Task 1:

A)

Logic Operations	Hand Calculation	Python Calculation
A and B	0	0
A or B	1	1
A == B	0	0
(A and B) == (A or B)	0	0
A != B	1	1
A < B	0	0
A <= B	0	0
A = B	1	0

B) The answer for the last logic operation is different because "=" is not a logic operator, but is used to define variables
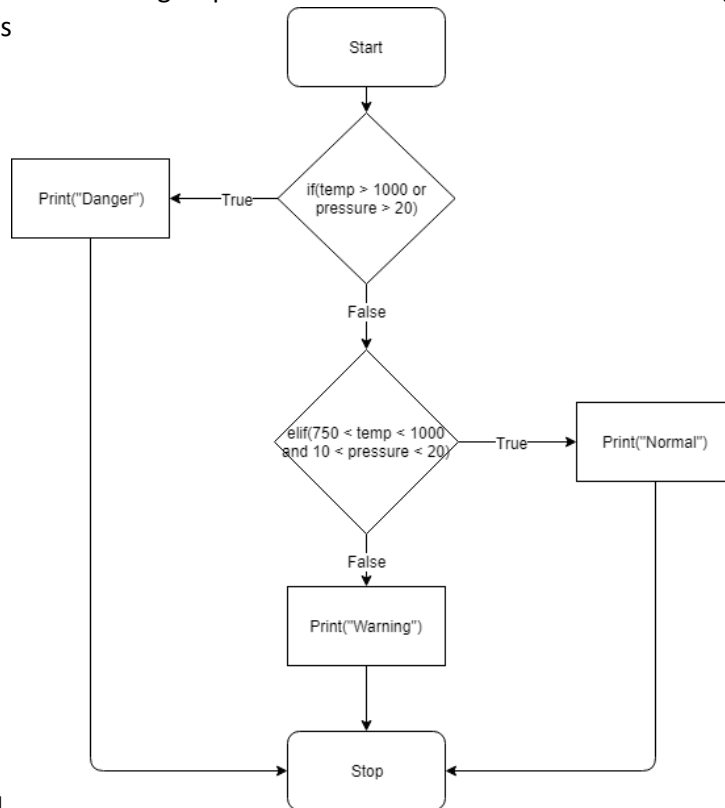
C) 1. A. Normal

   B. Danger

   C. Warning

2. Logical, conditional and comparison operations are important because they allow for a program to have varying actions depending on the values within the program. Without conditionals, other, much more complicated selection methods, such as selection by calculation, must be used.
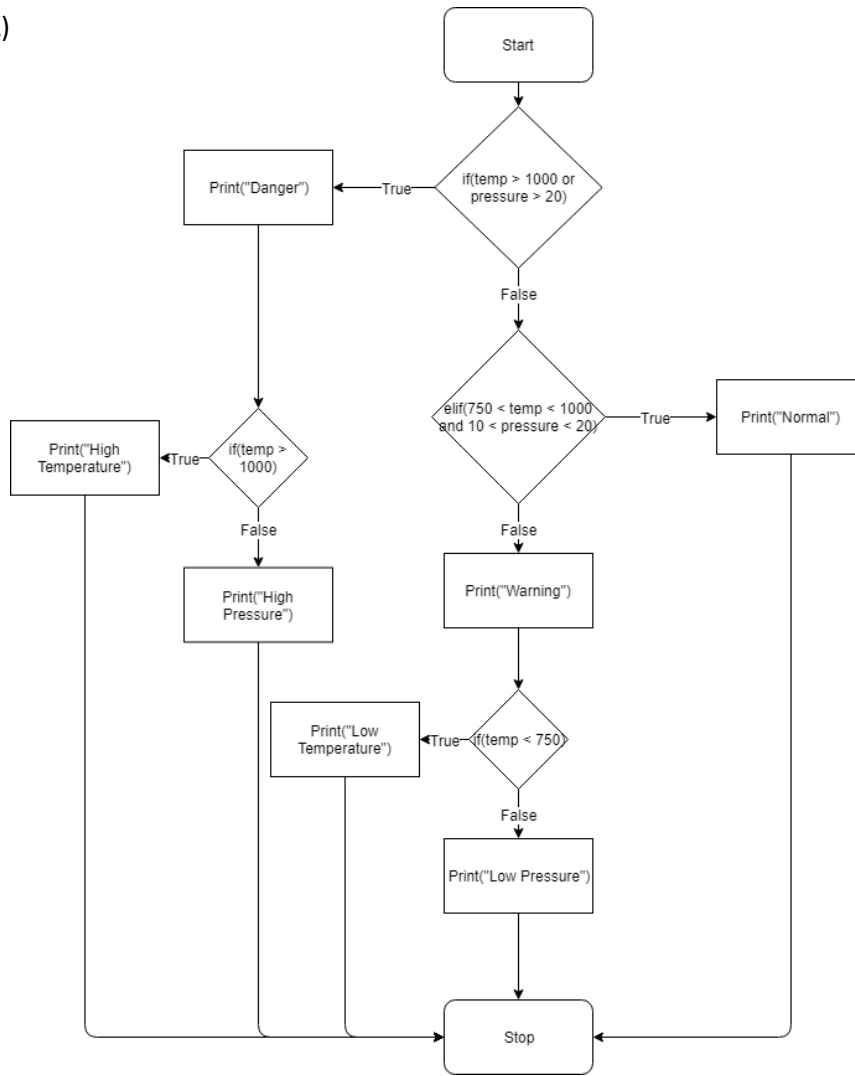
D) A. Normal

   B. Danger

   C. Warning

Task 2:

A)

Flowchart:
- Start
- if(temp > 1000 or pressure > 20)
  - True → Print("Danger") → if(temp > 1000)
    - True → Print("High Temperature")
    - False → Print("High Pressure")
  - False → elif(750 < temp < 1000 and 10 < pressure < 20)
    - True → Print("Normal")
    - False → Print("Warning") → if(temp < 750)
      - True → Print("Low Temperature")
      - False → Print("Low Pressure")
- Stop

1. A. Normal
   B. Danger
      High Pressure
   C. Warning
      Low Temperature

B) A. Normal

   B. Danger

      High Pressure

   C. Warning

      Low Temperature

Task 3:
1. print()
2. distanceRover only has two parameters while solarPanelArea has three parameters
3. There are two values passed into distanceRover and three values passed into solarPanelArea
4. A main program contains the main code of the program and is not called by other functions. User defined functions allow for a simplification of the code as it allows for less redundancy and more organization.

Task 4:
1. There is a NameError because R is not defined in the main program
2. The program is able to run as it is meant to
3. There is a NameError because area is not defined in the main program
4. There is a NameError because area is not defined in the main program
5. This tells me that while local variables are only in functions, global variables are through the entire program

1. S1 and S2 are local variables to the function rectArea