

OOP – Multimedia Shop

The goal of this lab is to practice **Object-oriented programming** by building a Multimedia Shop System for managing different items – movies, books and games. The items can be **sold** or **rented**.

Problem 7. * Reports

We're almost done – we can supply, rent and sell items. Let's implement the report command for giving us info about our rents and sales.

Step 1 – Printing Rents/Sales

Rents and sales should be printable in the following formats, depending on the item they hold:

Rent Format	Sale Format
- Rent [status] [itemType] [id] Title: [title] Price: [price] Genres: [genres] Author: [author] / Age Restriction: [ageRestriction] / Length: [length] Rent fine: [rentfine]	- Sale [saleDate] [itemType] [id] Title: [title] Price: [price] Genres: [genres] Author: [author] / Age Restriction: [ageRestriction] / Length: [length]

Avoid code repetition through inheritance and code reuse. **Avoid string concatenation** (use a different approach for constructing long text).

Step 2 – Reporting Rents

The **report rents** command should print all **overdue rents**, ordered by their **rent fine** in ascending order (then by item's **title** as secondary criteria).

Think carefully who should generate the report and who should print it.

Step 3 - Reporting Sales

The **report sales [startDate]** should print the total sum of all sales going back to **[startDate]** in the format: **TODO**

Think carefully who should generate the report and who should print it.

Input
supply book 5 id=4fd332&title=Razkazi&price=7.99&author=Elin_Pelin&genre=story supply game 19 id=9fkj332&title=Empire_Earth&price=17.60&ageRestriction=Minor&genre=strategy rent 9fkj332 07-11-2014 07-01-2015 rent 9fkj332 13-01-2015 23-02-2015 rent 9fkj332 14-01-2015 14-05-2015

rent 4fd332 24-12-2014 24-01-2015

report rents

sell 4fd332 24-12-2014

sell 9fkj332 13-01-2015

sell 9fkj332 14-01-2015

report sales 25-12-2014

Output

- Rent Overdue

Book 4fd332

Title: Razkazi

Price: 7.99

Genres: story

Author: Elin_Pelin

Rent fine: 0.72

- Rent Overdue

Game 9fkj332

Title: Empire_Earth

Price: 17.60

Genres: strategy

Age Restriction: Minor

Rent fine: 4.58

35.20

Final Step

- Check every file in your project – make sure it belongs to the **proper namespace**.
- Ensure all fields are properly **encapsulated** and **validated**, and no code is **unnecessarily repeated**.
- Ensure all core classes **operate through interfaces**, not concrete classes.
- Make sure functionality is properly **separated into methods**.