

In []: 1.
->the **for** statement iterates through a collection **or** iterable object **or** generator
the **while** statement simply loops until a condition **is** false

In [5]: **for** i **in** range(10):
 print(i)
 i=i+1

0
1
2
3
4
5
6
7
8
9

In [17]: 2.

sum=0
for i **in** range(11):
 sum=i+sum
 i=i+1

print (sum)

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In [19]: sum=0
i=10
while i>0:
 sum=i+sum
 i=i-1

print(sum)

55

```
In [1]: 3.
units=int(input("enter your units: "))

if units<=100:
    s=units*4.5
    print("your electricity bill is "+str(s) )

elif units<=200 :
    s=(units-100)*6+100*4.5
    print("your electricity bill is "+str(s))

elif units<=300 :
    s=(units-200)*10+100*6+100*4.5
    print("your electricity bill is "+str(s))

else:
    s=(units-300)*20+100*10+100*6+100*4.5
    print("ypur electricity bill is "+str(s))
```

ypur electricity bill is 2250.0

```
In [8]: l=[]
for i in range (1,101):
    l.append(i)
    i=i+1
print(l)

l1=[]
for i in range (1,len(l)+1):
    l1.append(i**3)
    i=i+1
print(l1)

l2=[]
for i in range (len(l1)):
    if l1[i]%4==0 and l1[i]%5==0:
        l2.append(l1[i])
        i=i+1

print(l2)
```

```
[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, 29, 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, 80, 81, 82, 83, 84, 85, 86,
87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100]
[1, 8, 27, 64, 125, 216, 343, 512, 729, 1000, 1331, 1728, 2197, 2744, 3375, 4096, 4
913, 5832, 6859, 8000, 9261, 10648, 12167, 13824, 15625, 17576, 19683, 21952, 2438
9, 27000, 29791, 32768, 35937, 39304, 42875, 46656, 50653, 54872, 59319, 64000, 689
21, 74088, 79507, 85184, 91125, 97336, 103823, 110592, 117649, 125000, 132651, 1406
08, 148877, 157464, 166375, 175616, 185193, 195112, 205379, 216000, 226981, 238328,
250047, 262144, 274625, 287496, 300763, 314432, 328509, 343000, 357911, 373248, 389
017, 405224, 421875, 438976, 456533, 474552, 493039, 512000, 531441, 551368, 57178
7, 592704, 614125, 636056, 658503, 681472, 704969, 729000, 753571, 778688, 804357,
830584, 857375, 884736, 912673, 941192, 970299, 1000000]
[1000, 8000, 27000, 64000, 125000, 216000, 343000, 512000, 729000, 1000000]
```

In [25]:

```
5.

string="i want to become a data scientist"
count=0
for i in string:
    if i in "aeiou":
        count=count+1

print(count)
```

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In []: