I, Questions:

1, What is Boolean? Write down 3 different expression that results a Boolean type (i.e. 5 == 6)

A Boolean value is either true or false

Python, the two Boolean values are True and False (the capitalization must be exactly as shown), and the Python type is bool.

>>> type(True)

>>> type(true)

Traceback (most recent call last):

File "", line 1, in NameError: name ’true’ is not defined.

A Boolean expression is an expression that evaluates to produce a result which is a Boolean value. For example, the operator == tests if two values are equal. It produces (or yields) a Boolean value:

>>> 5 == (3 + 2) # Is five equal 5 to the result of 3 + 2?

True >>> 5 == 6 False

>>> j = "hel"

>>> j + "lo" == "hello"

True

The == operator is one of **six common** comparison operators which all produce a bool result; here are all six:

x == y # Produce True if ... x is equal to y

x != y # ... x is not equal to y

x > y # ... x is greater than y

x < y # ... x is less than y

x >= y # ... x is greater than or equal to y

x <= y # ... x is less than or equal to y

2.What is a flow chart? Draw flow chart for the following code snippet: (you can draw on a paper, take a picture of it)

The Boolean expression after the if statement is called the condition. If it is true, then all the indented statements get executed. If not, then all the statements indented under the else clause get executed

**Flowchart of an if statement with an else clause**

3. What is nested conditionals? Write a piece of code that uses nested conditionals

One conditional can also be nested within another. (It is the same theme of composibility, again!) We could have written the previous example as follows:

 For example, assume we have two integer variables, x and y. The following pattern of selection shows how we might decide how they are related to each other.

**if** x < y:

**print**("x is less than y")

**else**:

**if** x > y:

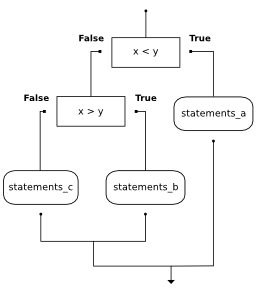
**print**("x is greater than y")

**else**:

**print**("x and y must be equal")

The outer conditional contains two branches. The second branch (the else from the outer) contains another if statement, which has two branches of its own. Those two branches could contain conditional statements as well.

The flow of control for this example can be seen in this flowchart illustration.



x = 9

y = 10

if x < y:

print("x is less than y")

else:

if x > y:

print("x is greater than y")

else:

print("x and y must be equal")

**II, Turtle**

**a.**

from turtle import \*

shape("triangle")

color("red")

right(30)

for i in range(4):

forward(100)

left(60)

forward(100)

left(120)

forward(100)

left(60)

forward(100)

right(150)

mainloop()

**b.**

rom turtle import \*

color("blue")

for \_ in range(3):

forward(100)

left(120)

color("red")

for \_ in range(4):

forward(100)

left(90)

color("blue")

for \_ in range(5):

forward(100)

left(72)

color("red")

for \_ in range(6):

forward(100)

left(60)

mainloop()

**III. Serious;**

**A,**

height = float(input("Enter your height in cm?"))

weight = float(input("Enter your weight in kg?"))

m = int(height)\*0.01

BMI = int(weight)/(m\*m)

print(BMI)

if BMI < 10:

print("Severely underweight")

elif 16 < BMI < 18.5:

print("Underweight")

elif 18.5 < BMI < 25:

print("Normal")

elif 25 < BMI <30:

print("Overweight")

else:

print("Obese")

print("Good bye")

**B,**

n = input("Entern number?")

import math

n = math. factorial(n)

print("n!=",n)

**C.**print("Hello", end="")

print(", my name", end="")

print(" is B-max")

**D.**

**a,b**

n = int(input("Number of star?"))

for i in range(n):

print("\*",end="")

**c,d**

n = int(input("Enter number of stars?"))

n = int((n-1)/2)

for \_ in range(n):

print("x \* ", end="")

print("x")

**f,g**

n = int(input("number of star in collum? "))

m = int(input("number of star in line?"))

for i in range(m):

for i in range(n):

print("\*", end="")