

```
1  """
2  While loops definition:
3  A while loop is used to execute a block of code repeatedly as long as a
4  specified condition is true.
5  The condition is checked before the execution of the loop body.
6  """
7
8  # example
9  x = 6
10
11 # infinite loop
12 # while x == 6:
13 #     print("inf loop")
14
15 # false condition from the beginning
16 while x > 10:
17     print("x greater than 10")
18
19 print("out of while loop")
20
21 # simple while loop (incrementing in the loop)
22 print("loop 1")
23 i = 1
24 while i < 5:
25     print(i)
26     i = i + 1 # don't forget to increment the variable in the loop
27
28 print("out of loop 1")
29
30 # incrementing in the loop example 2
31 print("loop 2")
32 i = 1
33 while i < 5:
34     i = i + 1
35     print(i)
36
37 print("out of loop 2")
38
39 # decrementing in the loop
40 print("loop 3")
41 i = 6
42 while i ≥ 0:
43     print(i)
44     i = i - 1
45
46 print("out of loop 3")
47
48 #break:
49 print("loop 4")
50 i = 1
```

```
50 while i < 5:
51     print(i)
52     if i == 3:
53         break
54     i = i + 1
55
56 print("out of loop 4")
57
58 #continue:
59 print("loop 5")
60 i = 0
61 while i < 5:
62     i = i + 1
63     if i == 3:
64         continue # skip the rest of lines in the while and check condition
65     print(i)
66
67 print("out of loop 5")
68
69 # else
70 print("loop 6")
71 i = 1
72 while i < 4:
73     print(i)
74     i = i + 1
75 else:
76     print("else of while loop 6")
77
78 print("out of loop 6")
79
80 print("loop 7")
81 i = 1
82 while i < 4:
83     print(i)
84     i = i + 1
85     if i == 2:
86         break
87 else: # doesn't work if the break is the reason of while ending
88     print("else of while loop 7")
89
90 print("out of loop 7")
```