

1. Syntax of if - else and nested if - else
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Batch 1

In [1]:

```
""" if(condition):
    body
    if(condition):
        body
    elif (condition):
        body
    else:
        body
elif (condition):
    body
else:
    body """
print()
```

2. In given two numbers, check which number is greater
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In [2]:

```
n1 = int(input("Enter a number:"))
n2 = int(input("Enter a number:"))
if(n1>n2):
    print("%d is greater than %d"%(n1,n2))
else:
    print("%d is greater than %d"%(n2,n1))
```

Enter a number:5
Enter a number:6
6 is greater than 5

3. Program to increment the number if number is positive
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In [3]:

```
n = int(input("Enter a number : "))
if(n>0):
    n += 1
print("New Number : %d"%n)
```

Enter a number : 5
New Number : 6

4. Program to display if person is eligible for voting or not. If not Display the Age.
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In [4]:

```
age = int(input("Enter age : "))
if (age>=18):
    print("Eligible for voting")
else:
    print("Age = %d\nnot eligible for voting"%age)
```

Enter age : 17
Age = 17
not eligible for voting

5. Program to determine whether numbers are equal or not
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In [5]:

```
n1 = int(input("Enter a number:"))
n2 = int(input("Enter a number:"))
if(n1==n2):
    print("Two numbers are equal")
else:
    print("Two number are not equal")
```

Enter a number:5
Enter a number:5
Two numbers are equal

6. Write a program to check number is even or odd
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In [6]:

```
n = int(input("Enter a number:"))
if (n == 0):
    print("Number is zero")
elif (n%2 == 1):
    print("Number is odd")
elif (n%2 == 0):
    print("Number is even")
```

Enter a number:5
Number is odd

7. Program to enter a number and check its interval in (0-10), (11-20), (21-30), (31-40), (41-50)
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In [7]:

```
n = int(input("Enter a number:"))
if(0<=n<=10):
    print("Number present in range(0-10)")
elif(11<=n<=20):
    print("Number present in range(11-20)")
elif(21<=n<=30):
    print("Number present in range(21-30)")
elif(31<=n<=40):
    print("Number present in range(31-40)")
elif(41<=n<=50):
    print("Number present in range(41-50)")
else:
    print("Number Outside given ranges")
```

Enter a number:34
Number present in range(31-40)

8. Write a program to find the greatest number among three numbers

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In [8]:

```
n1 = int(input("Enter a number:"))
n2 = int(input("Enter a number:"))
n3 = int(input("Enter a number:"))
if(n1>n2 and n1>=n3) or (n1>=n2 and n1>n3):
    print("Greates number =",n1)
elif(n2>n1 and n2>=n3) or (n2>=n1 and n2>n3):
    print("Greatest number =",n2)
elif(n3>n1 and n3>=n2) or (n3>=n1 and n3>n2):
    print("Greatest number =",n3)
else:
    print("Three numbers are equal")
```

Enter a number:5
Enter a number:1
Enter a number:7
Greatest number = 7

9. Write a program to print the color name if user enter first letter of color name

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In [9]:

```

colors = ['black', 'silver', 'gray', 'white', 'maroon', 'red', 'purple', 'fuchsia',
'green', 'lime', 'olive', 'yellow', 'navy', 'blue', 'teal', 'aqua']
ch = input("Enter First Letter of Color:")
print("Color starting with letter",ch)
for color in colors:
    if ch.upper() == color[0] or ch.lower()==color[0]:
        print(color)

```

Enter First Letter of Color:B
Color starting with letter B
black
blue

10. Perform Arithmetic Operation using if-else block (1. Addition, 2. Subtraction, 3. Multiplication, 4. Division, 5. Modulus)
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In [10]:

```

print("Arithmetic Operations\n1. Addition \n2. Subtraction\n3. Multiplication")
print("4. Division\n5. Modulus")
ch = int(input("Enter choice from above menu:"))
n1 = int(input("Enter a number:"))
n2 = int(input("Enter a number:"))

if(ch == 1):
    print("Sum =",n1+n2)
elif(ch == 2):
    print("Differnece =",n1-n2)
elif(ch == 3):
    print("Product =",n1*n2)
elif(ch == 4):
    print("Quotient =",n1/n2)
elif(ch == 5):
    print("Remainder =",n1%n2)

```

Arithmetic Operations
1. Addition
2. Subtraction
3. Multiplication
4. Division
5. Modulus
Enter choice from above menu:3
Enter a number:7
Enter a number:5
Product = 35

11. Program to print Prime Numbers in a given range
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In [8]:

```
n = int(input("Enter range:"))
print("Prime Numbers:")
for i in range(2,n+1):
    flag = 0
    for j in range(2,i//2+1):
        if i%j == 0:
            flag = 1
            break
    if flag == 0:
        print(i)
```

Enter range:100

Prime Numbers:

2
3
5
7
11
13
17
19
23
29
31
37
41
43
47
53
59
61
67
71
73
79
83
89
97

12. Program to check whether a given number is Armstrong or not.

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In [19]:

```
n1 = n = int(input("Enter a number:"))
s = 0
while(n1 != 0):
    dig = n1 % 10
    s += (dig**len(str(n)))
    n1 //= 10
if s==n:
    print("Armstrong Number")
else:
    print("Not Armstrong Number")
```

Enter a number:153
Armstrong Number

13. Program to check whether a given year is leap year or not.
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In [21]:

```
yr = int(input("Enter year:"))
if(yr%4==0 and yr%100!=0) or yr%400==0:
    print("Leap Year")
else:
    print("Not Leap Year")
```

Enter year:1900
Not Leap Year