

## CONDITIONS

```
In [1]: x=4 #if
        r=x % 2
        if r==0:
            print('even number')
```

even number

```
In [2]: x=5 #if else
        r=x % 2
        if r==0:
            print('even number')

        else:
            print('odd number')
```

odd number

```
In [3]: x=7 #nested if and else
        r=x%2
        if r==0:
            print('even number')
            if x>5:
                print('greater number')
            else:
                print('lesser number')

        else:
            print('odd number')
            if x>5:
                print('greater number')
            else:
                print('lesser number')
```

odd number

greater number

```
In [4]: x=3 #if elif
        if x==1:
            print('one')
        elif x==2:
            print('two')
        elif x==3:
            print('three')
        elif x==4:
            print('four')
```

three

```
In [5]: x=6 #if elif else
        if x==1:
            print('one')
        elif x==2:
            print('two')
        elif x==3:
            print('three')
        elif x==4:
            print('four')
```

```
else:  
    print('higher number')
```

higher number

loop

WHILE LOOP

```
In [6]: x=5  
while x<=8:  
    print('DA')  
    x=x+1
```

DA

DA

DA

DA

```
In [7]: x=5  
while x<=8:  
    print('DA',x)  
    x=x+1
```

DA 5

DA 6

DA 7

DA 8

```
In [8]: x=10  
while x>=5:  
    print('DA')  
    x=x-1
```

DA

DA

DA

DA

DA

DA

```
In [9]: x=10  
while x>=5:  
    print('DA',x)  
    x=x-1
```

DA 10

DA 9

DA 8

DA 7

DA 6

DA 5

```
In [10]: x=1  
while x<=5:  
    print('DA')  
    y=1  
    while y<=3:  
        print('TECH')  
        y=y+1
```

```
x=x+1
print()
```

DA  
TECH  
TECH  
TECH

DA  
TECH  
TECH  
TECH

DA  
TECH  
TECH  
TECH

DA  
TECH  
TECH  
TECH

DA  
TECH  
TECH  
TECH

```
In [11]: x=1
while x<=5:
    print('DA', end=' ')
    y=1
    while y<=3:
        print('TECH', end=' ')
        y=y+1
    x=x+1
    print()
```

DA TECH TECH TECH  
DA TECH TECH TECH  
DA TECH TECH TECH  
DA TECH TECH TECH  
DA TECH TECH TECH

FOR LOOP

```
In [12]: x='nit'
for i in x:
    print(i)
```

n  
i  
t

```
In [13]: for i in range(5):
          print(i)
```

0  
1  
2  
3  
4

```
In [14]: for i in range(5): #break in for loop
         if i==3:
             break

         print(i)
```

0  
1  
2

```
In [15]: for i in range(10): #continue in for loop
         if i==3:
             continue
         print(i)
```

0  
1  
2  
4  
5  
6  
7  
8  
9

```
In [16]: for i in range(1,60):
         if i%2==0 or i%3==0:
             continue
         print(i)
```

1  
5  
7  
11  
13  
17  
19  
23  
25  
29  
31  
35  
37  
41  
43  
47  
49  
53  
55  
59

```
In [17]: for i in range(1,10):
         if i%2==0:
```

```

        print('even')
        continue
    print(i)

```

```

1
even
3
even
5
even
7
even
9

```

```

In [18]: for i in range(15):
        if i%2!=0:
            print('odd')
            continue

        print(i)

```

```

0
odd
2
odd
4
odd
6
odd
8
odd
10
odd
12
odd
14

```

```

In [19]: num=13 #for else
        for i in range(2,num):
            if num%i==0:
                print('not a prime number')

        else:
            print('prime number')

```

```
prime number
```

```

In [20]: for i in range(4): # nested for loop
        for j in range(4-i):
            print('#', end= ' ')

        print()

```

```

# # # #
# # #
# #
#

```

```

In [21]: for i in range(0,4):
        for j in range(1+i):

```

```
    print('#',end=' ')\n    print()
```

```
#\n# #\n# # #\n# # # #
```

```
In [22]: num=[12,15,17,20,22,23] #printing required numbers from a list\n         for num in num:\n             if num%2==0:\n                 print(num)
```

```
12\n20\n22
```

```
In [23]: num=[12,15,17,20,22,23]\n         for num in num:\n             if num%2==0:\n                 break\n         print(num)
```

```
12
```