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**Customer Table Booking - Requirement 4**

**Requirement 4:**

In this requirement, you need to sort the list of customers by name, amount or rating using Comparable and Comparator interfaces.

a) Create a Customer Class with the following private attributes:

|  |  |
| --- | --- |
| **Member Field Name** | **Type** |
| id | Long |
| name | String |
| mobileNumber | String |
| birthdate | java.util.Date |
| averageSpendAmount | Double |
| totalAmount | Double |
| dateEnrolled | java.util.Date |
| rating | Double |

Mark all the attributes as private, Create / Generate appropriate Getters & Setters, Add a default constructor and a parameterized constructor to take in all attributes in the given order: **Customer(Long id, String name, StringmobileNumber, java.util.Date birthdate, Double averageSpendAmount, Double totalAmount, java.util.Date dateEnrolled, Double rating)**  
  
b) The Customer class should implement the **Comparable**interface which sorts the customer list based on names.  
  
c) Write a Comparator class named**AmountComparator** implementing Comparator Interface. This comparator should sort the customers based on the averageSpendAmount.  
  
d) Write a Comparator class named**RatingComparator** implementing Comparator Interface. This comparator should sort the customers based on their rating.  
  
The input format consists of customer details separated by comma in the below order,  
(id, name, mobileNumber, birthdate, averageSpendAmount, totalAmount, dateEnrolled, rating)  
  
**Note:**If any other option is selected display "**Invalid choice**".  
Assume that name,amount spent and rating will be always unique.  
When the “customer” object is printed, it should display the following format  
Print format:  
**System.out.format("%-5s %-15s %-15s %-15s %-20s %-15s %-15s %s\n", "Id","Name","Mobile Number","Date of Birth","Average spent amount","Total amount","Date Enrolled","Rating");**  
  
**Sample INPUT & OUTPUT 1:**  
  
Enter the number of customers:  
**3  
222,John,9876543210,12-12-1990,4000,12000.5,12-12-2017,3.5  
111,Mark,9632587410,13-01-1992,3000.0,8000,14-04-2014,4  
333,Anil,9874563012,19-09-2015,6000.0,5000,16-09-2016,3.75**  
Enter a type to sort:  
1.Name  
2.Amount Spent  
3.Rating  
**1**  
Id    Name            Mobile Number   Date of Birth   Average spent amount Total amount    Date Enrolled   Rating  
333   Anil            9874563012      19-09-2015      6000.0               5000.0          16-09-2016      3.75  
222   John            9876543210      12-12-1990      4000.0               12000.5         12-12-2017      3.5  
111   Mark            9632587410      13-01-1992      3000.0               8000.0          14-04-2014      4.0  
  
**Sample INPUT & OUTPUT 2:**  
  
Enter the number of customers:  
**3  
222,John,9876543210,12-12-1990,4000,12000.5,12-12-2017,3.5  
111,Mark,9632587410,13-01-1992,3000.0,8000,14-04-2014,4  
333,Anil,9874563012,19-09-2015,6000.0,5000,16-09-2016,3.75**  
Enter a type to sort:  
1.Name  
2.Amount Spent  
3.Rating  
**2**  
Id    Name            Mobile Number   Date of Birth   Average spent amount Total amount    Date Enrolled   Rating  
111   Mark            9632587410      13-01-1992      3000.0               8000.0          14-04-2014      4.0  
222   John            9876543210      12-12-1990      4000.0               12000.5         12-12-2017      3.5  
333   Anil            9874563012      19-09-2015      6000.0               5000.0          16-09-2016      3.75  
  
**Sample INPUT & OUTPUT 3:**  
  
Enter the number of customers:  
**3  
222,John,9876543210,12-12-1990,4000,12000.5,12-12-2017,3.5  
111,Mark,9632587410,13-01-1992,3000.0,8000,14-04-2014,4  
333,Anil,9874563012,19-09-2015,6000.0,5000,16-09-2016,3.75**  
Enter a type to sort:  
1.Name  
2.Amount Spent  
3.Rating  
**3**  
Id    Name            Mobile Number   Date of Birth   Average spent amount Total amount    Date Enrolled   Rating  
222   John            9876543210      12-12-1990      4000.0               12000.5         12-12-2017      3.5  
333   Anil            9874563012      19-09-2015      6000.0               5000.0          16-09-2016      3.75  
111   Mark            9632587410      13-01-1992      3000.0               8000.0          14-04-2014      4.0  
  
**Sample INPUT & OUTPUT 4:**  
  
Enter the number of customers:  
**3  
222,John,9876543210,12-12-1990,4000,12000.5,12-12-2017,3.5  
111,Mark,9632587410,13-01-1992,3000.0,8000,14-04-2014,4  
333,Anil,9874563012,19-09-2015,6000.0,5000,16-09-2016,3.75**  
Enter a type to sort:  
1.Name  
2.Amount Spent  
3.Rating  
**4**  
Invalid choice