**Assignment: Implementing Comparators and Comparable**

**Question**: **(30 %)**  
You are tasked with working on a program that manages a list of `**Product**` objects. Each `**Product**` object has the following attributes:

- `**productId**` (a unique integer)

- `**productName**` (a string)

- `**productPrice**` (a double)

You need to create a Java program that accomplishes the following:

**Part 1**: Implementing the `**Product**` Class

1. Create a Java class named `**Product**` with the attributes mentioned above. Include a constructor to initialize these attributes.

2. Implement the `**Comparable**` interface in the `**Product**` class. The comparison should be based on the `**productPrice**` attribute, allowing `**Product**` objects to be compared based on their prices.

3. Override the `**compareTo**` method to define the natural ordering of `**Product**` objects, which should be in ascending order of `**productPrice**`.

**Part 2:** Implementing Custom Comparators

4. Create a custom `**Comparator**` class: `**ProductIdComparator**`

- `**ProductIdComparator**` should compare `Product` objects based on their `**productId**` in descending order.

**Part 3:** Using Comparators

5. In the `**Main**` class, create a list of `**Product**` objects.

6. Use the `**Collections.sort**` method to sort the list of `**Product**` objects in 2 ways:

- Using the natural ordering (based on `**productPrice**`)

- Using the `**ProductIdComparator**`

7. Print the sorted lists to verify that they have been correctly sorted according to the specified criteria.

You may copy-paste the input from Mock\_data.txt file.

A screenshot of a menu

Description automatically generated

**SUBMIT: 10 mins video explaining the execution of the code. (70 %)**

Your video should contain:

1. Your Name.
2. Code explanation.
3. Execution of code.
4. Rate yourself from 1 to 5. (How easily were you able to write the code – what were the challenges).

You may use any screen recorder.   
I prefer <https://screenapp.io/> which is free and you don’t need to install any other software.