FIND THE MAXIMUM ELEMENT IN AN ARRAY

In this coding exercise you will be expected to complete an incomplete class and a method to run the main program.
MyList<T> Class: This generic class is expected to use as a container for all types arrays. The use of MyList class is seen in the main method. It has only one constructor and a field.
max(): This method is expected to accept a parameterized type of MyList and find the maximum element of the list. The parameter type should be Comparable as it is seen in the method definition. The incomplete max() method and the complete main method is given as below.
Student Class: This class is a complete example class that is given for testing .

1. The complete Student class is as below

```
class Student implements Comparable {
    private int id;
    private String name;

    public Student(int id, String name) {
        this.id = id;
        this.name = name;
    }

    public int getId() {
        return id;
    }

    public void setId(int id) {
        this.id = id;
    }

    public String getName() {
        return name;
    }

    public void setName(String name) {
        this.name = name;
    }

    @Override
    public String toString() {
        return "Student{" +
                "id=" + id +
                ", name='" + name + '\'' +
                '}';
    }

    @Override
    public int compareTo(Object o) {
        Student student = (Student) o;
        return this.name.compareTo(student.name);
    }
}
```

2. The incomplete MyList class is as below

```
class MyList<T> {
// write your code here

   }
}
```

3. The complete main() method and the incomplete max() method is as below

```
public class Main {

   public static void main(String[] args) {

      Student[] students = {new Student(100, "Adam"), new Student(200, "John")
            , new Student(300, "Bill")};
      MyList<Student> studentList = new MyList<>(students);
      System.out.println("Maximum of Students: " +max(studentList));

      String[] strings = { "Adam",  "John",  "Bill"};
      MyList<String> stringList = new MyList<>(strings);
      System.out.println("Maximum of Strings: " +max(stringList));

      Double[] numbers = { 10.25,  15.55,  11.0};
      MyList<Double> numberList = new MyList<>(numbers);
      System.out.println("Maximum of Numbers: " +max(numberList));

   }

   public static <T extends Object & Comparable<? super T>> T max(MyList<?
extends T> list) {
      T max ;
// write your code here
      return max;
   }
}
```

4. Output of the above main() method is as below

```
Maximum of Students: Student{id=200, name='John'}
Maximum of Strings: John
Maximum of Numbers: 15.55
```