

# Programming Project / C++ – Console Game Management & Interaction System

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Student 1: Bârsan Ioana Alexandra

Student 2: Bitir Ilinca Maria

## I. Task Description

Student 1 is responsible for managing the game console system:

- Installing games
- Uninstalling games

Student 2 is responsible for managing the list of installed games:

- Viewing installed games
- Sorting installed games by name or size

The console has a maximum memory capacity of 1TB (1024 GB). Installed games consume memory according to their size in GB.

## II. Data Structures Used by the Team

The following classes will be used:

- Game: string name, double size
- Console: vector<Game> availableGames, vector<Game> installedGames, int usedMemory

## III. File Structure

The following files will be used:

A file that stores the list of all games available for the console:

**available\_games.txt**

```
<number of games>
<game1 name> <game1 size>
<game2 name> <game2 size>
...
```

A file that stores the list of games currently installed on the console:

**installed\_games.txt**

```
<number of installed games>  
<game1 name> <game1 size>  
<game2 name> <game2 size>  
...
```

## IV. Interacting with Executables

Console Management Application Options (main1.exe):

To install a game (if sufficient space is available): `./main1 install <game_name>`

To uninstall a game (freeing up its used memory) : `./main1 uninstall <game_name>`

Installed Games Management Application Options (main2.exe):

To display all currently installed games: `./main2 view`

To sort the installed games by name (A-Z): `./main2 sortname`

To sort the installed games by size (ascending): `./main2 sortsize`