Real Estate Management System

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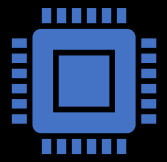
INTRODUCTION

Property management systems may be used in real estate, manufacturing, logistics, intellectual property, government or hospitality accommodation management. These software makes the management of properties, personal property, equipment, including maintenance, legalities and personnel hassle free ,and all through a single piece of software. Cumbersome and inefficient paper-based methods have been replaced by them.

The Objective of developing this project:



This Real Estate Management System was built with an objective that this would help the customers as well as the people associated with this domain to digitize all the physically maintained information. This system would help the customers to know about various properties and their rates at a single place so they don't need to go and search for these details physically.

For the commercial sector, this system could provide them a solution to keep all the records of their clients and properties they're associated with. Being easily accessible this system would provide them a best way to provide the property details to their clients.

Future Development in our system would be as follows:-
A better UI
A Database Management System to store all the information
Search features:
Property search based on maps

TECHNICAL REQUIREMENTS

C++

Basics of UML.

LINUX

App Creately(Class and State Diagrams)

property.h

- In this file property.h we have created a class property which is base class of following classes:
  land, shop,
  bungalow, apartment.
- Here we are creating the function void display which passes prop_name, prop_type, prop_id, price .

```
#ifndef __property
#define __property

#include <string.h>
using std::string;

namespace example
{
        class property
        {
                public:
                                char prop_name[100];
                                string prop_type;
                                int prop_id;
                                int price;
                                void display(char*,string, int, int);
        };
}
#endif
```

land.h

- Here we are creating land.h in which we are creating class land that has landdimension1 andlanddimension2 as private methods.
- and this class land is a derived class of property.
- This class has public methods as

  void input_land().

```
#ifndef __land
#define __land

#include "property.h"

namespace example
{
        class land: public property
        {
                private:
                        int landdimension1;
                        int landdimension2;
                public:
                        void input_land();
        };
}
#endif
```

bunglow.h

- bungalow.h file includes class bungalow which consists of void input_bungalow() as public methods
- and this class bunglow is a derived class of property.

```
#ifndef __bungalow
#define __bungalow

#include "property.h"

namespace example
{
        class bungalow: public property
        {
                public:
                        void input_bungalow();
        };
}
#endif
```

shop.h

- shop.h includes the class shop which has shopdimension1 and shopdimension2 as private members.
- and this class shop is a derived class of property.
- This class has input_shop() as public method.

```
#ifndef __shop
#define __shop

#include "property.h"

namespace example
{
        class shop: public property
        {
                private:
                        int shopdimension1;
                        int shopdimension2;
                public:
                        void input_shop();
        };
}
#endif
```

appartment.h

- In this file apartment.h we have created a class apartment which is base class of following class: single_apartment, deluxe_ apartment, luxury_apartment
- This class apartment is a derived class of property.
- apartment.h file includes class apartment which consists of apart_number and input_apartment as its public methods.

```
#ifndef __apartment
#define __apartment

#include "property.h"

namespace example
{
        class apartment: public property
        {
                public:
                                int apart_number;
                                void input_apartment();
        };
}
#endif
```

single_apartment

- class apartment has three child class and single_apartment is one of them.
- This file includes the class single_apartment th at has single_apartment() as its public methods.

```
#ifndef __single_apartment
#define __single_apartment

#include <string.h>
#include "apartment.h"

namespace example
{
        class single_apartment: public apartment
        {
                public:
                                single_apartment();
        };
}
#endif
```

deluxe_apartment.h

- class apartment has three child class and deluxe_apartment is one of them.
- This file includes the class deluxe_apartment that has deluxe_apartment() as its public methods.

```
#ifndef __deluxe_apartment
#define __deluxe_apartment

#include "apartment.h"

namespace example
{
        class deluxe_apartment: public apartment
        {
                public:
                                deluxe_apartment();
        };
}
#endif
```

luxury_apartment.h

- class apartment has three child class and luxury_apartment is one of them.
- This file includes the class luxury_apartment that has luxury_apartment() as its public methods.

```
#ifndef __luxury_apartment
#define __luxury_apartment

#include "apartment.h"

namespace example
{
        class luxury_apartment: public apartment
        {
                public:
                                luxury_apartment();
        };
}
#endif
```

real_estate.cpp

- Real_estate.cpp includes all the header files .
- This file basically takes user credentials and executes the different files according to user's choice.

```cpp
#include<iostream>
#include<string.h>
#include"property.h"
#include"land.h"
#include"apartment.h"
#include"shop.h"
#include"bungalow.h"
#include "single_apartment.h"
#include "deluxe_apartment.h"
#include "luxury_apartment.h"

using std::cout;
using std::cin;
using std::endl;
using std::string;

using namespace example;

int main()
 {
        string name ,address;
        long int mobile;
        cout<<"\n##########################################################################\n\n";
        cout<<"\n !!*** WELCOME TO LUCKNOW KE NAWAB'S REAL ESTATE MANAGEMENT SYSTEM ***!! \n";
        cout<<"\n";
        cout<<"\n Enter your Details\n";
        cout<<"\n Enter your Name: ";
        getline(cin,name);
        cout<<"\n Enter the Address: ";
        getline(cin,address);
        cout<<"\n Enter your mobile no: ";
        cin>>mobile;

        int choice;

        cout<<"#####################################";
        cout<<"\n *****BUYING COST OF PROPERTY***** \n";
        cout<<"\n * For land it is 2500 per sq feet";
        cout<<"\n * For shops it is 5000 sq feet";
        cout<<"\n * For bunglow it Rs. 7500000";
        cout<<"\n * For single apartment it is Rs. 3500000";
        cout<<"\n * For deluxe apartment it is Rs. 5000000";
        cout<<"\n * For luxury apartment it is Rs. 6500000";
        cout<<"\n#####################################\n\n";
```

real_estate.cpp

- This part of real_estate.cpp go through the switch cases of shop ,land and bungalow.
- Apart from these we also have a switch case four choice for apartment which is base class for our further choice in this switch case.

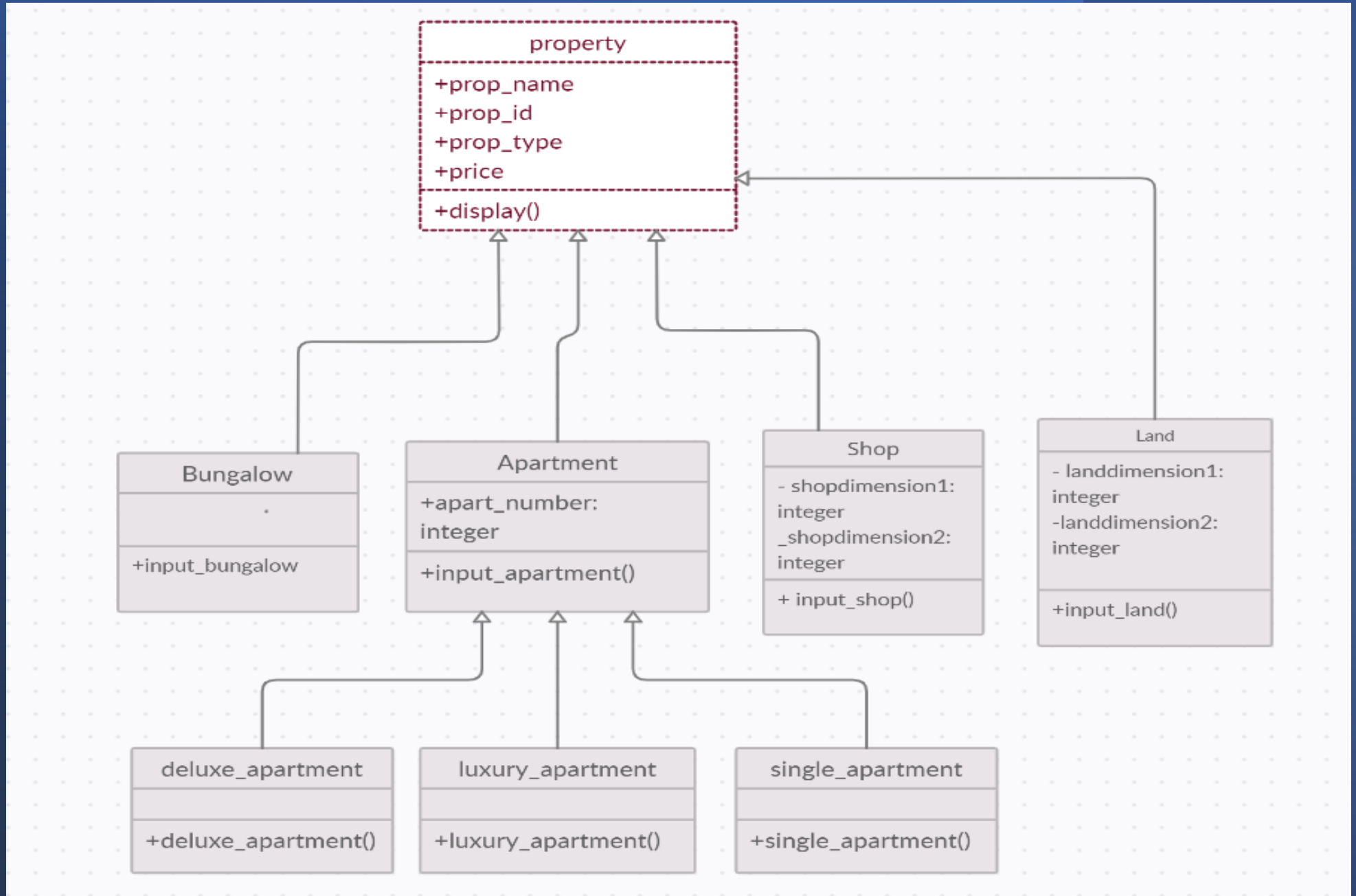
```
do
{
        land l; shop s; bungalow b;
        cout<<"\n Press 1 for Land";
        cout<<"\n Press 2 for Shops";
        cout<<"\n Press 3 for Bunglow";
        cout<<"\n Press 4 for Apartments";
        cout<<"\n Press 5 to Exit";
        cout<<"\n\n Eenter your Choice:\t";
        cin>>choice;

        switch(choice)
        {
        case 1:
        l.input_land();
        break;

        case 2:
        s.input_shop();
        break;

        case 3:
        b.input_bungalow();
        break;

        case 4:
        int apart_choice;
        cout << "Select the type of apartment\n";
        cout << "Press 1 for Single Apartment.\n";
        cout << "Press 2 for Deluxe Apartment.\n";
        cout << "Press 3 for Luxury Apartment.\n";
        cin >> apart_choice;
```

real_estate.cpp

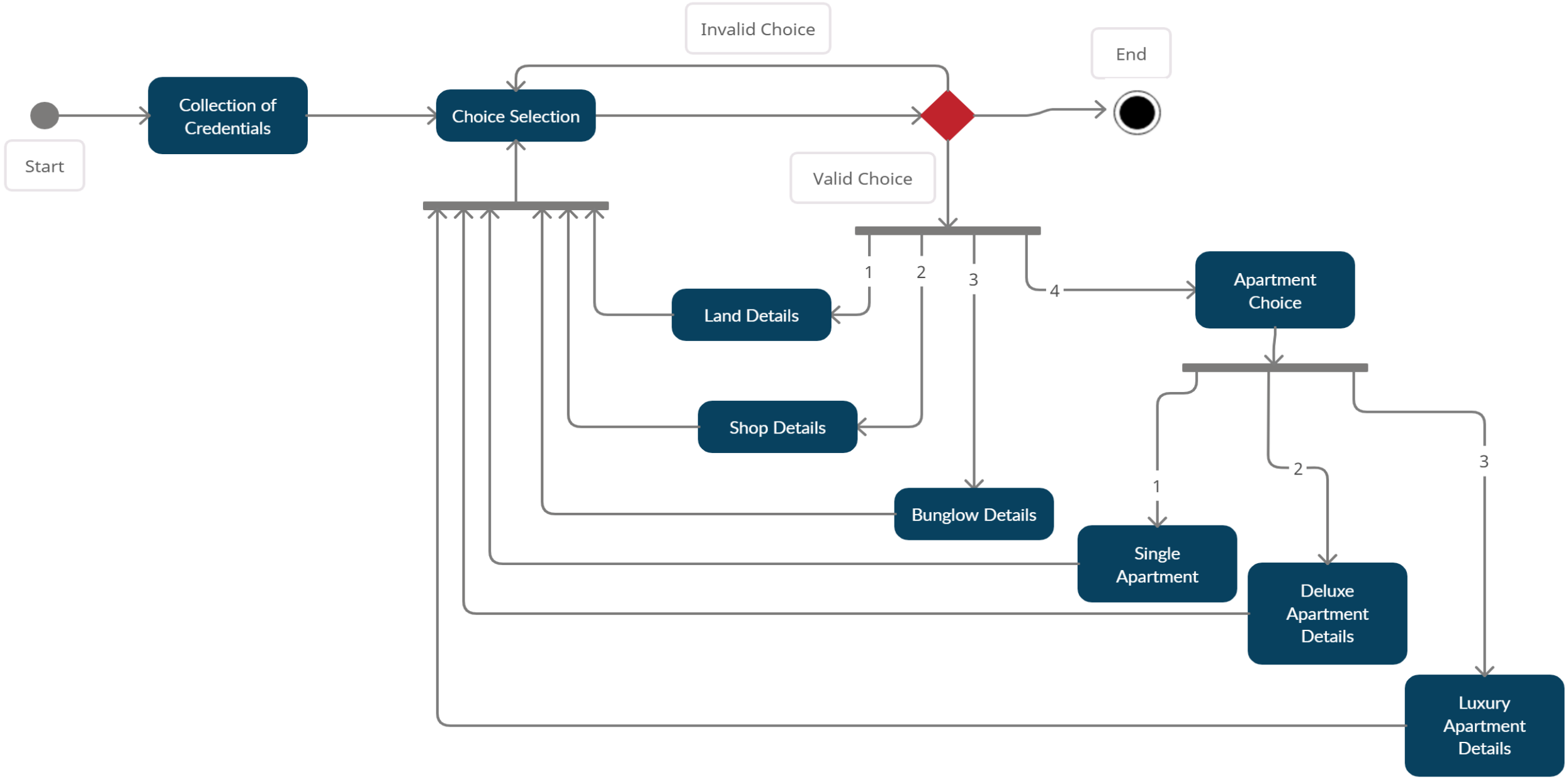
- This part of real_estate.cpp go through the switch cases for different apartment like single apartment ,deluxe apartment and luxury apartment.

```
                switch(apart_choice)
                {
                        case 1:
                        single_apartment();
                        break;
                        case 2:
                        deluxe_apartment();
                        break;
                        case 3:
                        luxury_apartment();
                        break;
                }

                case 5:
                cout<<"\n * Thanks for visting us *\n";
                break;
                default:
                cout<<"\n Wrong Choice;\t Try Again";
                }
        }
        while (choice!=5);

        cout<<"\n\n BYE BYE ";
        cout<<"\n Have a nice day\n";
        cout<<"####**********************************
        return(0);
}
```

Class Diagram



Activity Diagram



Code Execution

```
##################################################################

 !!*** WELCOME TO LUCKNOW KE NAWAB'S REAL ESTATE MANAGEMENT SYSTEM ***!!


 Enter your Details

 Enter your Name: Ram Prakash

 Enter the Address: 206 L/2 GTB Nagar Lucknow

 Enter your mobile no: 2341234576
#####################################
 *****BUYING COST OF PROPERTY*****

 * For land it is 2500 per sq feet
 * For shops it is 5000 sq feet
 * For bunglow it Rs. 7500000
 * For single apartment it is Rs. 3500000
 * For deluxe apartment it is Rs. 5000000
 * For luxury apartment it is Rs. 6500000
#####################################


 Press 1 for Land
 Press 2 for Shops
 Press 3 for Bunglow
 Press 4 for Apartments
 Press 5 to Exit

 Eenter your Choice:    2
Enter the name of the shop: Lucknavi

Enter the shop ID: 213

Enter the dimensions of the shop: 13 15

Name of the Shop: Lucknavi
ID of the Shop: 213
Price of the Shop: Rs.975000
```

CONCLUSION

- The System interface is quite User friendly and it is accessible easily.
- Using this system could reduce a huge amount of Paperwork which would help in Environment Conservation as well as in Time Management.
- Removes the Third Party Involvement.
- The system is open for Further improvements in the future.

“Thank You”