

# Class-04: AI-101 | What are Lists in Python? List Methods in Python

Shopping list making

```
from typing import List

#variable data type : string = value is cake

item_1 : str = "cake"
item_2 : str = "cake1"
item_3 : str = "cake2"
item_4 : str = "cake3"

print(item_1, item_4)
```

cake cake3

```
from typing import List

#variable data type : string = value is cake

item_1 : str = "cake"
item_2 : str = "cake1"
item_3 : str = "cake2"
item_4 : str = "cake3"

# print(item_1, item_4)

shopping_list : List[str] = ["cake", "cake1", "cake2", "cake3"]

print(shopping_list)
```

['cake', 'cake1', 'cake2', 'cake3']

Find index from list (index always start from 0).

```
shopping_list : List[str] = ["cake", "cake1", "cake2", "cake3"]

#           0           1           2           3

print(shopping_list[1])
```

cake1

```
shopping_list : List[str] = ["cake", "cake1", "cake2", "cake3"]

#           0       1       2       3

print(shopping_list[1])
print(shopping_list[3])
```

cake1  
cake3

To count the length of list elements. Length start from 1.

```
shopping_list : list[str] = ["cake", "cake1", "cake2", "cake3"]

print(len(shopping_list))
```

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### List Slicing

```
#           0       1       2       3       4       5
shopping_list : list[str] = ["cake", "cake1", "cake2", "cake3", "cake4", "cake5"]
print(shopping_list[1:4])
```

['cake1', 'cake2', 'cake3']

### List Slicing

```
#           0       1       2       3       4       5
shopping_list : list[str] = ["cake", "cake1", "cake2", "cake3", "cake4", "cake5"]
print(shopping_list[5])
```


cake5


### List Slicing

```
#           0       1       2       3       4       5
shopping_list : list[str] = ["cake", "cake1", "cake2", "cake3", "cake4", "cake5"]
print(shopping_list[0:5])
```


['cake', 'cake1', 'cake2', 'cake3', 'cake4']


checking membership

```
0s  shopping_list : list[str] = ["cake", "cake1", "cake2", "cake3", "cake4", "cake5"]  
print("cake" in shopping_list)
```

 True

checking membership

```
0s  shopping_list : list[str] = ["cake", "cake1", "cake2", "cake3", "cake4", "cake5"]  
print("cake" in shopping_list)  
print("cakebig" in shopping_list)
```


 True  
False


adding and remove item from list

```
 shopping_list : list[str] = ["cake", "cake1", "cake2", "cake3", "cake4", "cake5"]  
  
print(shopping_list)  
  
# add small cake in last of list elements  
shopping_list.append("small cake")  
print(shopping_list)
```

 ['cake', 'cake1', 'cake2', 'cake3', 'cake4', 'cake5']  
['cake', 'cake1', 'cake2', 'cake3', 'cake4', 'cake5', 'small cake']

adding and remove item from list

```
1s  shopping_list : list[str] = ["cake", "cake1", "cake2", "cake3", "cake4", "cake5"]  
  
print(shopping_list)  
  
# add small cake in last of list elements  
shopping_list.append("small cake")  
print(shopping_list)  
  
# add big cake in last of list elements  
shopping_list.append("big cake")  
print(shopping_list)
```

 ['cake', 'cake1', 'cake2', 'cake3', 'cake4', 'cake5']  
['cake', 'cake1', 'cake2', 'cake3', 'cake4', 'cake5', 'small cake']  
['cake', 'cake1', 'cake2', 'cake3', 'cake4', 'cake5', 'small cake', 'big cake']

## inserting and remove from list

```
shopping_list : list[str] = ["cake", "cake1", "cake2", "cake3", "cake4", "cake5"]

#inserting item in list
shopping_list.insert(2, "small cake")
print(shopping_list)

#remove item from list
shopping_list.remove("small cake")
print(shopping_list)
```

→ ['cake', 'cake1', 'small cake', 'cake2', 'cake3', 'cake4', 'cake5']  
→ ['cake', 'cake1', 'cake2', 'cake3', 'cake4', 'cake5']