1. String

i. `upper()`

- **Syntax:**
  `"hello".upper()`
- **Doc:**
  Returns a copy of the string with all characters in uppercase.
- **Usage:**

```
python
CopyEdit
name = "alex"
print(name.upper())
```

- **Output:**
  `ALEX`

ii. `replace(old, new)`

- **Syntax:**
  `"hello".replace("l", "x")`
- **Doc:**
  Returns a copy with all occurrences of `old` replaced by `new`.
- **Usage:**

```
python
CopyEdit
text = "hello world"
print(text.replace("o", "0"))
```

- **Output:**
  `hell0 w0rld`

iii. `split(sep)`

- **Syntax:**
  `"a,b,c".split(",")`
- **Doc:**
  Splits string into a list using the separator.
- **Usage:**

```
python
CopyEdit
data = "a,b,c"
print(data.split(","))
```

- **Output:**
  `['a', 'b', 'c']`

2. List

i. `append(x)`

- **Syntax:**
  `list.append(x)`
- **Doc:**
  Adds an item to the end of the list.
- **Usage:**

```
python
CopyEdit
nums = [1, 2]
nums.append(3)
print(nums)
```

- **Output:**
  `[1, 2, 3]`

ii. `pop([i])`

- **Syntax:**
  `list.pop()` or `list.pop(index)`
- **Doc:**
  Removes and returns the item at the given position.
- **Usage:**

```
python
CopyEdit
items = ["a", "b", "c"]
print(items.pop())
print(items)
```

- **Output:**

```
c
['a', 'b']
```

iii. `sort()`

- **Syntax:**
  `list.sort()`
- **Doc:**
  Sorts the list in-place.
- **Usage:**

```
python
CopyEdit
numbers = [3, 1, 2]
numbers.sort()
print(numbers)
```

- **Output:**

```
[1, 2, 3]
```

3. Tuple

i. `count(x)`

- **Syntax:**
  `tuple.count(x)`
- **Doc:**
  Returns number of times x appears.
- **Usage:**

```
python
CopyEdit
t = (1, 2, 2, 3)
print(t.count(2))
```

- **Output:**
  2

ii. `index(x)`

- **Syntax:**
  `tuple.index(x)`
- **Doc:**
  Returns first index of x.
- **Usage:**

```
python
CopyEdit
t = (5, 3, 7)
print(t.index(3))
```

- **Output:**
  1

iii. `__len__()` (or `len()` function)

- **Syntax:**
  `len(tuple)`
- **Doc:**
  Returns number of elements in tuple.
- **Usage:**

```
python
CopyEdit
t = (10, 20, 30)
print(len(t))
```

- **Output:**
  `3`

4. Set

i. `add(x)`

- **Syntax:**
  `set.add(x)`
- **Doc:**
  Adds an element to the set.
- **Usage:**

```
python
CopyEdit
s = {1, 2}
s.add(3)
print(s)
```

- **Output:**
  `{1, 2, 3}`

ii. `remove(x)`

- **Syntax:**
  `set.remove(x)`
- **Doc:**
  Removes element x; raises error if not found.
- **Usage:**

```
python
CopyEdit
s = {1, 2, 3}
s.remove(2)
print(s)
```

- **Output:**
  `{1, 3}`

iii. `union(other)`

- **Syntax:**
  `set.union(other)`
- **Doc:**
  Returns a new set with all items from both sets.
- **Usage:**

```
python
CopyEdit
a = {1, 2}
b = {2, 3}
print(a.union(b))
```

- **Output:**
  `{1, 2, 3}`

5. Dictionary

i. `get(key)`

- **Syntax:**
  `dict.get(key)`
- **Doc:**
  Returns value for key or None if key not found.
- **Usage:**

```
python
CopyEdit
d = {"a": 1, "b": 2}
print(d.get("b"))
```

- **Output:**
  `2`

ii. `update(other_dict)`

- **Syntax:**
  `dict.update(other_dict)`
- **Doc:**
  Updates the dictionary with key-value pairs from another dict.
- **Usage:**

```
python
CopyEdit
d = {"x": 1}
d.update({"y": 2})
```

```
print(d)
```

- **Output:**
  ```
  {'x': 1, 'y': 2}
  ```

iii. `items()`

- **Syntax:**
  `dict.items()`
- **Doc:**
  Returns a view of dictionary's (key, value) pairs.
- **Usage:**

```
python
CopyEdit
d = {"a": 10, "b": 20}
print(list(d.items()))
```

- **Output:**
  ```
  [('a', 10), ('b', 20)]
  ```