



Topic: **Resource Booking System**

Group no: **MLB\_07.01\_09**

Campus: **Malabe** / ~~Metro~~ / ~~Matara~~ / ~~Kandy~~ / ~~Kurunegala~~ / ~~Kandy~~ / ~~Jaffna~~

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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. The requirements of the system

1. A new user needs to first register on the system and become a registered user to book a resource.
2. As a registered user, the user will be able to view resources.
3. As a registered user, he/she can book a resource for a required date if the selected resource is available.
4. When booking a hall, users should choose a resource type.
5. Every booking has a payment, and it can be done through a visa, credit, or master card.
6. When the user confirms the booking, the payment will be validated in each transaction.
7. The payment details are stored in the system.
8. Users can make reviews and contact us if needed.
9. The manager can check the contact\_us, give responses, manage payments, check income, generate income reports, and update the price lists.

## 2). Classes

- User
- Reservation
- Resource
- Review
- Contact\_us
- Payment
- Report
- Manager
- Admin

### 3). CRC Cards

User	
Responsibility	Collaborators
Register & login into the system	
Store Details of User	
User view resources	Resource
User make reviews	Review
User make payment	Payment, Resource, Reservation
User contact with contact_us	Contact_us

Reservation	
Responsibility	Collaborators
Store reservation's history	
Keep unreserved resources details	
Check availability of resources	resource
Calculate monthly income	Report

Resource	
Responsibility	Collaborators
Store Resources details	
Display Resources	
Update details	

Review	
Responsibility	Collaborators
Keep review	
Keep user details	user

Contact_us	
Responsibility	Collaborators
Keep message	
Keep user details	User

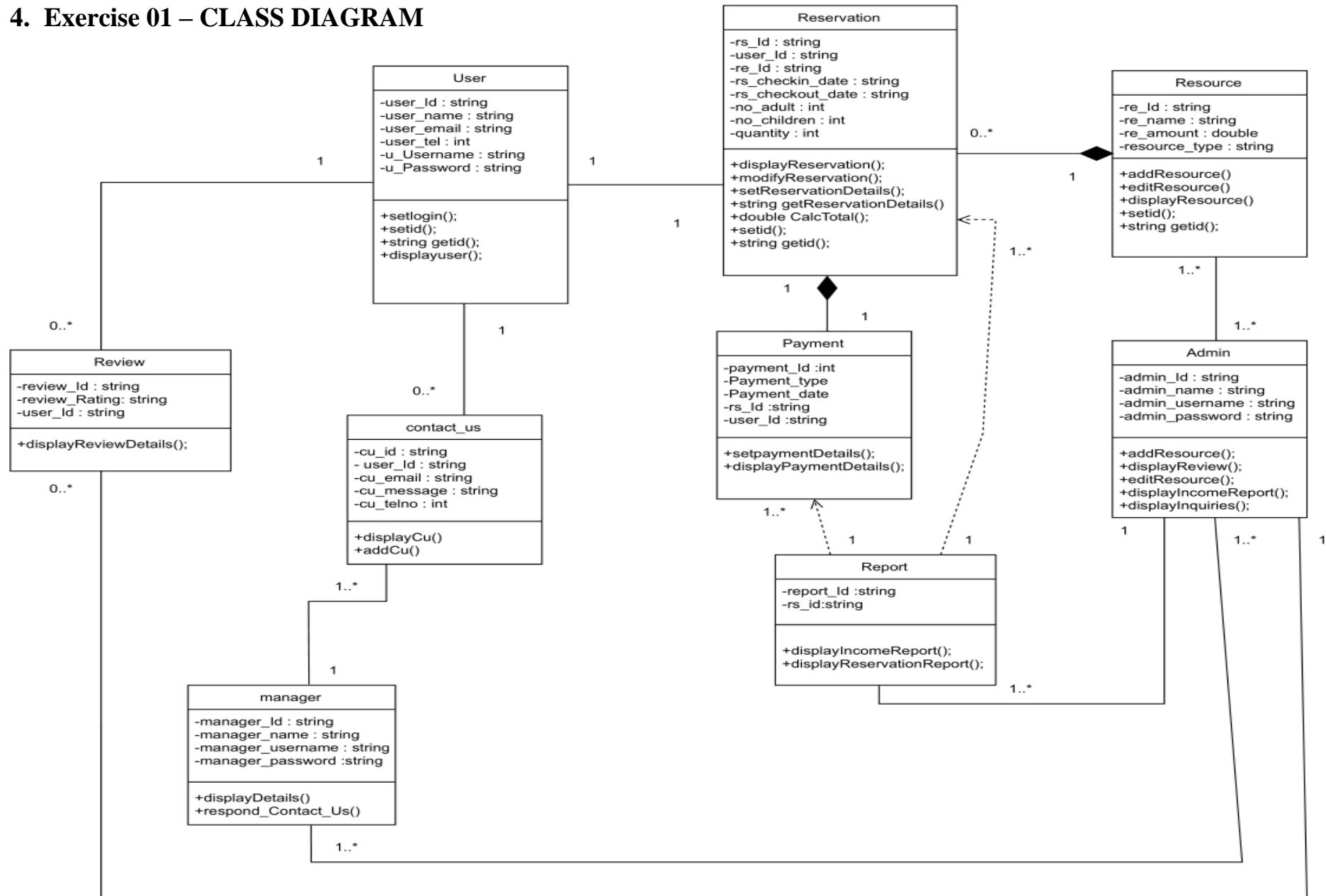
Payment	
Responsibility	Collaborators
Handle transactions	
Keep payment details	
Get user details	User
Get reservation details	Reservation

Report	
Responsibility	Collaborators
Generate Reservation details	Reservation
Get Income Report	Admin, payment

<b>Manager</b>	
<b>Responsibility</b>	<b>Collaborators</b>
Manage contact_us,Review	User, contact_us
Give responses	

<b>Admin</b>	
<b>Responsibility</b>	<b>Collaborators</b>
Manage reviews	review
Update information	
Manage managers	Manager
Add or Update resources	resources

## 4. Exercise 01 – CLASS DIAGRAM



## 5. Exercise 02 – CODE

```
#include <iostream>
#include <string>

using namespace std;

//IT210994720 -AL balushi O.T.M.G
//User Class
class user{
private:
    string user_id;
    string user_name;
    string user_email;
    int user_tel;
    string u_username;
    string u_password;

public:
    user();
    user(string id, string name, string email, int phone, string username, string password);
    void setlogin();
    void displayuser();
    void setid(string x);
    string getid();
};

user::user() {
}

user::user(string id, string name, string email, int phone, string username, string password) {
    user_id = id;
    user_name = name;
    user_email = email;
    user_tel = phone;
    u_username = username;
    u_password = password;
}

void user::setlogin()
{

}

;

void user::displayuser() {
```



```

        cout << "user id:" << user_id << endl;
        cout << "user name:" << user_name << endl;
        cout << "email:" << user_email << endl;
        cout << "phone number:" << user_tel << endl;
        cout << "username:" << u_username << endl;
        cout << "password:" << u_password << endl;
    };
    void user::setid(string x) {
        user_id = x;
    };
    string user::getid() {
        return user_id;
    }

//IT210994720 -AL balushi O.T.M.G
//Review class
class Review {
private:
    int review_Id;
    string review_Rating;
    user* u1;

public:
    Review();
    Review(int review_num, string review_Ra, user* uu1);
    void displayReviewDetails();
};

Review::Review() {};
Review::Review(int review_num, string review_Ra, user* uu1) {
    review_Id = review_num;
    review_Rating = review_Ra;
    u1 = uu1;
};

void Review::displayReviewDetails() {
    cout << "Review ID: " << review_Id << endl;
    cout << "Review Rating:" << review_Rating << endl;
    cout << "User id:" << u1->getid() << endl;
};

//IT21347962-K. Siribaddana
//resource class
class Resource {
private:

```

```

    string re_id;
    string re_name;
    double re_amount;
    string resource_type;

public:
    Resource();
    Resource(string Res_Id, string Res_Name, double Res_Amount, string Res_Type);
    void addResource();
    void editResource();
    void displayResource();
    void setid(string id);
    string getid();
};

void Resource::setid(string id) {
    re_id = id;
};

string Resource::getid() {
    return re_id;
};

Resource::Resource() {
};

Resource::Resource(string Res_Id, string Res_Name, double Res_Amount, string Res_Type) {

    re_id = Res_Id;
    re_name = Res_Name;
    re_amount = Res_Amount;
    resource_type = Res_Type;
};

void Resource::addResource() {

};

void Resource::editResource() {

};

void Resource::displayResource() {
    cout << "Resource Id:" << re_id << endl;
    cout << "Resource Name:" << re_name << endl;
    cout << "Resource Amount:" << re_amount << endl;
    cout << "Resource Type:" << resource_type << endl;
};

```

```

//IT21146442 -Jayasinghe K.A.C.T
//Class Contact US
class contact_us {
private:
    string cu_id;
    string cu_email;
    string cu_message;
    int cu_telno;
    user* u1;

public:
    contact_us();
    contact_us(string c_id, string c_email, string c_message, int c_tel, user* uu1);
    void displayCu();
    void addCu();
};

contact_us::contact_us() {};
contact_us::contact_us(string c_id, string c_email, string c_message, int c_tel, user* uu1) {

    cu_id = c_id;
    cu_email = c_email;
    cu_message = c_message;
    cu_telno = c_tel;
    u1 = uu1;
};

void contact_us::displayCu() {

    cout << "Custmer Id:" << cu_id << endl;
    cout << "Custmer Email:" << cu_email << endl;
    cout << "Custmer Message:" << cu_message << endl;
    cout << "Custmer Telnumber:" << cu_telno << endl;
    cout << "User id:" << u1->getid() << endl;
};

void contact_us::addCu() {

};

//IT21146442 -Jayasinghe K.A.C.T
//reservation class
class reservation {
private:
    string rs_id;
    string rs_checkin_date;

```

```

    string rs_checkout_date;
    int no_adult;
    int no_children;
    int quantity;
    user* u1;
    Resource* res;

public:
    reservation();
    reservation(string id, string in, string out, int big, int small, int no, user* uu1, Resource*
res1);
    void setReservationDetails(string id, string in, string out);
    string getReservationDetails();
    void displayReservation();
    void modifyReservation();
    double CalcTotal();
    void setid(string id);
    string getid();
};

reservation::reservation() {};
reservation::reservation(string id, string in, string out, int big, int small, int no, user* uu1,
Resource* res1) {
    rs_id = id;
    rs_checkin_date = in;
    rs_checkout_date = out;
    no_adult = big;
    no_children = small;
    quantity = no;
    u1 = uu1;
    res = res1;
}
void reservation::setReservationDetails(string id, string in, string out)
{
    rs_id = id;
    rs_checkin_date = in;
    rs_checkout_date = out;
}

string reservation::getReservationDetails()
{
    return rs_id;
    return rs_checkin_date;
}

```

```

        return rs_checkout_date;
    };

void reservation::displayReservation() {
    cout << "Reservation id:" << rs_id << endl;
    cout << "check in date:" << rs_checkin_date << endl;
    cout << "check out date:" << rs_checkout_date << endl;
    cout << "No of adult:" << no_adult << endl;
    cout << "No of children:" << no_children << endl;
    cout << "User id:" << u1->getid() << endl;
    cout << "Resource id:" << res->getid() << endl;
}

void reservation::modifyReservation()
{
}

double reservation::CalcTotal()
{
    return 0.0;
}

void reservation::setid(string id) {
    rs_id = id;
}

string reservation::getid() {
    return rs_id;
};

//IT21156656-Deshapriya V.P.G.
//Class manager
class manager {
private:
    string manager_id;
    string manager_name;
    string manager_username;
    string manager_password;

public:
    manager();
    manager(string m_id, string m_name, string m_username, string m_password);
    void displayDetails();
    void respond_Contact_Us();

```

```

};

manager::manager() {};
manager::manager(string m_id, string m_name, string m_username, string m_password) {

    manager_id = m_id;
    manager_name = m_name;
    manager_username = m_username;
    manager_password = m_password;
};

void manager::displayDetails() {

    cout << "Manager Id:" << manager_id << endl;
    cout << "Manager Name:" << manager_name << endl;
    cout << "Manager Username:" << manager_username << endl;
    cout << "Manager Password:" << manager_password << endl;
};

void manager::respond_Contact_Us() {};

//IT21156656-Deshapriya V.P.G.
//Class payment
class paymant {
private:
    int Payment_Id;
    string payment_date;
    string payment_type;
    user* u1;
    reservation* res;
public:
    paymant();
    paymant(int p_id,string date,string type,user* uu1, reservation* ress);
    void setpaymentDetails();
    void displayPaymentDetails();
};

paymant::paymant() {};
paymant::paymant(int p_id, string date, string type, user* uu1, reservation* ress) {

    Payment_Id = p_id;
    payment_date = date;
    payment_type = type;
    u1 = uu1;
    res = ress;
}

```

```

};

void payment::setpaymentDetails() {};
void payment::displayPaymentDetails() {
    cout << "Paymant Id:" << Payment_Id << endl;
    cout << "Paymant date:" << payment_date << endl;
    cout << "Paymant type:" << payment_type << endl;
    cout << "User id:" << u1->getid() << endl;
    cout << "Reservation id:" << res->getid() << endl;
};

//IT21347962-K. Siribaddana
//Admin Class
class Admin
{
private:
    string admin_Id;
    string admin_Name;
    string admin_Username;
    string admin_Password;
    contact_us* contact;
    Resource* res;
    Review* rw;
    manager* manager1;

public:
    Admin();
    Admin(string ad_id, string ad_name, string ad_username, string
ad_password,contact_us*con, Resource* ress, Review* rww, manager* manager11);
    void displaydetails();
    void addResource();
    void displayReview();
    void editResource();
    void displayIncomeReport();
    void displayContactUs();
};

Admin::Admin()
{
};

```

```

Admin::Admin(string ad_id, string ad_name, string ad_username, string ad_password,
contact_us* con, Resource* ress, Review* rww, manager* manager11)
{
    admin_Id = ad_id;
    admin_Name = ad_name;
    admin_Username = ad_username;
    admin_Password = ad_password;
    contact = con;
    res = ress;
    rw = rww;
    manager1 = manager11;
};

void Admin::displaydetails()
{
    cout << "Admin Id:" << admin_Id<<endl;
    cout << "Admin name:" << admin_Name<<endl;
    cout << "Admin username:" << admin_Username<<endl;
    cout << "Admin password:" << admin_Password<<endl;
};

void Admin::addResource()
{
}

void Admin::displayReview()
{
}

void Admin::editResource()
{
}

void Admin::displayIncomeReport()
{
}

void Admin::displayContactUs()
{
}

//IT21347962-K. Siribaddana
//Report Class

```



```

class report {
private:
    string report_Id;
    reservation* res;

public:
    report();
    report(string rep_id, reservation* ress);
    void displayIncomeReport();
    void displayReservationReport();
};

report::report() {};
report::report(string rep_id, reservation* ress) {
    report_Id = rep_id;
    res = ress;
};
void report::displayIncomeReport() {};

void report::displayReservationReport() {

    cout << "Report - Reservation:";
    cout<< res->getReservationDetails() << endl;
};

int main(){

    //IT210994720 -AL balushi O.T.M.G
    //User class object
    cout << "User" << endl;
    user u2 = user("R001", "okok", "email@", 07657, "omer12", "pass#");
    u2.displayuser();

    cout << endl << endl;

    //IT210994720 -AL balushi O.T.M.G
    //review class object
    cout << "Review" << endl;
    Review rev1 = Review(1000, "very good", &u2);
    rev1.displayReviewDetails();

    cout << endl << endl;

    //IT21146442 -Jayasinghe K.A.C.T
    //contactus class object

```

```

cout << "Contact Us" << endl;
contact_us cu1 = contact_us("cu0001", "Kumara@gmail.com", "Good", 715869009, &u2);
cu1.displayCu();

cout << endl << endl;

//IT21347962-K. Siribaddana
//resources class object
cout << "Resources" << endl;
Resource r1 = Resource("RE100", "Amaya", 1000.00, "event");
r1.displayResource();

cout << endl << endl;

//IT21146442 -Jayasinghe K.A.C.T
//reservation class object
cout << "Reservation" << endl;
reservation rs1 = reservation("RS001", "2000/02/01", "2000/02/07", 2, 3, 5, &u2, &r1);
rs1.displayReservation();

cout << endl << endl;

//IT21156656-Deshapriya V.P.G.
//manager class object
cout << "Manager" << endl;
manager me1 = manager("ME0001", "gayashan", "gayashan12", "gayashankkk");
me1.displayDetails();

cout << endl << endl;

//IT21156656-Deshapriya V.P.G.
//payment class object
cout << "Payment" << endl;
paymant pa1 = paymant(1000,"2022/02/03","VISA" ,&u2, &rs1);
pa1.displayPaymentDetails();

cout << endl << endl;

//IT21347962-K. Siribaddana
//admin class object
cout << "admin" << endl;
Admin admin1;
admin1.displaydetails();

cout << endl << endl;

```

```
//IT21347962-K. Siribaddana
//report class object
report report1=report("RP001",&rs1);
report1.displayReservationReport();

return 0;
}
```

## 6. Individual Contribution

MLB_07.01_09 - Resource Booking System							
Student	Student Id		IT21099472	IT21146442	IT21156656	IT21347962	
	Student Name		Albalushi O.T.M.G.	Jayasinghe K.A.C.T.	Deshapriya V.P.G.	K. Siribaddana	
Section worked on	Designed & Coded for Classes	User	Reservation	Payment	Resources		
		Review	Contact_us	Manager	Admin	Report	
Special contributions		-Combined, typed, and edited the final assignment report.	-Designed the final Class Diagram by combining individually designed classes.	-Typed the requirements of the system.	-Gather all the individually designed CRC Cards and attached them to the report.		
		Discussed with each member and find out the requirements of the system					
		Discussed with each member found the relevant relationship between for the classes identified individually.					