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

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