

Loops in Python

```
n = 10
i = 9
j = 5
```

```
while i<n:
    print("value i: ", i)
    while j<n:
        print("value j: ", j)
        j+=1
    i+=1
```

```
print("Came outside while loop")
```

```
↳ value i: 9
   value j: 5
   value j: 6
   value j: 7
   value j: 8
   value j: 9
   Came outside while loop
```

```
team_score = [12,23,54,26,76,31]
```

```
i = 0
n = len(team_score)
total_score = 0

while i<n:
    print("iteration: ", i)
    total_score += team_score[i]
    print("total score: ", total_score)
    if total_score>=100:
        break
    i+=1
```

```
print("came out of loop")
```

```
↳ iteration: 0
   total score: 12
   iteration: 1
   total score: 35
   iteration: 2
   total score: 89
   iteration: 3
   total score: 115
   came out of loop
```

```
team_score = [12,23,54,26,76,31]
```

```
i = 0
n = len(team_score)
total_score = 0

for score in team_score:
    print("score: -->", score)
    total_score += score
    print("total_score: -->", total_score)
    if total_score >= 100:
        break
```

```
print("Came out of for loop")
```

```
↳ score: --> 12
   total_score: --> 12
```

```

score: --> 23
total_score: --> 35
score: --> 54
total_score: --> 89
score: --> 26
total_score: --> 115
Came out of for loop

```

```
team_score = [12,23,54,26,76,31]
```

```

i = 0
n = len(team_score)
total_score = 0

for score in team_score:
    print("score: -->", score)
    total_score += score
    print("total_score: -->", total_score)
    if total_score>=100:
        break

```

```

→ score: --> 12
total_score: --> 12
score: --> 23
total_score: --> 35
score: --> 54
total_score: --> 89
score: --> 26
total_score: --> 115

```

```
team_scores = [[12,23,54,26,76,31], [12,34,54,23,53,23,53], [1,2,4,52,5]]
```

```

for curr_team_score in team_scores:
    total_score = 0
    print("curr team score: -->", curr_team_score)
    for score in curr_team_score:
        print("score: ", score)
        total_score += score
        print("total_score : -->", total_score)
        if total_score >= 100:
            break
    if len(curr_team_score) > 4:
        break

```

```
print("came out of for loop")
```

```

→ curr team score: --> [12, 23, 54, 26, 76, 31]
score: 12
total_score : --> 12
score: 23
total_score : --> 35
score: 54
total_score : --> 89
score: 26
total_score : --> 115
came out of for loop

```

▼ Continue

```

l = [12,32,0,-10,-5,200,100]

non_negative_value = 0

for value in l:
    print("value: ", value)
    if value<0:
        continue
    non_negative_value += value
    print("curr non negative value: ", non_negative_value)

print("final non_negative_value outside for loop: ",non_negative_value)

```

```

↩ value: 12
  curr non negative value: 12
  value: 32
  curr non negative value: 44
  value: 0
  curr non negative value: 44
  value: -10
  value: -5
  value: 200
  curr non negative value: 244
  value: 100
  curr non negative value: 344
  final non_negative_value outside for loop: 344

```

```

l = [1,2,3,4,5,6,5,4,2]

for value in l:
    print("value: -->",value)
    if value==5:
        continue
    print("VENKY")
    print("Python")
    print("ANy value")

```

```

↩ value: --> 1
  VENKY
  Python
  ANy value
  value: --> 2
  VENKY
  Python
  ANy value
  value: --> 3
  VENKY
  Python
  ANy value
  value: --> 4
  VENKY
  Python
  ANy value
  value: --> 5
  value: --> 6
  VENKY
  Python
  ANy value
  value: --> 5
  value: --> 4
  VENKY
  Python
  ANy value
  value: --> 2
  VENKY
  Python
  ANy value

```

✓ **Pass**

```
l = [[9.5,8.2,7.3,5], [5.6,9.8,10,7.1,6], [6.2,7.5,9.3]]
```

```
for cgpa_list in l:
    for curr_cgpa in cgpa_list:
        print("curr_cgpa: ", curr_cgpa)
        if curr_cgpa>9:
            pass
    print("Award Ceremony")
    print("Parties in college")
```

```

curr_cgpa: 9.5
curr_cgpa: 8.2
curr_cgpa: 7.3
curr_cgpa: 5
Award Ceremony
Parties in college
curr_cgpa: 5.6
curr_cgpa: 9.8
curr_cgpa: 10
curr_cgpa: 7.1
curr_cgpa: 6
Award Ceremony
Parties in college
curr_cgpa: 6.2
curr_cgpa: 7.5
curr_cgpa: 9.3
Award Ceremony
Parties in college

```

```
l = [10,20,30,40]
```

```
for value in l:
    if value>20:
        continue
    print("Value: ", value)
```

```

Value: 10
Value: 20

```

```
l = [10,20,30,40]
```

```
for value in l:
    if value>20:
        pass
    print("Value: ", value)
```

```

Value: 10
Value: 20
Value: 30
Value: 40

```

```
l = [10,20,30,40]
```

```
for value in l:
    if value>20:
        # adding a line single comment
    print("Value: ", value)
```

```

File "<ipython-input-24-270a9c82fd1c>", line 6
    print("Value: ", value)
    ^
IndentationError: expected an indented block after 'if' statement on line 4

```

Next steps: [Explain error](#)

▼ Else in Loops

```
# IF ELSE
```

```
value = 5
```

```
if value>6:
```

```
    print("Value more than 6: ", value)
```

```
else:
```

```
    print("Value less than 6: ", value)
```

```
➞ Value less than 6: 5
```

```
# else in for loops
```

```
l = [10,20,30,40,50,60]
```

```
total_value = 0
```

```
for value in l:
```

```
    total_value += value
```

```
    print("curr_total_value: ", total_value)
```

```
else:
```

```
    print("In Else Block of for loop")
```

```
print("Outside For loop")
```

```
➞ curr_total_value: 10
   curr_total_value: 30
   curr_total_value: 60
   curr_total_value: 100
   curr_total_value: 150
   curr_total_value: 210
   In Else Block of for loop
   Outside For loop
```

```
l = [10,20,30,40,50,60]
```

```
for value in l:
```

```
    print("curr_value: ", value)
```

```
· · if value == 45:
```

```
· · · break
```

```
else:
```

```
    print("In Else Block of for loop")
```

```
print("Outside For loop")
```

```
➞ curr_value: 10
   curr_value: 20
   curr_value: 30
   curr_value: 40
   curr_value: 50
   curr_value: 60
   In Else Block of for loop
   Outside For loop
```

```
l = [10,20,30,45,50,60]
```

```
for value in l:
```

```
    print("curr_value: ", value)
```

```
    if value == 45:
```

```
        break
```

```
else:
```

```
    print("In Else Block of for loop")
```

```
print("Outside For loop")
```

```
➞ curr_value: 10
   curr_value: 20
   curr_value: 30
   curr_value: 45
```

Outside For loop

```
l = [10,20,30,45,50,60]
```

```
for value in l:
    print("curr_value: ", value)
    if value == 60:
        break
else:
    print("In Else Block of for loop")
```

```
print("Outside For loop")
```

```
→ curr_value: 10
   curr_value: 20
   curr_value: 30
   curr_value: 45
   curr_value: 50
   curr_value: 60
   Outside For loop
```

Understanding else in for loop

1. if there is a break in a for loop, then else block of for loop will not be executed.
2. if there is no break in a for loop, then else block of for loop will be executed.

```
rcb_main_5 = ["virat", "faf", "maxi", "dhoni", "rohit"]
```

```
for player in rcb_main_5:
    print("curr_player: ", player)
    if player == "abd":
        break
else:
    print("In Else Block of for loop")
print("Outside For loop")
```

```
→ curr_player: virat
   curr_player: faf
   curr_player: maxi
   curr_player: dhoni
   curr_player: rohit
   In Else Block of for loop
   Outside For loop
```

```
rcb_main_5 = ["virat", "faf", "maxi", "dhoni", "rohit"]
```

```
for player in rcb_main_5:
    print("curr_player: ",player)
    if player == "faf":
        print("inside break")
        break
else:
    print("In Else Block of for loop")
print("Outside For loop")
```

```
→ curr_player: virat
   curr_player: faf
   inside break
   Outside For loop
```

```
l = [[1,2,3,4], [6,7,9,11]]

for curr_list in l:
    for value in curr_list:
        if value == 5:
            break
    else:
        print("In else block of inner for loop")
else:
    print("In else block of outer for loop")
print("Outside complete for loop")
```

```
➞ In else block of inner for loop
In else block of inner for loop
In else block of outer for loop
Outside complete for loop
```

▼ While loop - else

```
i = 0
n = 10

while i<n:
    print("value i : ", i)
    if i==7:
        break
    i+=1
else:
    print("This is while loop else")
print("Outside while loop")
```

```
➞ value i : 0
value i : 1
value i : 2
value i : 3
value i : 4
value i : 5
value i : 6
value i : 7
Outside while loop
```

```
i = 0
n = 10

while i<n:
    print("value i : ", i)
    if i==7:
        print("Venky")
    i+=1
else:
    print("This is while loop else")
print("Outside while loop")
```

```
➞ value i : 0
value i : 1
value i : 2
value i : 3
value i : 4
value i : 5
value i : 6
value i : 7
Venky
value i : 8
value i : 9
This is while loop else
Outside while loop
```

