

OOP – Multimedia Shop

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

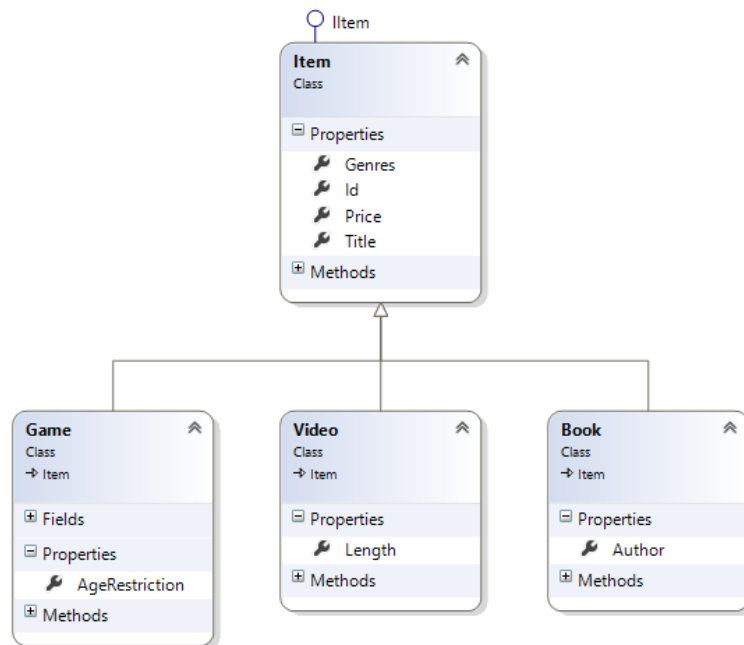
Problem 3. The Items in Our Shop

Step 1 – The Items

It's time to create the actual items in our shop.

- Book – holds **Author**, should be a non-empty string, at least 3 symbols long
- Game – holds **AgeRestriction** (either Minor, Teen or Adult)
- Video – holds **Length** (in minutes)

Book, **Game** and **Video** are all **Items** – therefore they should inherit the behavior of the **Item** class.



Step 2 – Class Constructors

Create the following constructors for each class:

- `Item(id, title, price, genres)`
- `Item(id, title, price)`
- `Book(id, title, price, author, genres)`
- `Book(id, title, price, author, genre)`
- `Video(id, title, price, length, genres)`
- `Video(id, title, price, length, genre)`
- `Game(id, title, price, genres, ageRestriction)` – age restriction is optional with default value **Minor**
- `Game(id, title, price, genre, ageRestriction)` – age restriction is optional with default value **Minor**

Note: genres is a **set of genres**, whereas genre is a single **genre** (represented as string).

Make sure you do NOT repeat any code by properly **reusing constructors** from the base class.

Step 3 – Test Your Classes

```
Item sallingerBook = new Book("4adwlj4", "Catcher in the Rye", 20.00m, "J. D. Salinger",  
"fiction");  
Item threeManBook = new Book("84djesd", "Three Men in a Boat", 39.99m, "Jerome K. Jerome", new  
List<string> { "comedy" });  
Item acGame = new Game("9gkjdsa", "AC Revelations", 78.00m, "historical", AgeRestriction.Teen);  
Item bubbleSplashGame = new Game("r8743jff", "Bubble Splash", 7.80m, new List<string> { "child",  
"fun" });  
Item godfatherMovie = new Video("483252j", "The Godfather", 99.00m, 178, "crime");  
Item dieHardMovie = new Video("9853kfds", "Die Hard 4", 9.90m, 144, new List<string> { "action",  
"crime", "thriller" });
```

Think if can change something about the **Item** class:

- Will you ever need to create instances of it?
- Will its constructors ever be called outside the class, and if so - where?