In [2]:
```
print("hello worl")
```

```
hello worl
```

In [3]:
```
#first 10 natural numbers
n=10
for i in range(1,n+1):
    print(i,'',end='')
```

```
1 2 3 4 5 6 7 8 9 10
```

In [4]:
```
#fist 10 whole numbers
n=10
for i in range(n):
    print(i,'',end='')
```

```
0 1 2 3 4 5 6 7 8 9
```

In [5]:
```
#10 integers
n=5
for i in range(-n,n+1):
    print(i,'',end='')
```

```
-5 -4 -3 -2 -1 0 1 2 3 4 5
```

In [6]:
```
#perfect numbers in range of 1 to 10000
for i in range(1,10000):
    count=0
    for j in range(1,i):
        if i%j==0:
            count=count+j
    if i==count:
        print(i,'',end='')
```

```
6 28 496 8128
```

In [7]:
```
#prime numbers first 100
for i in range(100):
    if i==1 or i==0:
        continue
    for j in range(2,i):
        if i%j==0:
            break
    else:
        print(i,'is Prime')
```

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

In [8]:
```
#first 10 even numbers
for i in range(1,11):
    if i%2==0:
        print(i,'',end='')
```

```
2 4 6 8 10
```

In [9]:
```
#first 10 odd numbers
for i in range(1,11):
    if i%2!=0:
        print(i,'',end='')
```

```
1 3 5 7 9
```

In [10]:
```
#first 10 fibanacci numbers
i=0
j=1
for f in range(0,10):
    m=i+j
    i=j
    j=m
    print(m,'',end='')
```

```
1 2 3 5 8 13 21 34 55 89
```

In [11]:
```
#first ten abundant numbers
num=10
k=0
for i in range(1,100):
    count=0
    for j in range(1,i):
        if i%j==0:
            count=count+j
    if count>i:
        k=k+1
        print(count,'is the sum of all the factors of',i)
    if k==num:
        break
```

```
16 is the sum of all the factors of 12
21 is the sum of all the factors of 18
22 is the sum of all the factors of 20
36 is the sum of all the factors of 24
42 is the sum of all the factors of 30
55 is the sum of all the factors of 36
50 is the sum of all the factors of 40
54 is the sum of all the factors of 42
76 is the sum of all the factors of 48
66 is the sum of all the factors of 54
```

In [12]:
```
#first ten deficient numbers
num=10
k=0
for i in range(1,100):
    count=0
    for j in range(1,i):
        if i%j==0:
            count=count+j
    if count<i:
        k=k+1
        print(count,'is the sum of all the factors of',i)
    if k==num:
        break
```

```
0 is the sum of all the factors of 1
1 is the sum of all the factors of 2
1 is the sum of all the factors of 3
3 is the sum of all the factors of 4
1 is the sum of all the factors of 5
1 is the sum of all the factors of 7
7 is the sum of all the factors of 8
4 is the sum of all the factors of 9
8 is the sum of all the factors of 10
1 is the sum of all the factors of 11
```

In [13]:
```
#checking the given number is perfect square or not.
n=24
for j in range(1,n):
    if j*j==n:
        print(n,"is a perfect square")
        break
else:
    print(n,"Is not a perfect square")
```

```
24 Is not a perfect square
```

In [14]:
```
#checking the given number is cubic number or not.
n=8
for j in range(1,n):
    if j*j*j==n:
        print(n,"is a cubic number")
        break
```

```
else:
    print(n,"is not a cubic number")
```

```
8 is a cubic number
```

In [ ]: