Task 1 : - Factorial

In [14]:

```
n = int(input("Enter the Factorial no "))
fact = 1
while n > 1:
    fact =  fact * n
    n = n - 1
print("factorial of given no is:- ", fact)
```

```
Enter the Factorial no 5
factorial of given no is:-  120
```

Task 2 :- 1st 20 Prime No

In [4]:

```
start, end = 2, 20
primeNo = [2]

for num in range(start, end + 1):
    flag = 0
    if num < 2:
        flag = 1

    if num % 2 == 0:
        continue
    iter = 2

    while iter < int(num / 2):
        if num % iter == 0:
            flag = 1
            break
        iter += 1

    if flag == 0:
        primeNo.append(num)

print(primeNo)
```

```
[2, 3, 5, 7, 11, 13, 17, 19]
```

Task 3 :- Sum of 5

In [13]:

```
n = 0
i = 0
count = 0
sum = 0
remainder = 0
while count < 5:
    n = int(input("Enter 5 value :"))
    count = count + 1
    print (n)
    while n > 0:
        remainder = n % 10
        sum = sum + remainder
        n = n//10
        n = n-1
print ("Sum of nos :- ",sum)
```

```
Enter 5 value :1
1
Enter 5 value :2
2
Enter 5 value :3
3
Enter 5 value :4
4
Enter 5 value :5
5
Sum of nos :-  15
```

Task 4 :- Fibonacci series

In [12]:

```
n1 = 1
n2 = 2
n3 = 0
print(n1)
print(n2)
while n3 < 20:
    n3=n1+n2
    print(n3)
    n1 = n2
    n2 = n3
    n3+=1
```

```
1
2
3
5
8
13
21
```

Task 5:-

In [17]:

```
t1 = (4,5 ,'female', 'male')
t2 = (6, 7, 'red', 'green')
print('The_id of tuple1 :',id(t1))
print('The_id of tuple2 :',id(t2))
t1 = t1 + t2
print('The_id of new tuple1:',id(t1))
```

```
The_id of tuple1 : 1813121602960
The_id of tuple2 : 1813121603440
The_id of new tuple1: 1813090599760
```

Task 6 :-

In [11]:

```
m = {10, 20, 30, 40, 50}
n = {30, 40, 50, 60, 70}
m.union(n)
```

Out[11]:

```
{10, 20, 30, 40, 50, 60, 70}
```

Task 7 :-

In [10]:

```
port1 = {'FTP':1, 'SSH':2 , 'talent':3, 'http':4}
port2 = { }
res = list(port1.keys())
i = 0
n = len(port1)
while(i<n):
    if port1[res[i]] % 2==0:
        port2[res[i]] = port1[res[i]]
    i +=1
print("List :", port2)
```

```
List : {'SSH': 2, 'http': 4}
```

Task 8 :-

In [9]:

```
start = 1
end = 15
dict = {}

while start <  15:
    dict[start]=start**2
    start = start + 1
print(dict)

dict[100] = 10000
print(dict)
```

```
{1: 1, 2: 4, 3: 9, 4: 16, 5: 25, 6: 36, 7: 49, 8: 64, 9: 81, 10: 100, 11: 12
1, 12: 144, 13: 169, 14: 196}
{1: 1, 2: 4, 3: 9, 4: 16, 5: 25, 6: 36, 7: 49, 8: 64, 9: 81, 10: 100, 11: 12
1, 12: 144, 13: 169, 14: 196, 100: 10000}
```

Task 9 :-

In [6]:

```
port1 = {'FTP': 1, 'SSH':2, 'telnet':3, 'http':4}
port2 = dict([(value,key) for key, value in port1.items()])
print(port2)
```

```
{1: 'FTP', 2: 'SSH', 3: 'telnet', 4: 'http'}
```

task 10:-

In [8]:

```
Employee ={
'Emp1': {'name': 'Sara', 'Dept': 'IT', 'Designation': 'Team Lead' },
'Emp2': {'name': 'Anna', 'Dept': 'IT', 'Designation': 'Senior Software Engineer' },
'Emp3': {'name': 'Andy', 'Dept': 'BioTech', 'Designation': 'Senior Software Engineer' },
'Emp4': {'name': 'Andy', 'Dept': 'BioTech', 'Designation': 'Senior Software Engineer' }
}

Details = {}
for key,value in Employee.items():
    if value not in Details.values():
        Details[key] = value
print(Details)
```

```
{'Emp1': {'name': 'Sara', 'Dept': 'IT', 'Designation': 'Team Lead'}, 'Emp2':
{'name': 'Anna', 'Dept': 'IT', 'Designation': 'Senior Software Engineer'},
'Emp3': {'name': 'Andy', 'Dept': 'BioTech', 'Designation': 'Senior Software
Engineer'}}
```