameter, circumference, and area of a circle. Ask the user to enter a
value for the radius. Make your program user friendly by prompting them for this value. Use one line
comments to separate this program into its parts: input, calculations, and output.

1) Use a `DocString` at the beginning of the program for your comments. Type comments at the
    beginning of the program to display your name and other information just like those used for
    program 1A. **Be sure to change the program name, program number, and program
    description.**

2) Leave a blank line after the DocString.

3) Declare and initialize a constant for PI. Don't forget that constant names should use
    ALL_CAPS.

4) Leave a blank line after the constant.

5) Initialize all of the variables that are to be used in this program. Initialize each variable on a
    separate line. (Initialize integers to 0 (zero), decimal numbers to 0.0, strings to "" (double quotes
    with nothing in between them, and Boolean variables to False). Make sure that you use
    descriptive identifiers for all of your variables to model "self-documenting code", and that all

variables are initialized at this place in the program. **You need variables for radius, diameter, circumference, and area. Initialize all of these as float variables.**

6) Leave a blank line after the variable initialization statements.

7) Type the following comment:
   #---------------------------Display My Information--------------------------
   Follow this comment with print statements to display your name and period output just like those used for program 1A. **Be sure to change the program name, and program number.**

8) Leave a blank line after the print statements listed above.

9) For the Input section, type the following comment:
   #----------------------------------Input------------------------------------
   Ask the user for the radius. Type cast this to a float variable in your "input statement".

10) For the Calculations section, type the following comment:
    #-------------------------------Calculations-------------------------------
    Perform all of the calculations.
    The formulas are:
    diameter = 2 * radius
    circumference = diameter * PI
    area = PI * radius **2

11) For the Output section, type the following comment:
    #------------------------------- Output-------------------------------
    Echo out the value of the radius as well as the results of your calculations for the diameter, circumference, and area of the circle. The output should look something like the following:

    The radius is: 2.0
    The diameter is: 4.0
    The circumference is: 12.56
    The area is: 12.56

12) Finish your program with these last 2 lines of code.
    print ("")
    input("Press enter to quit the program")

13) Save your program as LastNameFirstNameP1B.py.

14) When you are finished with your program, have tested it thoroughly to make sure that your program is correct, and are sure that you don't need to make any changes, then save your program in the "T" network mapping, in the Program 1B folder.