

Agenda

CONTROL FLOW

- SEQUENTIAL
- DECISION CONTROL
- ITERATIVE(LOOPING) CONTROL STATEMENTS
- UNCONDITIONAL STMTS

Sequential stmts

In [1]:

```
a=100
b=200
print("Sum=", a+b)
print("END")
```

Sum= 300
END

Decision Control Statements

- Simple if
- if-else
- nested if
- if-elif-else

Simple if

In []:

```
if condition/test expression:
    statement1
    statement2
    .
    .
    .
    stmt n
```

In [2]:

```
n=int(input("enter any number"))
if n>0:
    print("Positive")
```

enter any number100
Positive

if-else

In []:

```
if condition/test expression:
    statement1
    statement2
    .
    .
    .
    statement n
else:
    statements
```

In [6]:

```
num=int(input("Enter any number"))
if num%2==0:
    print("Even")
else:
    print("ODD")
```

Enter any number15
ODD

nested if

In []:

```
if condition:
    if condition:
        stmt1
        stmt2
        .
        .
        stmt n
    else:
        stmt1
        stmt2
        .
        .
else:
    stmt
    stmt
```

In []:

```
# Largest of Three Numbers
```

In [7]:

```
a= int(input("Enter a value"))
b= int(input("Enter b value"))
c= int(input("Enter c value"))
if a>b:
    if a>c:
        print("a value is big")
    else:
        print("c value is big")
elif b>c:
    print("b value is big")
else:
    print("c is big")
```

Enter a value15

Enter b value25

Enter c value19

b value is big

if-elif-else

In []:

```
if condition:
    stmt1
    stmt2
    .
    .
elif condition:
    stmt1
    stmt2
    .
    .
else:
    stmt1
    stmt2
    ..
    ..
```

In [10]:

```
# Program to find the relation between two numbers
n1=int(input("Enter n1 value"))
n2=int(input("Enter n2 value"))
if n1==n2:
    print("BOTH ARE EQUAL")
elif n1>n2:
    print("n1 is greaterthan n2")
else:
    print("n1 is smaller than n2")
```

Enter n1 value489
Enter n2 value45689
n1 is smaller than n2

Iterative(Looping Control Statements)

- for
- while

for

In []:

```
for i in seq:
    list
    tuple
    dictionary
    range
```

In []:

```
for i in range(start,stop,stepsize):
    strt---->0
    stop---->terminating condition
    stepsize---->default(1)
    range(0,n)----->0,1,2,3,.....n-1
```

In [11]:

```
for i in range(10):  
    print(i)
```

0
1
2
3
4
5
6
7
8
9

In [13]:

```
for i in range(1,11):  
    print(i)
```

1
2
3
4
5
6
7
8
9
10

In [19]:

```
for i in range(0,101,5):  
    print(i,end=' ')
```

0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75 80 85 90 95 100

In [21]:

```
for i in range(10,0,-2):  
    print(i)
```

10
8
6
4
2

In []:

while

In [2]:

```
num=int(input("Enter any num"))
i=0
while i<num:
    print(i,end=' ')
    i+=1
print("STOP")
```

Enter any num100

0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27
28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52
53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77
78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 STOP

Unconditional Statements

- BREAK
- CONTINUE

In [3]:

```
for i in range(0,10):
    if i==6:
        print("LOOP TERMINATED OBNORMALLY")
        break
    print(i)
```

0
1
2
3
4
5
LOOP TERMINATED OBNORMALLY

In [4]:

```
for i in range(0,10):
    if i==6:
        print("LOOP TERMINATED OBNORMALLY")
        continue
    print(i)
```

0
1
2
3
4
5
LOOP TERMINATED OBNORMALLY
7
8
9

In []: