

In [6]:

```
userid=int(input('Enter userid: '))
if(userid>=100 and userid<=200):
    password=input('Enter Password: ')
    if(password=='apssdc@123'):
        print("Welcome")
    else:
        print("Invalid Password")
else:
    print("Invalid userid")
```

Enter userid: 56

Invalid userid

Loops

In []:

```
# why we use Loops
```

In [10]:

```
print("apssdc")
print("apssdc")
print("apssdc")
print("apssdc")
print("apssdc")
.
```

apssdc
apssdc
apssdc
apssdc
apssdc

In []:

```
loops:  for loop
        while loop
```

In []:

loop: A loop **is** used **for** executing a block of statements repeatedly until a particular condition **is** satisfied....
(or)
A loop **is** an instruction that repeats multiple times **as** long **as** some condition **is** met

In []:

for loop syntax:

```
for value in range(start,end,stepcount(or)increase/decrease):
    statements
```

In []:

for loop : A **for** loop **is** used **for** iterating over a sequence(that **is** either **list**,**tuple**,string,**set**,dictionary)

In [19]:

```
# print your name 20 times
for s in range(20):
    print("python",end=' ')
```

python python python python python python python python python python python python
python python python python python python python python python python

In [15]:

```
# print 1 to 10 numbers
for i in range(1,11): # 1 2 3 4 5 ..... 10
    print(i,end=' ') # 1 2 3 4 5 .....10
```

1 2 3 4 5 6 7 8 9 10

In [22]:

```
# 10 to 1 numbers printing
for i in range(10,0,-1):
    print(i,end=' ')
```

10 9 8 7 6 5 4 3 2 1

In [23]:

```
# 10 8 6 4 2
for i in range(10,0,-2):
    print(i,end=' ')
```

10 8 6 4 2

In [24]:

```
# 10 7 4 1
for i in range(10,0,-3):
    print(i,end=' ')
```

10 7 4 1

In [27]:

```
# 1 3 5 7 9
for i in range(1,10,2):
    print(i,end=' ')
```

1 3 5 7 9

In [31]:

```
for i in range(11):
    print(i,end=' ')
```

0 1 2 3 4 5 6 7 8 9 10

In []:

```
# i/p: 100
# o/p: 1 2 3 .....
```

In [42]:

```
n=int(input())
for i in range(1,n+1):
    print(i,end=' ')
```

100

```
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 2
9 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 8
0 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100
```

In [45]:

```
# apssdc
n="apssdc"
for i in n:    # a p s s d c
    print(i,end=' ') # a p s s d c....
```

a p s s d c

In [44]:

```
for i in range(1,10):
    print(i,end=' ')
```

1 2 3 4 5 6 7 8 9

In [52]:

```
# 1 to 5 numbers      # 1 2 3 4 5
# total=15            1+2+3+4+5=15
total=0
for i in range(1,6): # 1      2      3      4      5
    total=total+i    # 0+1=1  1+2=3  3+3=6  6+4=10  10+5=15
print(total)         # 1      3      6      10     15
```

15

In [53]:

```
# i/p: 10              # 1 2 3 4 5 6 7 8 9 10
# o/p: 1 2 5 10
n=int(input())        # 10
for i in range(1,n+1): # 1,10
    if(n%i==0):        10%1==0(T)  10%2==0(T)  10%3==0(F)  10%4==0(F)
        print(i,end=' ')          2
```

10

1 2 5 10

In [56]:

```
# Factorial            1*2*3*4*5=120 (or) 5*4*3*2*1=120
# i/p: 5
# o/p: 120
f=1
s=int(input())        # 5
for i in range(1,s+1): # 1      2      3      4      5
    f=f*i              # 1*1=1    1*2=2    2*3=6    6*4=24    24*5=120
print("factorial=",f)
```

10

factorial= 3628800

In [60]:

```
# prime number
# i/p: 3
# o/p: prime number
# 3= 1,3=2    1,5    1,7    1,11    1,13    1,17
n=int(input()) # 3
fc=0
for i in range(1,n+1): # 1 2 3      1      2      3      4      5
    if(n%i==0):        #      5%1==0(T)  5%2==0(F)  5%3==0(F)  5%4==0(F)  5%5==0(T)
        fc=fc+1        #      0+1=1                      1+1=2
if(fc==2):             (T)
    print("Prime Number")
else:
    print("Not Prime Number")
```

5

Prime Number

In [61]:

```
# table
# I/P: 5
# O/P: 5 X 1 = 5
        5 X 2 =10
        .
        .
        5 X 10 = 50
```

File "<ipython-input-61-ef0f333b13b6>", line 4

```
5 X 2 =10
^
```

IndentationError: unexpected indent

In [65]:

```
n=int(input())
for i in range(1,11):
    print(n,'X',i,'=',n*i)
```

```
7
7 X 1 = 7
7 X 2 = 14
7 X 3 = 21
7 X 4 = 28
7 X 5 = 35
7 X 6 = 42
7 X 7 = 49
7 X 8 = 56
7 X 9 = 63
7 X 10 = 70
```

In []:

```
# perfect number
# i/p: 6                6= 1,2,3= 1+2+3=6    28=1,2,4,7,14=28
# o/p: perfect number

2) i/p: 1
    i/p: 10

o/p: Even numbers are : 2 4 6 8 10
     Odd numbers are : 1 3 5 7 9
```