# 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**.

## \* 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**.