

Python Loop Templates

A programmer's cheat sheet

Template 1: Do something n times

```
i=0
while i<5: # in this sample, n=5
    # do something
    print i
    i=i+1
```

Template 2: Total something

```
i=0
total=0 # the accumulator variable
while i<5:
    total=total+i # in this sample, we are totaling 0..4
    i=i+1
print total
```

Template 3: Total the elements of a list

```
i=0
total=0
list=[4,9,6,2]
while i<len(list):
    total=total+list[i]
    i=i+1

print total
```

Template 4: Process a matrix

A **nested loop** is used to process a matrix. We have two index variables, i and j (or sometimes x and y if we are working with coordinates in an image).

```
i=0
while i<5:
    j=0
    while j<3:
        print i,j
        j=j+1
    i=i+1
```