8. List Methods

1. `append()` Method

The `append()` method is used to add a new item to the end of an existing list.

```
fruits = ['apple', 'banana', 'orange']
fruits.append('grape')
print(fruits)  # Output: ['apple', 'banana', 'orange', 'grape']
```

In the example above, we start with a list of fruits. We then use the `append()` method to add the string `'grape'` to the end of the list.

2. `insert()` Method

The `insert()` method allows you to add a new item at a specific position in the list. It takes two arguments: the index position where you want to insert the new item, and the item itself.

```
fruits = ['apple', 'banana', 'orange']
fruits.insert(1, 'kiwi')
print(fruits)  # Output: ['apple', 'kiwi', 'banana', 'orange']
```

In this example, we insert the string `'kiwi'` at index position `1` in the `fruits` list. The items at index `1` and beyond are shifted to the right to make room for the new item.

3. `remove()` Method

The `remove()` method is used to remove the first occurrence of a specified item from the list.

```
fruits = ['apple', 'banana', 'orange', 'banana']
fruits.remove('banana')
print(fruits)  # Output: ['apple', 'orange', 'banana']
```

In the example above, we remove the first occurrence of the string `'banana'` from the `fruits` list.

4. `pop()` Method

The `pop()` method removes and returns the item at a given index position in the list. If no index is specified, it removes and returns the last item in the list.

```
fruits = ['apple', 'banana', 'orange']
last_fruit = fruits.pop()
print(fruits)  # Output: ['apple', 'banana']
print(last_fruit)  # Output: 'orange'
```

In this example, we use `pop()` without any arguments to remove and retrieve the last item (`'orange'`) from the `fruits` list.

5. `index()` Method

The `index()` method returns the index position of the first occurrence of a specified item in the list.

```
fruits = ['apple', 'banana', 'orange', 'banana']
banana_index = fruits.index('banana')
print(banana_index)  # Output: 1
```

In the example above, we use `index()` to find the index position of the first occurrence of the string `'banana'` in the `fruits` list, which is `1`.

6. `count()` Method

The `count()` method returns the number of times a specified item appears in the list.

```
fruits = ['apple', 'banana', 'orange', 'banana']
banana_count = fruits.count('banana')
print(banana_count)  # Output: 2
```

In this example, we use `count()` to find the number of times the string `'banana'` appears in the `fruits` list, which is `2`.

7. `sort()` Method

The `sort()` method sorts the items in the list in ascending order. It modifies the original list.

```
numbers = [5, 2, 8, 1, 9]
numbers.sort()
```

```
print(numbers)  # Output: [1, 2, 5, 8, 9]
```

In the example above, we use `sort()` to sort the `numbers` list in ascending order.

8. `reverse()` Method

The `reverse()` method reverses the order of the items in the list.

```
numbers = [1, 2, 3, 4, 5]
numbers.reverse()
print(numbers)  # Output: [5, 4, 3, 2, 1]
```

In this example, we use `reverse()` to reverse the order of the `numbers` list.

See Also

9. Mutable and Immutable Variables