TreeSet

What is a TreeSet?

Class that implements SortedSet interface.

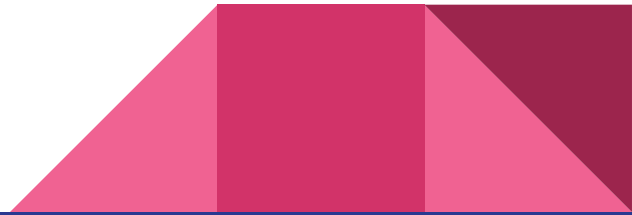
Data structure used to store elements: Tree.

Contains unique elements.

Provides fast retrieval and access.

Does not allow null element.

Objects in TreeSet are stored in sorted ascending order.



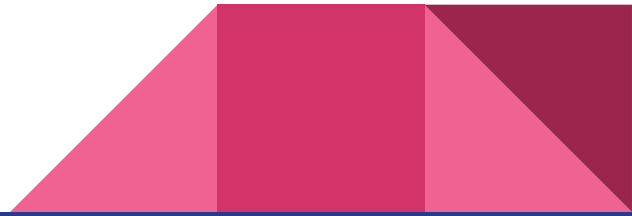
Creating TreeSet

TreeSet(): Create empty TreeSet, elements stored in natural sorting order.

TreeSet(Comparator comparator): Comparator specifies external specification of sorting order.

TreeSet(Collection c): TreeSet which contains elements of collection c.

TreeSet(SortedSet s): convert SortedSet objects to TreeSet objects.



Example

```
import java.io.FileInputStream;
import java.io.FileNotFoundException;
import java.io.IOException;
import java.util.*;

public class Main extends Box {

    public static void main(String[] args)  {

      TreeSet<String> t = new TreeSet<String>();
      t.add("Red");
      t.add("Blue");
      t.add("Green");
      t.add("Yellow");

      Iterator i = t.iterator();
      while (i.hasNext()){
          System.out.println(i.next());
      }

    }
}
```

Main › main()

Run: Main

```
/Library/Java/JavaVirtualMachines/jdk-13.0.2.jdk/Contents/Home
Blue
Green
Red
Yellow
```

Descending order

```
import java.io.FileInputStream;
import java.io.FileNotFoundException;
import java.io.IOException;
import java.util.*;

public class Main extends Box {

    public static void main(String[] args)  {

        TreeSet<String> t = new TreeSet<String>();
        t.add("Red");
        t.add("Blue");
        t.add("Green");
        t.add("Yellow");

        Iterator i = t.descendingIterator();
        while (i.hasNext()){
            System.out.println(i.next());
        }

    }
}
```

Main › main()

Main

```
/Library/Java/JavaVirtualMachines/jdk-13.0.2.jdk/Conter
Yellow
Red
Green
Blue
```

Let’s write some code to store objects in a TreeSet