

else:

```
print('The number is negative and not an integer')
```

'Output': Number **is** an integer

The while Loop

The while loop evaluates a condition, which, if true, repeatedly executes the set of instructions within the while block. It does so until the condition evaluates to false. The while statement is visualized by the flowchart in Figure 9-3.

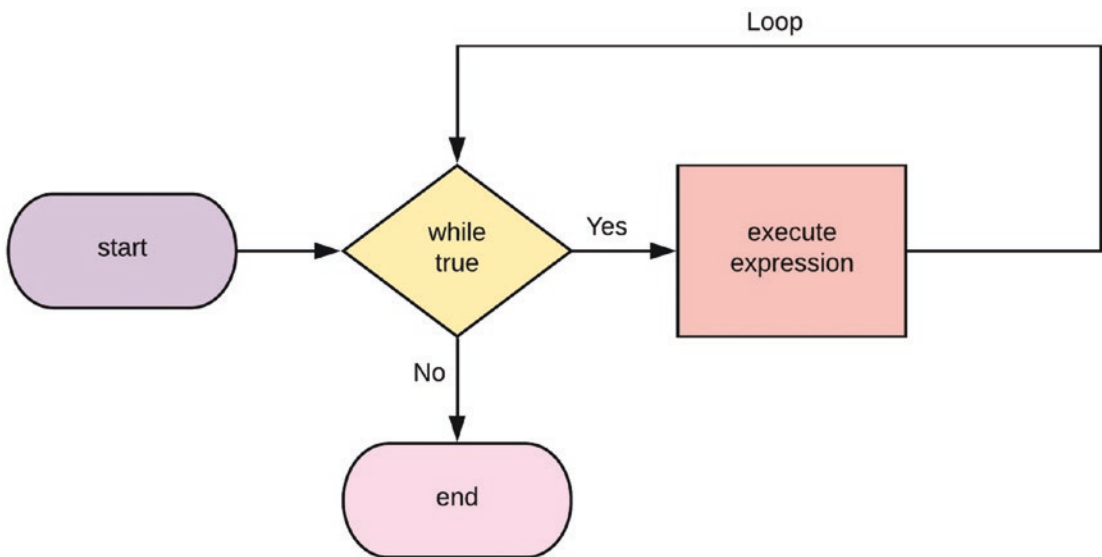


Figure 9-3. Flowchart of the while loop

Here is a program example:

```
a = 8
while a > 0:
    print('Number is', a)
    # decrement a
    a -= 1
```

```
'Output': Number is 8
        Number is 7
        Number is 6
        Number is 5
        Number is 4
        Number is 3
        Number is 2
        Number is 1
```

The for Loop

The for loop repeats the statements within its code block until a terminating condition is reached. It is different from the while loop in that it knows exactly how many times the iteration should occur. The for loop is controlled by an iterable expression (i.e., expressions in which elements can be accessed sequentially). The for statement is visualized by the flowchart in Figure 9-4.

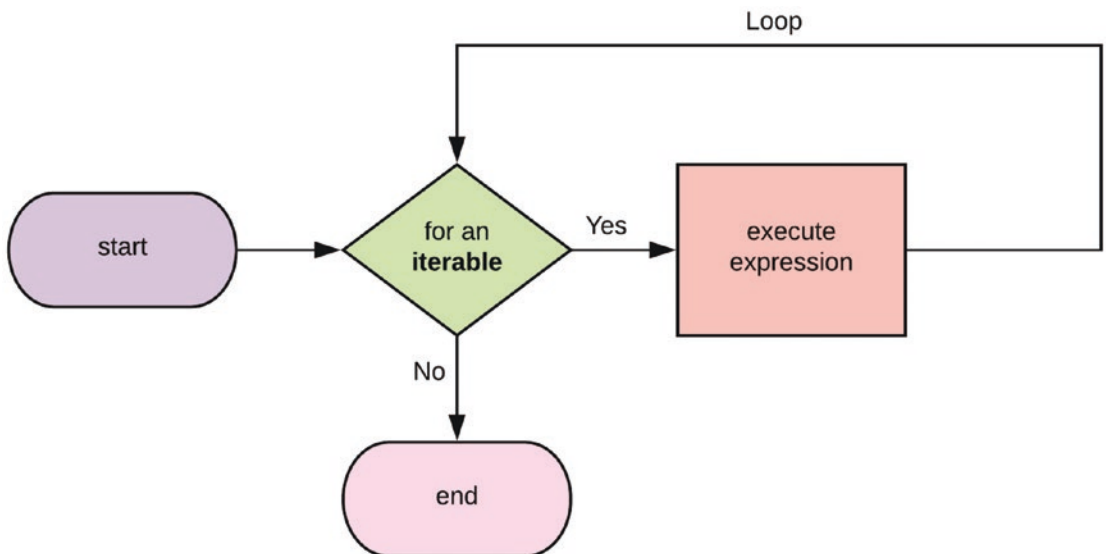


Figure 9-4. Flowchart of the for loop