In [5]:

```
#q1
ch_limit=int(input("Enter max number in series\n"))
series=1
n=0
x=False
my_dict={}
while series<=ch_limit:
    if n!=0:
        my_dict[n]=series
    n+=1
    series=int((2*n * (2*n- 1))/2)
my_dict_valueCheck=int(input("Enter a integer to check if it's in series\n"))
print(my_dict)
for i in my_dict.keys():
    if my_dict[i]==my_dict_valueCheck:
        print("Key: ",i,", Value: ",my_dict[i],sep=(""))
        x=True
if x==False:
    print("no such value exists")
```

```
Enter max number in series
28
Enter a integer to check if it's in series
11
{1: 1, 2: 6, 3: 15, 4: 28}
no such value exists
```

In [9]:

```
#q2
class Account:
    count=0
    balance:0
    def __init__(self,n1,n2,n3,n4):
        self.name=n1
        self.age=n2
        self.occupation=n3
        self.ammount=n4
        Account.count+=1
    def addMoney(self,n5):
        self.ammount+=n5
        print("Add Money successfully !!")
    def withdrawMoney(self,n6):
        if n6>self.ammount:
            print("Not sufficient balance.")
        else:
            self.ammount-=n6
            print("Withdraw Successful !!")
    def printDetails(self):
        print("Name:",self.name)
        print("Age:",self.age)
        print("Occupation:",self.occupation)
        print("Total Amount:",self.ammount)
print('No of account holders:', Account.count)
print("=========================")
p1 = Account("Abdul", 45, "Service Holder", 500000)
p1.addMoney(300000)
p1.printDetails()
print("=========================")
p2 = Account("Rahim", 55, "Businessman", 700000)
p2.withdrawMoney(700000)
p2.printDetails()
print("=========================")
p3 = Account("Ashraf", 62, "Govt. Officer", 200000)
p3.withdrawMoney(250000)
p3.printDetails()
print("=========================")
print('No of account holders:', Account.count)
```

```
No of account holders: 0
=========================
Add Money successfully !!
Name: Abdul
Age: 45
Occupation: Service Holder
Total Amount: 800000
=========================
Withdraw Successful !!
Name: Rahim
Age: 55
Occupation: Businessman
Total Amount: 0
=========================
Not sufficient balance.
Name: Ashraf
Age: 62
Occupation: Govt. Officer
Total Amount: 200000
=========================
No of account holders: 3
```

In [7]:

```
#q3
class Player:
     def init(self,name,goalsScored,tacklesWon):
         self.name = name
         self.goalsScored = goalsScored
         self.tacklesWon = tacklesWon
         self.point=0
     def calculatePoint(self):
          self.point+=(self.goalsScored*4)+(self.tacklesWon*3)
class Defender:
    def __init__(self,name,goalsScored,tacklesWon,rating):
        self.name=name
        self.goalsScored=goalsScored
        self.tacklesWon=tacklesWon
        self.rating=rating
        print("Name:",self.name,",","Rating:",self.rating)
    def calculatePoint(self):
        self.point=(self.goalsScored*4)+(self.tacklesWon*3)+(self.rating*2)
        print("Point of", self.name, ":", self.point)
class Attacker:
    def __init__(self,name,goalsScored,tacklesWon,rating):
        self.name=name
        self.goalsScored=goalsScored
        self.tacklesWon=tacklesWon
        self.rating=rating
        print("Name:", self.name,",","Rating:", self.rating)
    def calculatePoint(self):
        self.point = (self.goalsScored * 4) + (self.tacklesWon * 3) + (self.rating * 2)
        print("Point of", self.name, ":", self.point)
print('=========================')
p1 = Defender("Thiago Silva",5,12,8.5)
print('=========================')
p2 = Attacker("Cristiano Ronaldo",14,5,9.0)
print('=========================')
p3 = Attacker("Lionel Messi",12,9,9.5)
print('=========================')
p1.calculatePoint()
print('=========================')
p2.calculatePoint()
print('=========================')
p3.calculatePoint()
```

```
=========================
Name: Thiago Silva , Rating: 8.5
=========================
Name: Cristiano Ronaldo , Rating: 9.0
=========================
Name: Lionel Messi , Rating: 9.5
=========================
Point of Thiago Silva : 73.0
=========================
Point of Cristiano Ronaldo : 89.0
=========================
Point of Lionel Messi : 94.0
```

In [ ]: