

# Programming Project / C++ – Store Management & Interaction System –

Student 1: Ion Popescu

Student 2: Maria Popescu

## I. Task Description

Student 1 is responsible for managing the properties:

- Adding, deleting, modifying properties (price, number of rooms, etc.)
- Viewing purchase history

Student 2 is responsible for interacting with the system:

- Viewing available properties (apartments or houses)
- Adding properties to favourites
- Purchasing properties

## II. Data Structures Used by the Team

The following structures will be used:

- Property, which is used for apartments: float price, int:rooms,bathrooms,kitchens,parcking\_space
- Property2, which is used for houses: float price, int:rooms,bathrooms,kitchens,yard\_size

## III. File Structure

I will read everything from a single file and I will write in the same file

```
-input.txt
<number_of_apartments> <number_of_houses>
<apt1 price> <rooms> <bathrooms> <kitchens> <parking>
<apt2 price> ...
...
<house1 price> <rooms> <bathrooms> <kitchens> <yard_size>
<house2 price> ...
...
```

## IV. Interacting with Executables

App 1 will expose the following options:

`./app_1.exe add_apartment <price> <rooms> <bathrooms> <kitchens> <parking>`

# Adds a new apartment listing to the system.

`./app_1.exe add_house <price> <rooms> <bathrooms> <kitchens> <yard_size>`

# Adds a new house listing to the system.

`./app_1.exe delete_apartment <index>`

# Removes an apartment from the listings by index.

`./app_1.exe delete_house <index>`

# Removes a house from the listings by index.

`./app_1.exe modify_apartment <index> <price> <rooms> <bathrooms> <kitchens>  
<parking>`

# Updates the specified apartment's details.

`./app_1.exe modify_house <index> <price> <rooms> <bathrooms> <kitchens>  
<yard_size>`

# Updates the specified house's details.

`./app_1.exe view_properties`

# Displays all current apartment and house listings.

`./app_1.exe view_purchases`

# Displays all purchased properties (apartments and houses).

App 2 will expose the following options:

`./app_2.exe view_listings`

# Shows all available apartments and houses for viewing.

`./app_2.exe view_apartment <index>`

# Shows detailed information for the selected apartment.

`./app_2.exe view_house <index>`

# Shows detailed information for the selected house.

`./app_2.exe favourite_apartment <index>`

# Adds an apartment to the favourites list.

`./app_2.exe favourite_house <index>`

# Adds a house to the favourites list.

`./app_2.exe buy_apartment <index>`

# Purchases the selected apartment and removes it from listings.

`./app_2.exe buy_house <index>`

# Purchases the selected house and removes it from listings.

`./app_2.exe show_favourites`

# Displays all saved favourite properties.

`./app_2.exe show_bought`

# Displays all bought apartments and houses.

