

Programming Project / C++  
Real Estate Management System  
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I.

Student 1 responsibilities (System Management):

Add, delete, and modify property listings (price, size, etc.).

File I/O operations for property data.

Student 2 responsibilities (User Interaction):

Add/remove properties to/from favorites.

Purchase properties (remove from listings).

Display favorites and manage user workflows.

II. Data Structures Used by the Team

Classes:

Property:

string name, string address

float price, int size (sq. meters)

int rooms, int bathrooms

bool parking

Favorites:

vector<int> favoriteIndices (stores indexes of favorited properties).

III. File Structures

properties.txt

Stores property listings in the format:

<name>|<address>|<price>|<size>|<rooms>|<bathrooms>|<parking>

Example:

Green Villa|123 Palm Road|250000|120|4|2|1

#### IV. Interaction with Executables

##### Application 1 (Management):

`./app_1.exe view_properties`

Displays all properties from properties.txt.

`./app_1.exe add_property <name> <address> <price> <size> <rooms> <bathrooms> <parking>`

Validates and appends a new property to the file.

`./app_1.exe delete_property <index>`

Removes the property at the specified index.

##### Application 2 (User Interaction):

`./app_2.exe view_favorites`

Shows favorited properties (from memory).

`./app_2.exe add_favorite <index>`

Adds a property (by index) to favorites.

`./app_2.exe purchase_property <index>`

Removes the property from listings and confirms purchase.