lab 4

In [1]:

```
#program no:1
a=400
b=500
if a==400:
    print("The value of a is equal to 400")
if a<b:
    print("The value of a is less than b")
if a>b:
    print("The value of a is greater than b")
if a!=b:

    print("The value of a is not equal to b")
if a<=b:
    print("The value of a is less than or equal to b")
if a>=b:
    print("The value of a is greater than or equal to b")
```

```
The value of a is equal to 400
The value of a is less than b
The value of a is not equal to b
The value of a is less than or equal to b
```

In [2]:

```
#program no:1
a=500
b=400
if a==400:
    print("The value of a is equal to 400")
if a<b:
    print("The value of a is less than b")
if a>b:
    print("The value of a is greater than b")
if a!=b:

print("The value of a is not equal to b")
if a<=b:
    print("The value of a is less than or equal to b")
if a>=b:
    print("The value of a is greater than or equal to b")
```

```
The value of a is greater than b
The value of a is not equal to b
The value of a is greater than or equal to b
```

```
In [3]:
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```
#problem no:2
a=10
b=5
c=20
if a>b and c>a:
  print("Both conditions are true")
```

Both conditions are true

In [4]:

```
#problem no:3
a=105
b=50
c=200
if a>b and c>a:
  print("At least one of the condition are true")
```

At least one of the condition are true

In [16]:

```
#problem no:4
#python program to display all the prim number within an interval
l_limit=int(input("Enter lower limit range:"))
u_limit=int(input("Enter lower upper range:"))
print("Prime number between ",l_limit,"and",u_limit,"are:")
for number in range(l_limit,u_limit+1):

if number>1:

for i in range(2,number):
    if(number%i)==0:
        break
else:
    print(number)
```

Enter lower limit range:5
Enter lower upper range:50
Prime number between 5 and 50 are:

In [15]:

```
#problem no:5
initial_value=eval(input("Enter the initial value for the range"))
final_value=eval(input("Enter the final value for the range:"))
number=range(initial_value, final_value)
sum=0
for value in number:
sum=sum+value
print ("The sum is ",sum)
```

Enter the initial value for the range2 Enter the final value for the range:27 The sum is 350

In [18]:

```
#problem no:6
row_num=int(input("Input number of rows"))
col_num=int(input("Input number of columns:"))
multi list=[[0 for col in range(col num)]for row in range(row num)]
for row in range(row num):
for col in range(col num):
 multi_list[row][col]=row*col
print(multi list)
Input number of rows4
Input number of columns:45
5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 2
5, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 4
4], [0, 2, 4, 6, 8, 10, 12, 14, 16, 18, 20, 22, 24, 26, 28, 30, 32, 34, 36,
38, 40, 42, 44, 46, 48, 50, 52, 54, 56, 58, 60, 62, 64, 66, 68, 70, 72, 74,
76, 78, 80, 82, 84, 86, 88], [0, 3, 6, 9, 12, 15, 18, 21, 24, 27, 30, 33, 3
6, 39, 42, 45, 48, 51, 54, 57, 60, 63, 66, 69, 72, 75, 78, 81, 84, 87, 90, 9
3, 96, 99, 102, 105, 108, 111, 114, 117, 120, 123, 126, 129, 132]]
In [19]:
#problem no:7
datalist=[300,12.65,5+6j,True,'Faisal',{"color":"blue","color":'red'}]
for item in datalist:
 print("Type of ",item,"is",type(item))
       300 is <class 'int'>
Type of
Type of 12.65 is <class 'float'>
Type of (5+6j) is <class 'complex'>
Type of True is <class 'bool'>
Type of Faisal is <class 'str'>
Type of {'color': 'red'} is <class 'dict'>
```

In [22]:

```
#problem no 8
print("\t\t\t ASCII Character")
for i in range(0,256):
    print(i, "=",chr(i),end="\t")#end"\t" is used to place a tab after the displayed steing in print("\n")

ASCII Character

0 =
1 = □
2 = □
3 = □
4 = □
5 = □
6 = □
7 = □
8 =
```

In [25]:

```
#problem no 9
print("Python program to convert decimal number into binary, octal and hexadecimal number sy
for i in range(0,17):
    print("The decimal value of",i,"is:","in binary its:",bin(i),"in octal its:",oct(i),"ar
print("That's the end of the program with range from 1 to 16")
Python program to convert decimal number into binary,octal and hexadecimal n
umber system
The decimal value of 0 is: in binary its: 0b0 in octal its: 0o0 and in Hexad
ecimal its: Hexadecimal its: 0x0
The decimal value of 1 is: in binary its: 0b1 in octal its: 0o1 and in Hexad
ecimal its: Hexadecimal its: 0x1
The decimal value of 2 is: in binary its: 0b10 in octal its: 0o2 and in Hexa
decimal its: Hexadecimal its: 0x2
The decimal value of 3 is: in binary its: 0b11 in octal its: 0o3 and in Hexa
decimal its: Hexadecimal its: 0x3
The decimal value of 4 is: in binary its: 0b100 in octal its: 0o4 and in Hex
adecimal its: Hexadecimal its: 0x4
The decimal value of 5 is: in binary its: 0b101 in octal its: 0o5 and in Hex
adecimal its: Hexadecimal its: 0x5
The decimal value of 6 is: in binary its: 0b110 in octal its: 0o6 and in Hex
adecimal its: Hexadecimal its: 0x6
The decimal value of 7 is: in binary its: 0b111 in octal its: 0o7 and in Hex
adecimal its: Hexadecimal its: 0x7
The decimal value of 8 is: in binary its: 0b1000 in octal its: 0o10 and in H
exadecimal its:Hexadecimal its: 0x8
The decimal value of 9 is: in binary its: 0b1001 in octal its: 0o11 and in H
exadecimal its: Hexadecimal its: 0x9
The decimal value of 10 is: in binary its: 0b1010 in octal its: 0o12 and in
Hexadecimal its: Hexadecimal its: 0xa
The decimal value of 11 is: in binary its: 0b1011 in octal its: 0o13 and in
Hexadecimal its: Hexadecimal its: 0xb
The decimal value of 12 is: in binary its: 0b1100 in octal its: 0o14 and in
Hexadecimal its: Hexadecimal its: 0xc
The decimal value of 13 is: in binary its: 0b1101 in octal its: 0o15 and in
Hexadecimal its: Hexadecimal its: 0xd
The decimal value of 14 is: in binary its: 0b1110 in octal its: 0o16 and in
Hexadecimal its: Hexadecimal its: 0xe
The decimal value of 15 is: in binary its: 0b1111 in octal its: 0o17 and in
Hexadecimal its: Hexadecimal its: Oxf
The decimal value of 16 is: in binary its: 0b10000 in octal its: 0o20 and in
```

Hexadecimal its: Hexadecimal its: 0x10

That's the end of the program with range from 1 to 16

In [26]:

```
#Program No 10

n=5;
for i in range(n):
    for j in range(i):
        print('*',end="")
    print("")

for i in range(n,0,-1):
    for j in range(i):
        print('*',end="")
    print("")
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In [30]:

```
#Program No 11

print("This program will count toatal number of vowels from user defined sentence")
string=input("enter your string:")
vowels=0
for i in string:
    if(i=='a' or i=='e' or i=='i' or i=='o' or i=='u' or i=='A' or i=='E' or
i =='I' or i=='0' or i=='U'):vowels=vowels+1
print("Number of vowels are:")
print(vowels)
```

This program will count toatal number of vowels from user defined sentence enter your string:Quide Azam Muhammad Ali Jinnah
Number of vowels are:
12

In []: