tuple ()

It is a collection of heterogeneous data that are used in cases where data should remain unchanged for security purpose like multi-threaded programming.

eg:- a = (12,45,"hello", 10.8, True)

(it is heterogeneous: means it contains elements of different data types)

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Tuple Properties

Ordered

A tuple is an ordered collection of elements enclosed in parenthesis().

1

2

Allow Duplicates

Tuple can contain duplicate elements. For example: `x = (10, 45, 23, 10, "hlo", 45, 290, "hlo")`

Immutable

Tuple elements can't be changed once created.

(the immutability provides security by avoiding unintended changes)

3

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Example

1

Nested List or Tuple

```
zx = (12,10, "car", [45,34,23],"bus",[10, 100], 300)

#indexing

print(zx[3])

print(zx[3][1])


#slicing

print(zx[3][:1])


#check

for i in zx:

    print(zx)
```

(we can write list in between tuple and vice-versa)

2

Add elements in tuple by type-casting

```
a = [12,10, "car", "bus", 300, 5000]

lt = list(a)

lt.append(5000)

xyz = tuple(lt)

print(xyz)
```

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Set {}

It is a collection of heterogeneous and unchanging objects and contain unique elements.

eg:- a = {12,45,"hello", 10.8, True}

(it is heterogeneous: means it contains elements of different data types)

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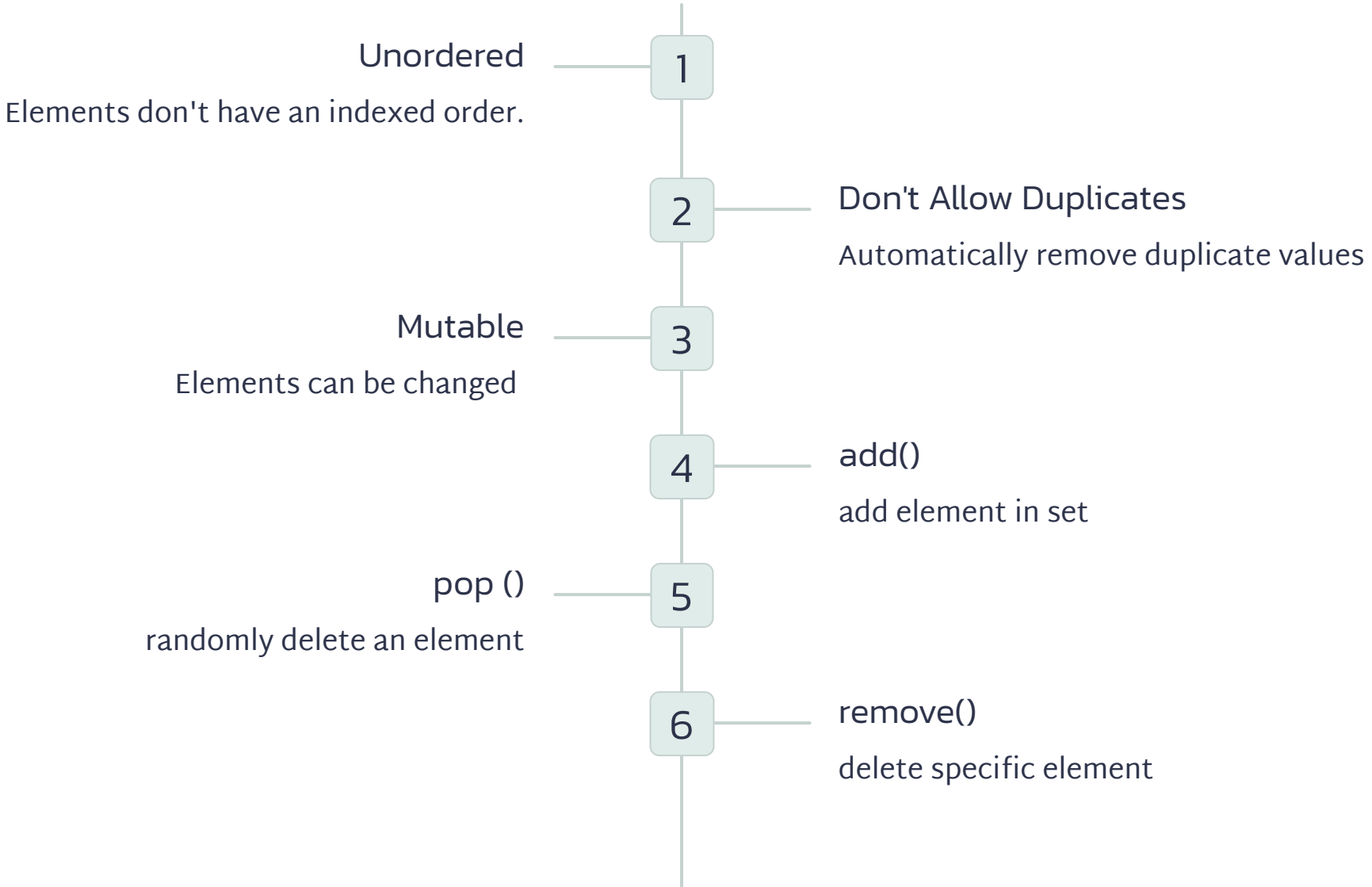
Set Properties



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Example

1

add()

zx = {12,10, "car", 45,34,23,"bus", 300}

zx.add(120)

2

pop()

a = {12,10, "car", "bus", 300, 5000}

a.pop()

3

remove()

a = {12,10, "car", "bus", 300, 5000}

a.remove(100)

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