

In [2]: *# Recap using for Loops*

```
t1 = 0
for i in range(1, 5):
    t1 += i
print(t1)
```

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In []: *# Using while Loop*

In [1]:

```
total2 = 0
j = 1
while j < 5:
    total2 += j
    j += 1
print(total2)
```

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In [3]: *# while loops used- When you dont know the number of Loops required before hand*

In [6]:

```
# Quiz- Finding Sum of all positive elemnts in the list.
# i is used as to inicate the index of an element in the list

a = [5, 4, 4, 3, 1, -2, -3, -5]

t3 = 0
i = 0 # i is used as to inicate the index of an element in the list
while a[i] > 0:
    t3 += a[i]
    i += 1 # +1 ensures that we get the next idex position=== 0, 1, 2, 3
print(t3)
```

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```
In [7]: # the above method oly works if theres is a negative number in the List

a = [5, 4, 4, 3, 1]

t3 = 0
i = 0          # i is used as to inicate the index of an element in the List
while a[i] > 0:
    t3 += a[i]
    i += 1      # +1 ensures that we get the next idx position=== 0, 1, 2, 3
print(t3)
```

```
-----
IndexError                                Traceback (most recent call last)
<ipython-input-7-51d8c286ccc0> in <module>
      5 t3 = 0
      6 i = 0          # i is used as to inicate the index of an element i
n the list
----> 7 while a[i] > 0:
      8     t3 += a[i]
      9     i += 1      # +1 ensures that we get the next idx position===
0, 1, 2, 3, 4...

IndexError: list index out of range
```

```
In [8]: # to fix above problem
# we add i < len(a)=== len(a) gives total number of elements in the group
a = [5, 4, 4, 3, 1]
print("No of elements in list: ", len(a))

t3 = 0
i = 0          # i is used as to inicate the index of an element in the List
while i < len(a) and a[i] > 0:
    t3 += a[i]
    i += 1      # +1 ensures that we get the next idx position=== 0, 1, 2, 3
print(t3)
```

```
No of elements in list: 5
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```

```
In [10]: # BREAK command
# Using for Loop + Break

a2 = [5, 4, 4, 3, 1, -2, -3, -5]
t4 = 0
for e in a2:
    if e <= 0:
        break    #it breaks the loop, values less than zero excluded
    t4 += e
print(t4)
```

```
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```

In [27]: *# Using while Loop + Break*

```
a2 = [5, 4, 4, 3, 1, -2, -3, -5]
t5 = 0
i = 0
while a2[i] > 0:
    t5 += a2[i]
    i += 1
    if a2[i] <= 0:      # in this case break command is unnecessary
        break
print(t5)
```

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In [17]: *# True command*

```
a2 = [5, 4, 4, 3, 1, -2, -3, -5]
t5 = 0
i = 0
while 1 < 2:      # True comand canbe used instead
    t5 += a2[i]
    i += 1
    if a2[i] <= 0:
        break
print(t5)
```

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In [18]: *# True command*

```
a2 = [5, 4, 4, 3, 1, -2, -3, -5]
t5 = 0
i = 0
while True:      # Shows that 1 < 2
    t5 += a2[i]
    i += 1
    if a2[i] <= 0:
        break
```

In [2]: *# Quiz- Find some of negative values*

```
a3 = [7, 5, 4, 4, 3, 1, -2, -3, -5, -7]
# using for loop
```

```
t6 = 0
for e in a3:
    if e < 0:
        t6 += e
print("for loop:", t6)
```

while loop

```
t7 = 0
i = len(a3) - 1

while a3[i] < 0:
    t7 += a3[i]
    i -= 1

print("while loop:", t7)
```

```
for loop: -17
while loop: -17
```

In []: