1) What is the output of the following if statement

In [14]:

```
a, b = 12, 5
if a + b:
    print('True')
else:
  print('False')
```

```
True
```

2) Given the nested if-else structure below, what will be the value of x after code execution completes

In [15]:

```
x = 0
a = 0
b = -5
if a > 0:
    if b < 0:
        x = x + 5
    elif a > 5:
        x = x + 4
    else:
        x = x + 3
else:
    x = x + 2
print(x)
```

```
2
```

3) Given the nested if-else below, what will be the value x when the code executed successfully

In [16]:

```
x = 0
a = 5
b = 5
if a > 0:
    if b < 0:
        x = x + 5
    elif a > 5:
        x = x + 4
    else:
        x = x + 3
else:
    x = x + 2
print(x)
```

```
3
```

4) A school has following rules for grading system:

a. Below 25 - F b. 25 to 45 - E c. 45 to 50 - D d. 50 to 60 - C e. 60 to 80 - B f. Above 80 - A Ask user to enter marks and print the corresponding grade

In [1]:

```
m=int(input("enter marks"))
if(m<25):
    print(" Grade F")
elif(m>=25 and m<45):
    print(" Grade E")
elif(m>=45 and m<50):
    print(" Grade D")
elif(m>=50 and m<60):
    print(" Grade C")
elif(m>=60 and m<80):
    print(" Grade B")
elif(m>=80):   #else:
    print(" Grade A")
```

```
enter marks83
 Grade A
```

5) A shop will give discount of 10% if the cost of purchased quantity is more than 1000.

Ask user for quantity Suppose, one unit will cost 100. Judge and print total cost for user.

In [6]:

```
quantity = int(input("enter the quantity number:"))
unit = 100
discount_price_range = 1000
priceOfyour = quantity * unit
TenpercentofyourPrice = ((10 * priceOfyour)/100)
afterdiscountPrice = priceOfyour - TenpercentofyourPrice
if priceOfyour <= 1000:
    print("Sorry. There is no discout you will get.")
else:
    print("Congratulation!!! Here is your after discount Price:", afterdiscountPrice)
```

```
enter the quantity number:25
Congratulation!!! Here is your after discount Price: 2250.0
```

6) Write a program to print absolute value of a number entered by user. E.g.-

INPUT: 1 OUTPUT: 1 INPUT: -1 OUTPUT: 1

In [8]:

```
x=float(input())
x=abs(x)
if(x%1.0):          #when x is a floating point number
    print(x)
else:
    print(int(x))   #when x is an integer
```

```
-5
5
```

7) Write a Python program that accepts a string and calculate the number of digits and letters.

Sample Data : Python 3.2 Expected Output : Letters 6 Digits 2

In [12]:

```
str = "Python 3.2 "
digit=letter=0
for ch in str:
   if ch.isdigit():
      digit=digit+1
   elif ch.isalpha():
      letter=letter+1
   else:
      pass
print("Letters:", letter)
print("Digits:", digit)
```

```
Letters: 6
Digits: 2
```

8) Write a Python program to check whether an alphabet is a vowel or consonant.

Expected Output: Input a letter of the alphabet: k
k is a consonant.

In [14]:

```
l = input("Input a letter of the alphabet: ")

if l in ('a', 'e', 'i', 'o', 'u'):
 print("%s is a vowel." % l)
elif l == 'y':
 print("Sometimes letter y stand for vowel, sometimes stand for consonant.")
else:
 print("%s is a consonant." % l)
```

```
Input a letter of the alphabet: k
k is a consonant.
```

9) Write a Python program to check a triangle is equilateral, isosceles or scalene. Go to the editor

Note : An equilateral triangle is a triangle in which all three sides are equal. A scalene triangle is a triangle that has three unequal sides. An isosceles triangle is a triangle with (at least) two equal sides. Expected Output:
Input lengths of the triangle sides:
x: 6
y: 8
z: 12
Scalene triangle

In [15]:

```
print("Input lengths of the triangle sides: ")
x = int(input("x: "))
y = int(input("y: "))
z = int(input("z: "))

if x == y == z:
    print("Equilateral triangle")
elif x==y or y==z or z==x:
    print("isosceles triangle")
else:
    print("Scalene triangle")
```

```
Input lengths of the triangle sides:
x: 3
y: 4
z: 2
Scalene triangle
```

10) Write an If elif else condition for finding the largest number in 3 numbers.

In [20]:

```
# Take 3 numbers from user
num1 = int(input("\nEnter 1st number : "))

num2 = int(input("\nEnter 2nd number : "))

num3 = int(input("\nEnter 3rd number : "))

# Check fro number 1, 2 and 3.
if (num1 > num2) and (num1 > num3):
    largest = num1
elif (num2 > num1) and (num2 > num3):
    largest = num2
else:
    largest = num3

print("The largest number is", largest)
```

```
Enter 1st number : 100

Enter 2nd number : 010

Enter 3rd number : 001
The largest number is 100
```