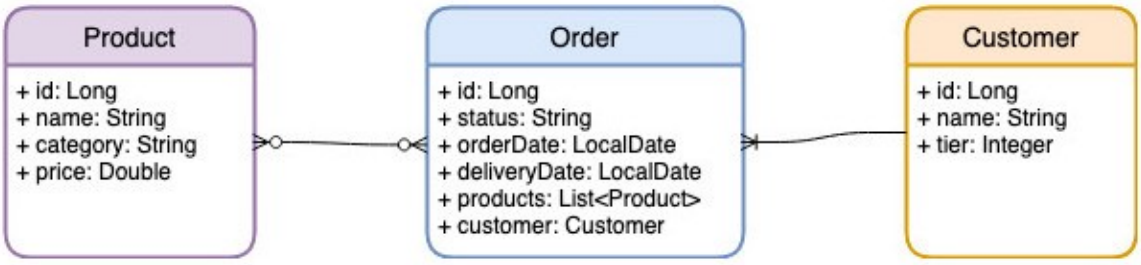
Day 10 - Core Java / STREAMS AND CONCURRENCY

Topics:

- Introduction on Streams
    - Map
    - Filter
    - Sorted
    - Collect
    - for Each
    - reduce
- Parallel Computing using Streams.
- New String methods
- New File Methods
- HTTP Client in Java 11

Assignments:

The exercises are based on a data model — customer, order and product. Refer to the entity relationship diagram below, customers can place multiple orders and so it is a one-to-many relationship while the relationship between products and orders is many-to-many



1. Obtain a list of products belongs to category “Books” with price > 100
2. Obtain a list of order with products belong to category “Baby”
3. Obtain a list of product with category = “Toys” and then apply 10% discount
4. Obtain a list of products ordered by customer of tier 2 between 01-Feb-2021 and 01-Apr-2021
5. Get the cheapest products of “Books” category
6. Get the 3 most recent placed order
7. Get a list of orders which were ordered on 15-Mar-2021, log the order records to the console and then return its product list
8. Calculate total lump sum of all orders placed in Feb 2021
9. Calculate order average payment placed on 14-Mar-2021

10. Obtain a collection of statistic figures (i.e. sum, average, max, min, count) for all products of category “Books”
11. Obtain a data map with order id and order’s product count
12. Produce a data map with order records grouped by customer
13. Produce a data map with order record and product total sum
14. Obtain a data map with list of product name by category
15. Get the most expensive product by category

Write a solution for each of the above using a separate Java class.