Definite Loops

- Quite often we have a list of items of the lines in a file effectively a finite set of things
- We can write a loop to run the loop once for each of the items in a set using the Python for construct
- These loops are called "definite loops" because they execute an exact number of times
- We say that "definite loops iterate through the members of a set"

A Simple Definite Loop

```
for i in [5, 4, 3, 2, 1] :
    print(i)
print('Blastoff!')
```

```
5
4
3
2
1
Blastoff!
```



A Definite Loop with Strings

```
friends = ['Joseph', 'Glenn', 'Sally']

for friend in friends:
    print('Happy New Year:', friend)

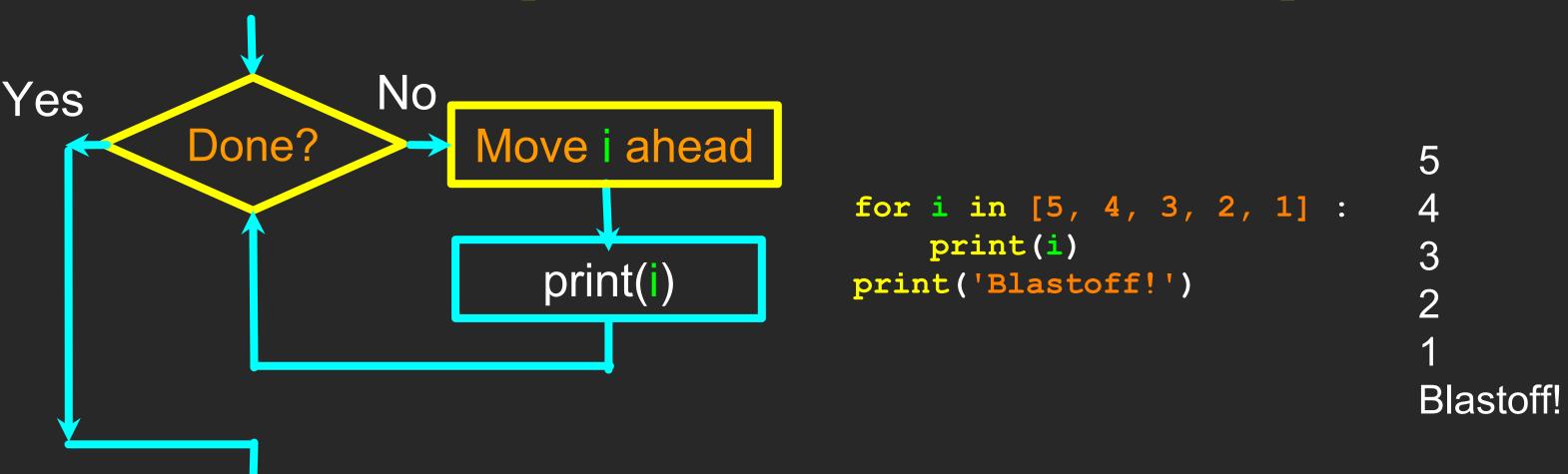
print('Done!')

Happy New Year: Joseph
Happy New Year: Glenn
Happy New Year: Sally

Done!
```



A Simple Definite Loop



print('Blast off!')

Definite loops (for loops) have explicit iteration variables that change each time through a loop. These iteration variables move through the sequence or set.

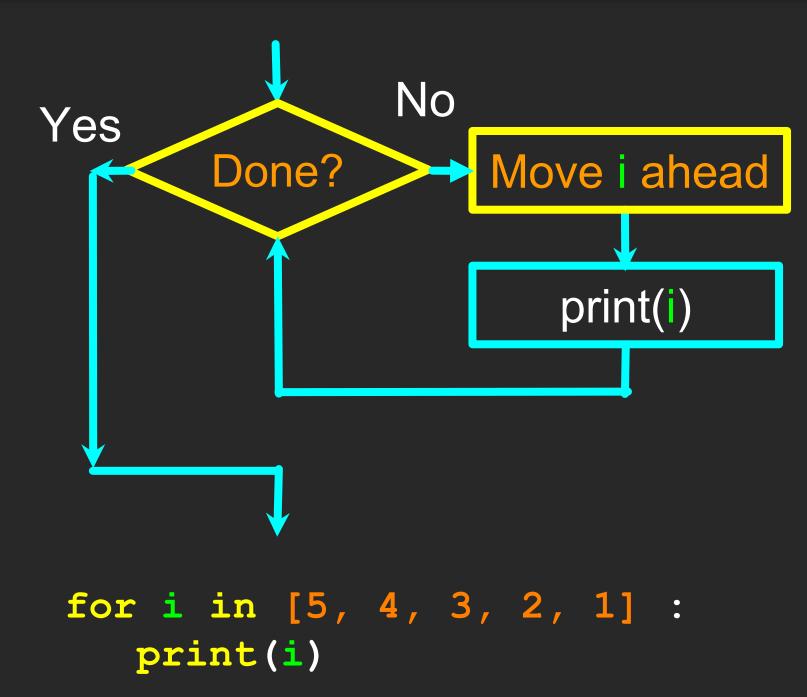


Looking at In...

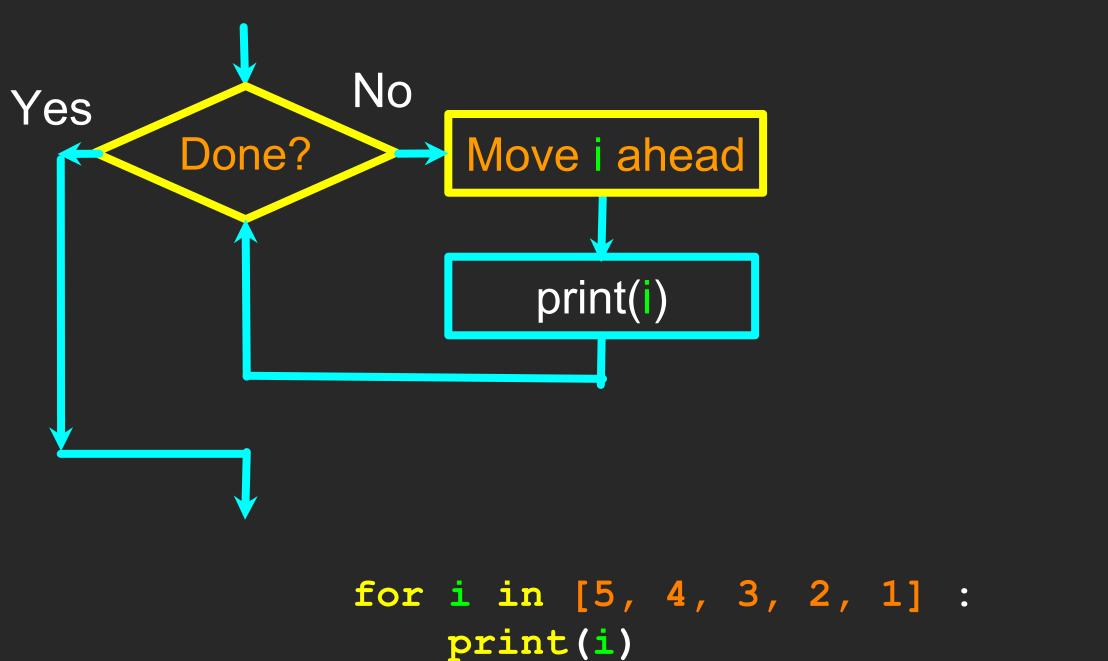
- The iteration variable "iterates" through the sequence (ordered set)
- The block (body) of code is executed once for each value in the sequence
- The iteration variable moves through all of the values in the sequence

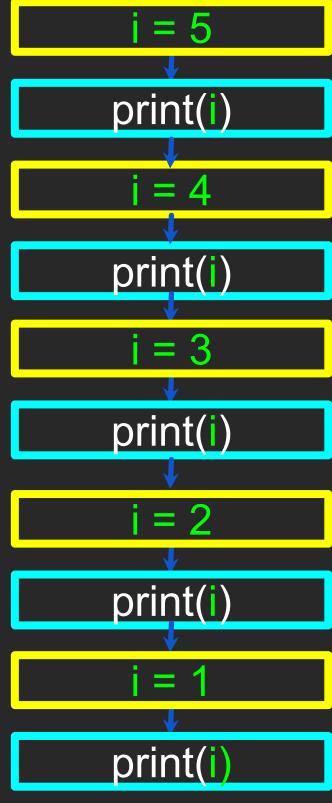
```
Iteration variable

for i in [5, 4, 3, 2, 1]:
    print(i)
```



- The iteration variable "iterates" through the sequence (ordered set)
- The block (body) of code is executed once for each value in the sequence
- The iteration variable moves through all of the values in the sequence





Definite Loops

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Loop Idioms





Acknowledgements / Contributions



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