

Programming Project / C++ – Console Game Management System

Student 1: Elias Bota Student 2: Răzvan Ciobanu

I. Task Description

Student 1 is responsible for managing consoles and games:

- Adding, deleting, modifying consoles (console name, total storage space)
- Adding, deleting, modifying available games (game name, space required, console it is for)

Student 2 is responsible for interacting with their own consoles and games:

- Acquiring consoles
- Installing and uninstalling games and managing storage space

II. Data Structures Used by the Team

The following classes will be used:

- Game: int id, string name, int consoleId, int spaceRequired
- Console: int id, string name, int storageSpace, Game[] games
- User: Console[] availableConsoles, int[] ownedConsoleIds, int[] ownedGameIds

III. File Structure

The following files will be used:

consoles.txt

A file where details about the available consoles will be stored in the form:

<number of consoles>

<console1 id> <console1 name> <console1 storageSpace>

<console2 id> <console2 name> <console2 storageSpace>

...

games.txt

A file where details about all available games are stored:

<number of games>

<game1 id> <game1 name> <game1 console id> <game 1 total space>

<game2 id> <game2 name> <game2 console id> <game 2 total space>

...

user.txt

A file where user details are stored:

<number of consoles>

<console 1 id> <console 2 id> ...

<number of games>

<game 1 id> <game 2 id> ...

IV. Interacting with Executables

Application 1 will offer the following options:

`./app_1.exe view_consoles`

To view all available consoles

`./app_1.exe add_console <name> <storage space>`

To add a console

`./app_1.exe delete_console <id>`

To delete a console

`./app_1.exe modify_console <id> <new name> <new storage space>`

To modify the name or storage space of a console

`./app_1.exe view_games <console id>`

To view games available for a certain console

`./app_1.exe add_game <console id> <game name> <required space>`

To add a new available game to a console

`./app_1.exe delete_game <console id> <game id>`

To delete an available game from a console

Application 2 will offer the following options:

`./app_2.exe view_consoles`

To view the consoles owned by the user

`./app_2.exe acquire_console <console id>`

To acquire a new console

`./app_2.exe install_game <console id> <game id>`

To install a new space to a certain console

`./app_2.exe uninstall_game <console id> <game id>`

To uninstall a game from a certain console

`./app_2.exe view_games <console id>`

To view installed games for a console and the space taken