



Topic : Online Land Sales Management System

Group no : KNDUNI\_04

Campus : Kandy Uni

Submission Date:

We declare that this is our own work and this Assignment does not incorporate without acknowledgment any material previously submitted by anyone else in SLIIT or any other university/Institute. And we declare that each one of us equally contributed to the completion of this Assignment.

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**01. Description of the requirements.**

1. There are four types of users.
2. Those are admin, agent, financial officer, and users (Registered or Unregistered).
3. All the users can view the websites, check availability of the lands, check price ranges, check the FAQ sections, make buy requests, make requests for sell the lands and, contact with the admin.
4. Any guest can register for the website by providing a first name, last name, address, password, date of birth, phone number, and email address.
5. After registering, the system registered users can login using their email address and password.
6. Registered users can check land packages and make requests to buy the lands.
7. Registered users can make requests to sell land and contact with agents.
8. Registered users can give feedback about the website.
9. Registered users can view, delete, or edit their profiles.
10. Registered users can view, delete, or edit their land sell requests.
11. Agent can login with their email address and password.
12. Agents can generate progress and customer service reports.
13. Agents can contact the seller and check the given land details.
14. If given details verified by agents can request to admin to approve the land sell proposal.

15. Agents can contact buyer and negotiate with them and sell the land.
16. Admins can login with their email address and password.
17. Admin can approve or decline the user land sell requests.
18. The admin can activate and delete the user accounts.
19. The admin can edit, delete, and view the land details on database.
20. The admin can activate and delete the employee accounts.
21. The admin can activate and delete the financial officers' accounts.
22. Admin can approve or decline transactions contact with financial officers.
23. Financial officers can generate finance reports.
24. Financial officers should communicate with buyers and decide payment methods.

**02. Classes Identified**

- User
- Registered User
- Agent
- Admin
- Financial Officer
- Land
- Profile
- Transaction
- Report
- Feedback

**03. CRC Card**

<b>Class: Agent</b>	
<b><u>Responsibilities</u></b>	<b><u>Collaborations</u></b>
Login to account	
Approve Requests	
Verify land details	
Requests for land sale approval	Admin
Contacts buyer	Registered User
Contacts seller	Registered User
Generate reports	Reports

<b>Class: Inquiry</b>	
<b><u>Responsibilities</u></b>	<b><u>Collaborations</u></b>
Show details about inquiry	
Show inquiry	

<b>Class: User</b>	
<u>Responsibilities</u>	<u>Collaborations</u>
Register to account	
Search Land ads	Land
Contact websites	
Check FAQs	
Check feedbacks	Feedback
View about us	
Bookmark land interested	Land

<b>Class: Land</b>	
<u>Responsibilities</u>	<u>Collaborations</u>
Stores land details	
Manage land details	

<b>Class: Registered User</b>	
<u>Responsibilities</u>	<u>Collaborations</u>
Login to the system	
Send inquiry	Admin
Post Land Ad	
Enter land details	Land
Edit land details	Land
Request for property buying	Agent
Request for property selling	Agent
Cancel request	
Post feedback	Feedback

<b>Class: Feedback</b>	
<u>Responsibilities</u>	<u>Collaborations</u>
Details about feedback	
Approved feedback	Admin



<b>Class: Report</b>	
<b>Responsibility</b>	<b>Collaborators</b>
Generate customer service reports	Agent
Generate finance reports	Financial Officer
Generate progress reports	Agent

<b>Class: Admin</b>	
<b>Responsibility</b>	<b>Collaborators</b>
Login	
View user profiles and verify them	Registered User, Financial Officer, Agent
Add/ delete and edit users accounts	Registered User, Financial Officer, Agent
Reply inquiry	Registered User
Approve or decline transactions	Financial Officer, Transaction
Manage land details	
Approve or decline land requests	Registered User, Agent

**Year 1, Semester 2**

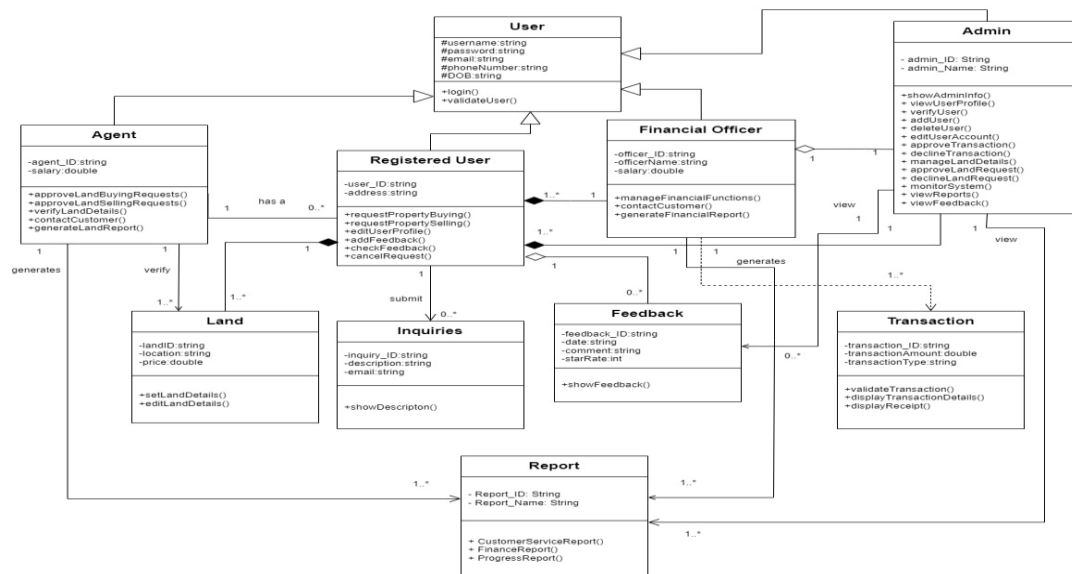
**2024- Feb**

Monitor system	
View reports	Reports
View feedback	Feedback

<b>Class: Financial Officer</b>	
<u>Responsibilities</u>	<u>Collaborations</u>
Manage risk	
Manage expense	
Manage treasury	
Generate financial reports	Reports
Contacts buyer	Registered User
Contacts Seller	Registered User

<b>Class: Transaction</b>	
<u>Responsibilities</u>	<u>Collaborations</u>
Store land sales transaction details	
Store land purchase transaction details	
Maintain transaction history	
Validate transaction data	Financial Officer

## 04.Class diagram



## 05.Coding for the classes

### 1.Main.cpp

```

... \Desktop\ooc\OOC Assignment\OOC Assignment\Main.cpp 1
1 #include <iostream>
2 #include "Registered_User.h"
3 #include "Agent.h"
4 #include "Financial_Officer.h"
5 #include "Admin.h"
6 #include "Feedback.h"
7 #include "Inquiry.h"
8 #include "Transaction.h"
9 #include "Land.h"
10
11 int main()
12 {
13     //data insert to Registered User
14     RegisteredUser*regUser= new RegisteredUser
15         ("Reshma","hello","reshma@gmail.com","0767856924","01.01.2001","U0001",
16         "123,Kandy rd,Kandy");
17     cout<<"Details of User:"<< endl;
18     regUser->display();
19     cout<<endl;
20
21     //data insert to Agent
22     Agent*Ag= new Agent
23         ("Hana","Blue","hana@gamil.com","0778596124","05.06.2007","A003","100",
24         "0000");
25     cout<<"Details of Agent"<< endl;
26     Agent->display();
27     cout<<endl;
28
29     //data insert to Financial Officer
30     financialOfficer*fin= new financialOfficer
31         ("Ayman","1234","ayman@gmail.com","06.07.2002","0005","89000");
32     cout<<"Details of Financial Officer"<< endl;
33     financialOfficer->display();
34     cout<<endl;
35
36     //data insert to Admin
37     Admin* admin = new Admin
38         ("Aazaf01","4536","aazaf@gmail.com","0752384956","07.05.2001","R003",
39         "Aazaf");
40     cout << "Details of Admin: " << endl;
41     admin->showAdminInfo();
42     cout << endl;
43
44     //data insert to Feedback
45     Feedback*fb= new Feedback("F0001","06.08.2024","Nice Location","4");
46     cout << "Details of Feedback:" << endl;
47     admin->showFeedback();
48     cout << endl;
49
50
51
52

```

```
...\\Desktop\\ooc\\OOC Assignment\\OOC Assignment\\Main.cpp 2
43 //data insert to Inquiry
44 Inquiry*inquire= new Inquiry("I001", "How can I purchase a Land?",
    "123user@gmail.com");
45 cout<<"Details of Inquiry:"<< endl;
46 inquire->display();
47 cout<<endl;
48
49 //data insert to Transaction
50 Transaction*transact= new Transaction("T001", "1200000", "Online
    Transaction");
51 cout<<"Details of Transaction:"<< endl;
52 transact->display();
53 cout<<endl;
54
55 //data insert to Land
56 Land*land= new land("L001", "49/A, King Street, Matale");
57 cout<<"Details of Land:"<< endl;
58 land->display();
59 cout<<endl;
60
61 return 0;
62
63 }
64
65
66
```

**2.User.cpp and User.h**

```
...esktop\ooc\OOC Assignment\OOC Assignment\User.h.cpp 1
1 #include <iostream>
2 using namespace std;
3
4 class User
5 {
6     protected:
7         char username [20]; // Username of the user
8         char password [12]; // password of the user
9         char email [50]; // E-mail of the user
10        char phoneNumber [12]; // Phone Number of the user
11        char DOB [10]; // Date of Birth of the user
12
13    public:
14        User(); // Default constructor
15        User(char u_name, char pass_word, char e_mail, char phone_Number,
16            char D_O_B); // Parameterized constructor
17        void displayDetails();
18        void login();
19        void validateUser();
20        ~User(); // Destructor
21    };
22
23 User::User() // Default constructor
24 {
25     strcpy(username, "");
26     strcpy(password, "");
27     strcpy(email, "");
28     strcpy(phoneNumber, "");
29     strcpy(DOB, "");
30 }
31
32 User::User(char u_name, char pass_word, char e_mail, char phone_Number,
33     char D_O_B) // Parameterized constructor
34 {
35     strcpy(userName, u_name);
36     strcpy(password, pass_word)
37     strcpy(email, e_mail)
38     strcpy(phoneNumber, phone_Number)
39     strcpy(DOB, D_O_B)
40 }
41
42 void User::displayDetails()
43 {
44     cout<<username<<endl<<
45     password<<endl<<
46     email<<endl<<
47     phoneNumber<<endl<<
48     DOB<<endl;
```

```
...esktop\ooc\OOC Assignment\OOC Assignment\User.h.cpp 2
48
49 void User::login()
50 {
51
52 }
53
54 void User::validateUser()
55 {
56
57 }
58
59 User::~User() // Destructor
60 {
61
62 }
63
64
65
66
67
```

```

...ign 2\Registered user\OOC assignment\RegisteredUser.h 1
1 #pragma once
2 #include "admin.h"
3 #include "land.h"
4 #include "agent.h"
5 #include "Feedback.h"
6 #include "User.h"
7 #define SIZE 2
8
9 class RegisteredUser : public User {
10 private:
11     char user_ID[10];
12     char address[100];
13     Feedback* feedback[SIZ];
14
15 public:
16     RegisteredUser(); // default constructor
17     RegisteredUser(char ru_username[], char ru_password[], char ru_email[],
18         char ru_phoneNumber[],
19         char ru_DOB[], char ru_id[], char ru_address[]);
20     // overloaded constructor
21
22     void display();
23     void addFeedback();
24     void editUserProfile();
25     void requestPropertyBuying();
26     void requestPropertySelling();
27     void cancelRequest();
28
29     void addFeed(char Fb_ID[], char Fb_Date[], char Fb_comment[], int
30         Fb_starRate);
31     void displayFeedback();
32
33     ~RegisteredUser(); // destructor
34 };

```



```

...n 2\Registered user\OOC assignment\RegisteredUser.cpp 1
1 #include "RegisteredUser.h"
2 #include <iostream>
3 #include <cstring>
4
5 using namespace std;
6
7 // Default constructor
8 RegisteredUser::RegisteredUser() {
9     strcpy(user_ID, "");
10    strcpy(address, "");
11    for (int i = 0; i < SIZE; ++i) {
12        feedback[i] = nullptr;
13    }
14 }
15
16 // Overloaded constructor
17 RegisteredUser::RegisteredUser(char ru_username[], char ru_password[], char ru_email[],
18     ru_phoneNumber[], char ru_DOB[], char ru_id[], char ru_address[])
19 : User(ru_username, ru_password, ru_email, ru_phoneNumber, ru_DOB) {
20     strcpy(user_ID, ru_id);
21     strcpy(address, ru_address);
22     for (int i = 0; i < SIZE; ++i) {
23         feedback[i] = nullptr;
24     }
25 }
26
27 void RegisteredUser::display() {
28     User::display();
29     cout << "User ID: " << user_ID << endl;
30     cout << "Address: " << address << endl;
31 }
32
33 void RegisteredUser::addFeedback() {
34     // Implement feedback addition here
35 }
36
37 void RegisteredUser::editUserProfile() {
38     // Implement user profile editing here
39 }
40
41 void RegisteredUser::requestPropertyBuying() {
42     // Implement property buying request here
43 }
44
45 void RegisteredUser::requestPropertySelling() {
46     // Implement property selling request here
47 }
48

```

```
...n 2\Registered user\OOC assignment\RegisteredUser.cpp 2
49 void RegisteredUser::cancelRequest() {
50     // Implement request cancellation here
51 }
52
53 void RegisteredUser::addFeed(char Fb_ID[], char Fb_Date[], char Fb_comment
    [], int Fb_starRate) {
54     feedback[0] = new Feedback(Fb_ID, Fb_Date, Fb_comment, Fb_starRate);
55 }
56
57 void RegisteredUser::displayFeedback() {
58     if (feedback[0] != nullptr) {
59         feedback[0]->showFeedback();
60     }
61     else {
62         cout << "No feedback available" << endl;
63     }
64 }
65
66 RegisteredUser::~RegisteredUser() {
67     for (int i = 0; i < SIZE; ++i) {
68         if (feedback[i] != nullptr) {
69             delete feedback[i];
70         }
71     }
72 }
73
```

```

...Desktop\ooc\OOC Assignment\OOC Assignment\Admin.cpp 1
1 // Admin.cpp
2 #include "Admin.h"
3 #include <iostream>
4 #include <cstring> // For strcpy
5 using namespace std;
6
7 // Default constructor
8 Admin::Admin() {
9     strcpy(Admin_ID, ""); // Initialize with empty string
10    strcpy(Admin_Name, ""); // Initialize with empty string
11 }
12
13 // Parameterized constructor
14 Admin::Admin(char a_username[], char a_password[], char a_email[], char
    a_phoneNum[], char a_DOB[], char id[], char name[])
15 :User(a_username, a_password, a_email, a_phoneNum, a_DOB){
16     strcpy(Admin_ID, id);
17     strcpy(Admin_Name, name);
18 }
19
20 // Methods for Admin class functionalities
21
22 void Admin::showAdminInfo() {
23     cout << "Admin ID: " << Admin_ID << endl;
24     cout << "Admin Name: " << Admin_Name << endl;
25 }
26 void Admin::viewUserProfile() {
27
28 }
29
30 void Admin::verifyUser() {
31
32 }
33
34 void Admin::addUser() {
35
36 }
37
38 void Admin::deleteUser() {
39
40 }
41
42 void Admin::editUserAccount() {
43
44 }
45
46 void Admin::approveTransaction() {
47
48 }
  
```

```
...Desktop\ooc\OOC Assignment\OOC Assignment\Admin.cpp 2
49
50 void Admin::declineTransaction() {
51
52 }
53
54 void Admin::manageLandDetails() {
55
56 }
57
58 void Admin::approveLandRequest() {
59
60 }
61
62 void Admin::declineLandRequest() {
63
64 }
65
66 void Admin::monitorSystem() {
67
68 }
69
70 void Admin::viewReports() {
71
72 }
73
74 void Admin::viewFeedback() {
75
76 }
77
78
79
80 // Destructor
81 Admin::~Admin() {
82
83 }
84
```

```
...d\Desktop\ooc\OOC Assignment\OOC Assignment\Admin.h 1
1 // Admin.h
2 #pragma once
3 #include <string>
4 #include "RegisteredUser.h"
5 #include "Transaction.h"
6 #include "financial officer.h"
7 #include "Agent.h"
8 #include "Report.h"
9 #include "Feedback.h"
10
11
12
13 class Admin:public User {
14 private:
15     char Admin_ID[10]; // Identifier for the admin
16     char Admin_Name[100]; // Admin's name
17     char Admin_Email[100]; // Admin's email
18
19 public:
20     Admin(); // Default constructor
21     Admin(char a_username[], char a_password[],char a_email[], char a_phoneNum[],char a_DOB[],char id[],char name[]); // Parameterized constructor
22
23     void showAdminInfo(); // Method to display admin information
24     void viewUserProfile();
25     void verifyUser();
26     void addUser();
27     void deleteUser();
28     void editUserAccount();
29     void approveTransaction();
30     void declineTransaction();
31     void manageLandDetails();
32     void approveLandRequest();
33     void declineLandRequest();
34     void monitorSystem();
35     void viewReports();
36     void viewFeedback();
37
38
39
40     ~Admin(); // Destructor
41 };
42
```

#### 7.Agent.cpp

```

...Desktop\ooc\OOC Assignment\OOC Assignment\Agent.cpp 1
1 #include <iostream>
2 #include<cstring>
3 #include "Agent.h"
4 #include "RegisteredUser.h"
5 #include "Reports.h"
6 #include "land.h"
7
8 using namespace std;
9 // Default constructor
10 Agent::Agent() {
11     strcpy(agent_ID, "");
12     salary = 0.0;
13 }
14 //Overloaded Constructor implementation
15 Agent::Agent(char ag_username[], char ag_password[],char ag_email[], char ag_phoneNum[],char ag_DOB[], char ag_ID[], double ag_salary)
16     :User(ag_username, ag_password,ag_email,ag_phoneNum,ag_DOB) {
17     strcpy(agent_ID, ag_ID);
18     salary=ag_salary
19 }
20 //Display Agent Details
21 void Agent::display() {
22     User::display();
23     cout << "Agent ID:"<<agent_ID << endl;
24     cout<<"Salary:"<<salary<<endl;
25 }
26 void Agent::approveLandBuyingRequests() {
27
28 }
29 void Agent::approveLandSellingRequests() {
30
31 }
32 void Agent::verifyLandDetails() {
33
34 }
35 void Agent::contactCustomer() {
36
37 }
38 void Agent::generateLandReport() {
39
40 }
41 // Destructor
42 Agent::~Agent() {
43
44 }
45

```



```

...d\Desktop\ooc\OOC Assignment\OOC Assignment\Admin.h 1
1 // Admin.h
2 #pragma once
3 #include <string>
4 #include "RegisteredUser.h"
5 #include "Transaction.h"
6 #include "financial officer.h"
7 #include "Agent.h"
8 #include "Report.h"
9 #include "Feedback.h"
10
11
12
13 class Admin:public User {
14 private:
15     char Admin_ID[10]; // Identifier for the admin
16     char Admin_Name[100]; // Admin's name
17     char Admin_Email[100]; // Admin's email
18
19 public:
20     Admin(); // Default constructor
21     Admin(char a_username[], char a_password[],char a_email[], char  ➤
        a_phoneNum[],char a_DOB[],char id[],char name[]); // Parameterized  ➤
        constructor
22
23     void showAdminInfo(); // Method to display admin information
24     void viewUserProfile();
25     void verifyUser();
26     void addUser();
27     void deleteUser();
28     void editUserAccount();
29     void approveTransaction();
30     void declineTransaction();
31     void manageLandDetails();
32     void approveLandRequest();
33     void declineLandRequest();
34     void monitorSystem();
35     void viewReports();
36     void viewFeedback();
37
38
39
40     ~Admin(); // Destructor
41 };
42

```

```
...top\ooc\OOC Assignment\OOC Assignment\transaction.h 1
1 #pragma once
2
3 class Transaction {
4 private:
5     char transaction_ID[15];
6     char transactionAmount[15];
7     char transactionType[250];
8
9
10 public:
11     Transaction();
12     Transaction(char Fb_ID[], char Fb_Date[], char Fb_comment[], int Fb_starRate);
13
14     void showTransaction();
15     ~Transaction(); // Destructor
16 };
17
```



```
...oc\OOC Assignment\OOC Assignment\transaction[1].cpp 1
1 #include "Transaction.h"
2 #include "financialOfficer.h"
3 #include <iostream>
4 #include <cstring>
5
6
7
8 using namespace std;
9
10 Transaction::Transaction() {
11     strcpy(transaction_ID, "");
12     strcpy(transactionAmount, "");
13     strcpy(transactionType, "");
14 }
15
16 Transaction::Transaction(char tr_id[],char amnt[],char tr_type[]) {
17     strcpy(transaction_ID, tr_id);
18     strcpy(transactionAmount, tr_amnt);
19     strcpy(transactionType, tr_type);
20 }
21
22 void Transaction::showTransaction() {
23     cout << "Transaction Amount: " << transactionAmount << endl;
24     cout << "Transaction Type: " << transactionType << endl;
25 }
26
27 Transaction::~Transaction() {
28     // Destructor
29 }
30
```

```

...esktop\ooc\OOC Assignment\OOC Assignment\land.h.cpp 1
1 #include <iostream>
2 #include <cstring>
3 using namespace std;
4
5 class Land
6 {
7     private:
8         char land_ID [50];    //to represent land ID
9         char location [50];  //array to store location
10        double price;        // Price of the land
11
12    public:
13        Land(); // Default constructor
14        Land(char pland_ID, char plocation, double pprice); // Parameterized constructor
15        void display(); // function
16        void setLandDetails(); // Function
17        void getLandDetails(); // function
18        ~Land(); // Destructor
19 };
20
21 Land::Land() // Default constructor
22 {
23     strcpy(land_ID, "");
24     strcpy(location, "");
25     price=0;
26 }
27
28 Land::Land(char pland_ID, char plocation, double pprice) // Parameterized constructor
29 {
30     strcpy(land_ID, "pland_ID");
31     strcpy(location, "plocation");
32     price=pprice;
33 }
34
35 void Land::display()
36 {
37     cout<<land_ID<<endl<<
38     location<<endl<<
39     price<<endl;
40 }
41
42 void Land::setLandDetails()
43 {
44
45 }
46
47 Land::~Land() // Destructor

```

```
...esktop\ooc\OOC Assignment\OOC Assignment\land.h.cpp 2
48 {
49
50 }
51
52
53
```

```
...Desktop\ooc\OOC Assignment\OOC Assignment\Inquiry.h 1
1 #pragma once
2 class Inquiry
3 {
4 private:
5     char inquiry_ID[10];
6     char description[500];
7     char email[100];
8 public:
9     Inquiry();//Default Constructor
10    Inquiry(char i_ID[], char i_description[], char i_email[]);
11
12    void display();//Display Inquiry
13    void showDescription();
14
15    ~Inquiry();//Destructor
16 };
17
18
```

**10.Inquiry.cpp**

```
...sktop\ooc\OOC Assignment\OOC Assignment\Inquiry.cpp 1
1 #include<iostream>
2 #include "Inquiry.h"
3 using namespace std;
4
5 //Default Constructor Implementation
6 Inquiry::Inquiry() {
7     strcpy(inquiry_ID, "");
8     strcpy(description, "");
9     strcpy(email, "");
10 }
11
12 //Overloaded Constructor Implementation
13 Inquiry::Inquiry(char i_ID[], char i_description[], char i_email[]) {
14     strcpy(inquiry_ID, i_ID);
15     strcpy(description, i_description);
16     strcpy(email, i_email);
17 }
18 void Inquiry::display() {
19     cout << "Inquiry ID:" << inquiry_ID << endl;
20     cout << "Email:" << email << endl;
21 }
22 void Inquiry::showDescription() {
23     cout << "Description" << description << endl;
24 }
25 Inquiry::~Inquiry() {
26
27 }
```

```
...med\Desktop\OOC assign 2\Footer\Footer\Footer.h 1
1 #pragma once
2
3 class Feedback {
4 private:
5     char feedback_ID[15];
6     char date[15];
7     char comment[250];
8     int starRate;
9
10 public:
11     Feedback();
12     Feedback(char Fb_ID[], char Fb_Date[], char Fb_comment[], int Fb_starRate);
13
14     void showFeedback();
15     ~Feedback(); // Destructor
16 };
17
```

**12.Feedback.cpp**

```
...d\Desktop\OOC assign 2\Fedback\Fedback\Fedback.cpp 1
1 #include "Feedback.h"
2 #include <iostream>
3 #include <cstring>
4
5 using namespace std;
6
7 Feedback::Feedback() {
8     strcpy(feedback_ID, "");
9     strcpy(date, "");
10    strcpy(comment, "");
11    starRate = 0;
12 }
13
14 Feedback::Feedback(char Fb_ID[], char Fb_Date[], char Fb_comment[], int
    Fb_starRate) {
15     strcpy(feedback_ID, Fb_ID);
16     strcpy(date, Fb_Date);
17     strcpy(comment, Fb_comment);
18     starRate = Fb_starRate;
19 }
20
21 void Feedback::showFeedback() {
22     cout << "Date: " << date << endl;
23     cout << "Comment: " << comment << endl;
24     cout << "Star Rate: " << starRate << endl;
25 }
26
27 Feedback::~Feedback() {
28     // Destructor
29 }
30
```

**13.report.cpp**

```
...esktop\ooc\OOC Assignment\OOC Assignment\Report.cpp 1
1 // Report.cpp
2 #include "Report.h"
3 #include <iostream>
4 #include <cstring> // For strcpy
5
6 // Default constructor
7 Report::Report() {
8     strcpy(Report_ID, ""); // Initialize with empty string
9     strcpy(Report_Name, ""); // Initialize with empty string
10 }
11
12 // Parameterized constructor
13 Report::Report(const char id[10], const char name[100]) {
14     strcpy(Report_ID, id);
15     strcpy(Report_Name, name);
16 }
17
18 // Methods
19 void Report::CustomerServiceReport() {
20 }
21
22
23 void Report::FinanceReport() {
24 }
25
26
27 void Report::ProgressReport() {
28 }
29
30
31 // Destructor
32 Report::~Report() {
33 }
34 }
35
```



**14.report.h**

```
...\\Desktop\\ooc\\OOC Assignment\\OOC Assignment\\Report.h 1
1 // Report.h
2 #pragma once
3 #include <string>
4 #include "financial_officer.h"
5 #include "Agent.h"
6
7
8 class Report {
9 private:
10     char Report_ID[10]; // Identifier for the report
11     char Report_Name[100]; // Name of the report as a character array
12
13
14 public:
15     Report();
16     Report(const char id[10], const char name[100]);
17     void CustomerServiceReport();
18     void FinanceReport();
19     void ProgressReport();
20     ~Report(); // Destructor
21 };
22
```

**15. financial officer.h**

```
...c\OOC Assignment\OOC Assignment\financial officer.h 1
1 #pragma once
2 #include "reports.h"
3 #include "financialOfficer.h"
4 #define SIZE 2
5
6 class financialOfficer : public User // Derived from User
7 {
8 private:
9     char officer_ID[10];
10    char officerName[100];
11    reports* reports[SIZE];
12
13 public:
14    financialOfficer(); // default constructor
15    financialOfficer(char fin_username[], char fin_pass[], char fin_id[],  ➤
        char fin_email[], char fin_address[]);
16    //overloaded constructor
17
18    void display();
19    void manageFinancialFunctions();
20    void contactCustomer();
21    void generateFinancialReport();
22
23    void generateFinancialReport(char rep_Date[],char rep_Progress[],char  ➤
        rep_Finance[],char rep_cusSer,char rep_content);
24    void displayReports();
25
26    ~financialOfficer(); // destructor
27 };
28
```

```

...OOC Assignment\OOC Assignment\financial officer.cpp 1
1 #include "reports.h"
2 #include "financialOfficer.h"
3 #include <iostream>
4 #include <cstring>
5
6
7 using namespace std;
8
9 // Default constructor
10 financialOfficer::financialOfficer() {
11     strcpy(officer_ID, "");
12     strcpy(officerName, "");
13     for (int i = 0; i < SIZE; ++i) {
14         reports[i] = nullptr;
15     }
16 }
17
18 // Overloaded constructor
19 financialOfficer::financialOfficer(char fin_username[], char fin_pass[],
    char fin_id[], char fin_email[], char fin_address[])
20 : User(fin_username, fin_pass) {
21     strcpy(officer_ID_ID, fin_id);
22     strcpy(address, ru_address);
23     for (int i = 0; i < SIZE; ++i) {
24         reports[i] = nullptr;
25     }
26 }
27
28 void financialOfficer::display() {
29     User::display();
30     cout << officer_ID << endl;
31     cout << officerName << endl;
32 }
33
34 void financialOfficer::manageFinancialFunctions() {
35     // Manage financial functions here
36 }
37
38 void financialOfficer::contactCustomer() {
39     // Contact buyer and seller
40 }
41
42 void financialOfficer::generateFinancialReport() {
43     // Generate Financial reports
44 }
45
46
47 void financialOfficer::generateFinancialReport(char rep_Date[],char
    rep_Progress[],char rep_Finance[],char rep_cusSer,char rep_content) {

```

```
...OOC Assignment\OOC Assignment\financial officer.cpp 2
48     reports[0] = new Reports(rep_Date, rep_Progress, rep_Finance,
    rep_cusSer, rep_content);
49 }
50
51 void financialOfficer::displayReports() {
52     if (reports[0] != nullptr) {
53         reports[0]->showReports();
54     }
55     else {
56         cout << "No Reports available" << endl;
57     }
58 }
59
60 financialOfficer::~financialOfficer() {
61     for (int i = 0; i < SIZE; ++i) {
62         if (Reports[i] != nullptr) {
63             delete Reports[i];
64         }
65     }
66 }
67
```

---

**6.Individual Contributions**

**IT23255142: HANA S.M.F**

**❖ Individual contributions**

- \* Created Agent and Inquiry CRC cards**
- \* Worked Agent and Inquiry CRC Diagram**
- \* Worked on creating Agent.h, Agent.cpp and Inquiry.h, Inquiry.cpp**

**IT23262768: Reshma M.R.F**

**❖ Individual contributions**

- \* Created User and Land CRC cards**
- \* Worked User and Land CRC Diagram**
- \* Worked on creating User.h, User.cpp and Land.h, Land.cpp**

**IT23151710: Aazaf Ritha J**

**❖ Individual contributions**

- \* Created Admin and Report CRC cards**
- \* Worked Admin and Report CRC Diagram**
- \* Worked on creating Admin.cpp , Admin.h hand Report.h, Report.cpp**

**IT23187078: Aman Mohamed M. A**

**❖ Individual contributions**

**\* Created Registered User and Feedback CRC cards**

**\* Worked Registered User and Feedback CRC Diagram**

**\* Worked on creating RegisteredUser.h, RegisteredUser.cpp and Feedback.h, Feedback.cpp**

**IT23238480: Ayman M R**

**❖ Individual contributions**

**\* Created Financial Officer and Transaction CRC cards**

**\* Worked Financial Officer and Transaction CRC Diagram**

**\* Worked on creating Financial Officer.cpp , Financial Officer.h hand Transaction.h, Transaction.cpp**