

Algorithm

Linear Search

Code Walkthrough





Linear Search

```
def linear_search(main_list, item):  
    for i in range(len(main_list)):  
        if main_list[i] == item:  
            return i  
    return -1
```



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10

[5, 2, 8, -2, 10, 6, 1]





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```

[5, 2, 8, -2, 10, 6, 1]

```
>>> a = [5, 2, 8, -2, 10, 6, 1]  
>>> linear_search(a, 10)
```

```
Starting Linear Search Algorithm  
===== Iteration #0 =====  
Current list item: 5  
Item searched: 10  
Is the current item equal to the item searched? False  
This is not the item  
===== Iteration #1 =====  
Current list item: 2  
Item searched: 10  
Is the current item equal to the item searched? False  
This is not the item  
===== Iteration #2 =====  
Current list item: 8  
Item searched: 10  
Is the current item equal to the item searched? False  
This is not the item  
===== Iteration #3 =====  
Current list item: -2  
Item searched: 10  
Is the current item equal to the item searched? False  
This is not the item  
===== Iteration #4 =====  
Current list item: 10  
Item searched: 10  
Is the current item equal to the item searched? True  
Item found! at index 4  
4
```



Time to Practice!

