

Collections

Set Interface

Set Interface

- doesn't allow duplicate entries
- implementations: HashSet, TreeSet
- HashSet stores *(key, value)* elements in hash table
 - *key* is hashCode(), *value* is Object
 - doesn't keep the order
 - adding each element takes the same time
- TreeSet stores elements in a sorted tree structure
 - keeps the order
 - adding each element takes more time as tree goes bigger

```
// HashSet example
```

```
Set<String> names = new HashSet<>();
```

```
System.out.println(names.add("John"));
```

```
System.out.println(names.add("George"));
```

```
System.out.println(names.add("John"));
```

```
System.out.println(names.add("Ben"));
```

```
System.out.println(names);
```



true

true

false

true

[George, John, Ben]

arbitrary order!

```
// TreeSet example
```

```
Set<String> names = new TreeSet<>();
```

```
System.out.println(names.add("John"));
```

```
System.out.println(names.add("George"));
```

```
System.out.println(names.add("John"));
```

```
System.out.println(names.add("Ben"));
```

```
System.out.println(names);
```

true

true

false

true

[Ben, George, John]

keeping the order!

(last added is first on the list)