Assignment 3: (5 %)

Goals

Practice collections

Description

A store maintains a record of all its online sales. Each sale records both the customer and the product details as follows:

CustomerID FirstName LastName ProductID ProductName SingleItemPrice ItemsPurchased

At the end of each week based on this record the store prepares a bill for each customer and updates its products inventory.

Write a program that works with two maps – one of customers based on CustomerID and the other of products based on ProductID. The program will read all the records from the file "Sales.txt". Each line will result in two operations:

- Insert a new entry or update an existing entry in products map: update the count of the purchases of this product
- Insert a new entry or update an existing entry in customers map: update the total amount to be paid by this customer based on the price of this product multiplied by the number of items purchased.

For example, reading the following line:

1005 Abigail Adams 5020 blouse 45 2

should update the entry with key 5020 in products map increasing the count of purchases by 2 and should update the entry with key 1005 in customers map increasing the total bill for the customer by 90 dollars.

After reading through all the records the program should produce two printouts: one of all the customers with their final bills and another of all the products with their total count of purchased items. Every customer and every product must be mentioned in the printout only once.

The main method should be as short as possible and it must not throw any exceptions – all the exceptions must be handled by main or other methods.

Deliverables

Submit all the java files

Create a video recording of your output (run the program first-Show the output- and then explain the logic)

Zip or rar files will not be evaluated.

	20%	15%	10%	5%	0%

Rubric – Assignment 3

	20%	15%	10%	5%	0%
Maintaining maps	Both maps are properly maintained when reading from a file	Maps are somewhat maintained	Maps are present with little functionality	Missing most details	Missing
Handling open resources	All the exceptions are handled appropriately	Try-with-resources is properly used	Opened resources are closed inside finally block	Missing most details	Missing
Execution	Application is fully input proof	Most of foreseen cases are taken care of	Substantial number of Runtime errors	Execution crashes pretty quickly	Project doesn't compile
Output	Console output is well formatted to see clearly code working as expected	Coded to specifications	Missing or broken functionality	Missing lots of detail	Largely empty
Process	Pieces of the assignment have been steadily building throughout the time given. Creativity used to solve key problems. Able to reflect on what could be improved on.	Assignment completed satisfactorily	Somewhat of a rush to complete assignment	Obviously there has been a big last-minute rush to complete the assignment. No time for creativity or reflection	Student has not spent any time grappling with concepts, reaching out for help, or reflecting on topic