

While loop

- While loop is used to execute block of code repeatedly until a particular condition is satisfied

Syntax for while loop

initialization while(condition): statements increment/decrement

```
# printing 1 to 10 numbers using while loop
i = 1
while(i<=10):
    print(i,end=' ')
    i=i+1

1 2 3 4 5 6 7 8 9 10

# 10 to 1 numbers printing using while loop
i=10
while(i>=1):
    print(i,end=' ')
    i=i-2

10 8 6 4 2

# 1 to 10 numbers sum=55
i=1
s=0
while(i<=10): # i=4(T)
    s=s+i # 0+1=1 1+2=3 3+3=6+4=10.....
    i=i+1 # 1+1=2 2+1=3 4
print(s)

55

# I/P: 789
# O/P: 987
# Reverse
n = int(input()) # 789-987 78>0 7 0
rev = 0
while(n>0): # 789>0(T) 7>0(T)
    r = n%10 # 789%10=9 78%10=8 7%10=7
    rev = rev*10+r # 0*10+9=9 9*10+8=98 98*10+7=987
    n = n//10 # 789//10=78 78//10=7 7//10=0
print(rev)

78936
```

63987

Task-01

Write a python program to check whether a number is palindrom or not

```
#i/p: 639275
# o/p: 2 6
n = int(input())
while(n>0):
    r=n%10
    if(r%2==0):
        print(r,end=' ')
    n=n//10
```

8958939847543

4 4 8 8 8

i/p: 76839214

o/p: 1 9 3 7

odd digits sum = 20

What is the difference between for loop and while loop

- for loop is used when we know the number of iterations
- while loop is used when we don't know the number of iterations

Jumping statements / Loop control statements

- break :- Break is used to terminate from the entire loop
- continue :- Continue is used to skip the current iteration only

```
# break example
for i in range(1,11):
    if(i==4 or i==7):
        break
    else:
        print(i,end=' ')
```

1 2 3

```
# continue example
for i in range(1,11):
    if(i==5):
        continue
    else:
        print(i,end=' ')
```

1 2 3 4 6 7 8 9 10

```
# continue example
for i in range(1,11):
    if(i==5 or i==7):
        continue
    else:
        print(i,end=' ')
```

1 2 3 4 6 8 9 10