

CENG 443

Introduction to Object-Oriented Programming Languages and Systems

Spring 2022-2023

Lab Quiz 3
(Ver 1.0)

Due date: May 31, 2023, Wednesday, 20:00

1 Introduction

Keywords: *Streams, File Operations*

The assignment is based on Preliminary 3 Text. Your task is to write a program answers 4 new questions.

2 Questions

You can find the questions below:

1. What was the most vital product type between and including 1980 and 1990? (You can assume that the vital products are the ones bought on pay days, 15th of every month.)
2. How many purchases with 3 or more products include A or D?
3. How many products are purchased by elder people (age 55 or above) after and including 1995?
4. What was the years that least and most B type products sold? Solve this question by reading the stream only once. (Hint: Remember that the number of years in the dataset is finite.)

3 Rules

- Your solution should use streams and their methods. Exception to this rule is small operations needed for the final result. After applying all necessary operations to the stream, and no method presented in the course provide the necessary interface to apply the final operation to get the result, you can use other control flow structures. However, you should justify your decision with comments in your code and make sure that the operation could not be done with stream methods. Otherwise, you will lose points.

- Storing all elements of the stream in memory (like by converting to an array) is not the wanted solution and will lose you points. Utilize the laziness of streams.
- Your program name should be **Lab3**
- You can assume that there will be no purchases older than 1970 and newer than 2020.
- Your program will be tested with a different dataset. So You should not write a solution specific to given dataset.
- Use Java 8 or a newer version.