BSc (Hons) in Information Technology
Object Oriented Concepts – IT1050
Assignment 2

Year 1, Semester 2 **2023-July-Dec**

Topic : Online Medical Portal

Group no : MLB_WD_03.02.07

Campus : Malabe

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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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1. Description of the requirement

- All the users can visit the website and check specialists, check available medical institutes and available medical tests.
- Anyone can register and create an account by providing username, name, DOB, address, contact no, email, and password.
- After creating an account, the registered user can log into the website using the username and the password.
- Registered users can make appointments by selecting the preferred doctor.
- Registered users can view their test results.
- Registered users can view their medical history.
- Registered users can select a preferred healthcare center to get a preferred healthcare service.
- Registered users can give feedback.
- Registered users can view, delete, or edit their profiles.
- Customer support login into the website by providing a username and password.
- Customer support manages the scheduled doctor appointments.
- Customer support can activate or deactivate the patients account.
- Customer support can update doctor details.
- Customer support manages the feedback of the customers.

2. Classes Identified

- Guest user.
- Appointments.
- Feedback.
- Doctor.
- Customer support (Inherited from the user).
- Registered user (Inherited from the user).
- Manager (Inherited from the user).

3. CRC Card

Guest User	
Responsibilities:	**Collaboration:**
Log in to the system	
Validate user	
Check doctors & specialists	Doctors
Check medical institutes	
Check available medical tests	

Appointments	
Responsibilities:	**Collaboration:**
Store appointment details.	
Show appointment details.	

Feedback	
Responsibilities:	**Collaboration:**
Store details about Feedback	
Show approved feedback	

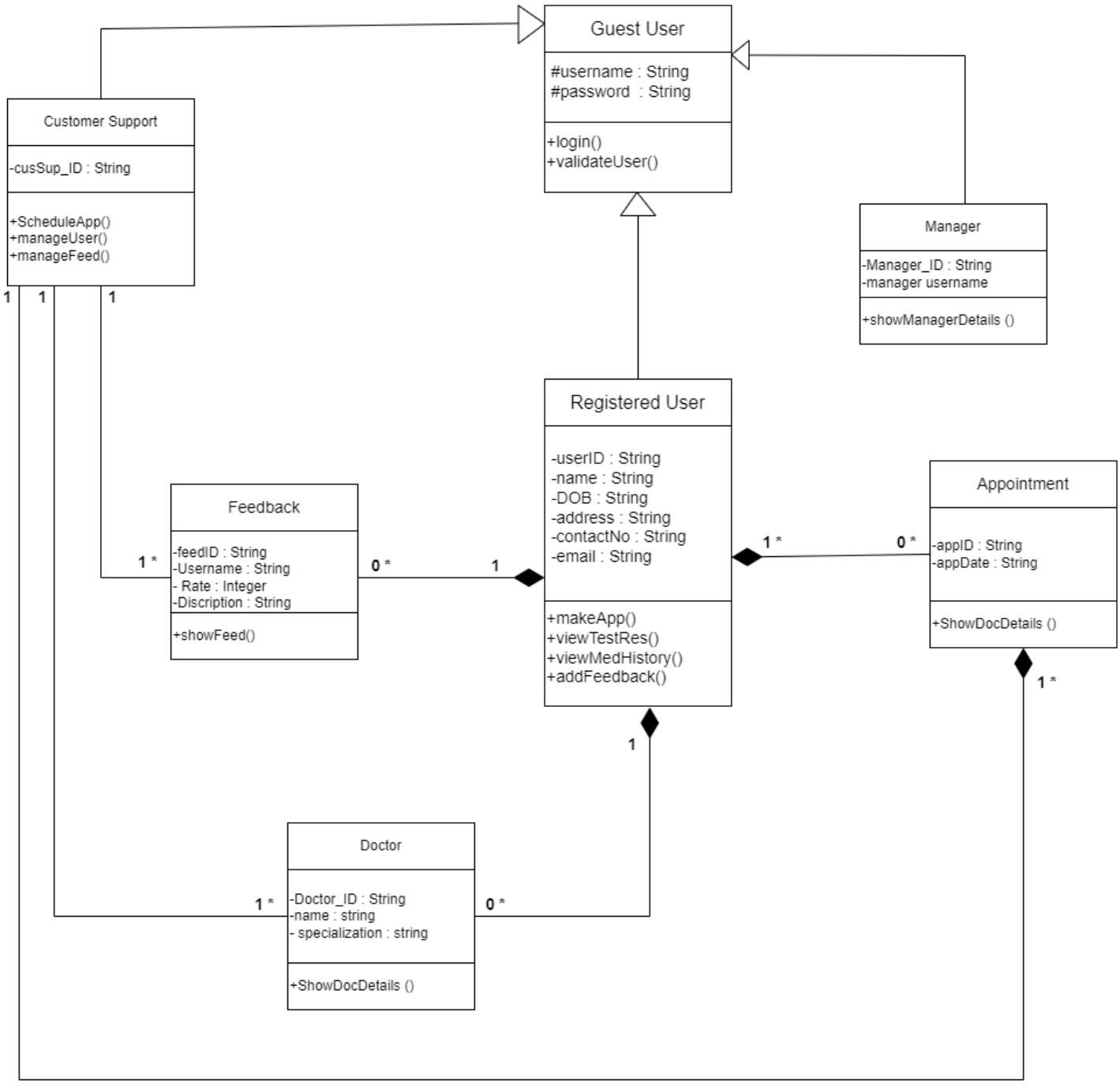
Doctor	
Responsibilities:	**Collaboration:**
Store doctor details.	
Show doctor details.	

Customer Support	
Responsibilities:	**Collaboration:**
Store details about customer supporter	
Schedule appointments	Appointments
Manage user accounts	Registered user
Manage feedback	Feedback

Registered User	
Responsibilities:	**Collaboration:**
Stores user details.	
Make appointments.	Appointments
View test results	
View medical history	
Give feedback	feedback

Manager	
Responsibilities:	**Collaboration:**
Store manager details.	
Generate reports	

4. Class Diagram



5. Coding for the classes

Main.cpp

```
#include <iostream>
#include <cstring>
#include "GuestUser.h"
#include "RegisteredUser.h"
#include "Appointment.h"
#include "CustomerSupport.h"
#include "Doctor.h"
#include "Feedback.h"
#include "Manager.h"

using namespace std;

int main()
{
	RegisteredUser* regUser = new RegisteredUser("JohnP", "abc@123", "RU001",
		"John Perera", "04/04/2000", "26 Main Street Kandy", "0772611121",
		"John@gmail.com");
	cout << "********* Detailes of User *********" << endl;
	regUser->display();
	cout << endl << endl;

	Manager* manage = new Manager("M001", "Tom Holand");
	cout << "********* Detailes of the manager *********" << endl;
	manage->showManagerDetails();
	cout << endl << endl;

	CustomerSupport* custsupp = new CustomerSupport("Jack Gilbert", "CS001", "abc@123");
	cout << "********* Detailes of the Customer Supporter *********" << endl;
	custsupp->display();
	cout << endl << endl;

	Doctor* doc;
	doc = new Doctor("D001", "Sam Werarathna", "Cardiologist");
	cout << "*********Detailes of the Doctor *********" << endl;
	doc->showDocDetails();
	cout << endl << endl;

	RegisteredUser* feed;
	feed = new RegisteredUser;
	feed->addFeed("F001", "Jessie", "Good service", 5);
	cout << "********* Feedback *********" << endl;
	feed->displayFeed();
	cout << endl << endl;

	RegisteredUser* appoint;
	appoint = new RegisteredUser;
	appoint->addApp("Ap001", "02/11/2023");
	cout << "********* Appointments *********" << endl;
	appoint->displayApp();

	return 0;
}
```

GuestUser.h

```
#pragma once
class GuestUser
{
protected:
	char userName[30];
	char password[15];

public:
	GuestUser();
		GuestUser(const char* username, const char* pass);
		void display();
		void login();
		void validateUser();
		~GuestUser();
};
```

GuestUser.cpp

```
#include <iostream>
#include "GuestUser.h"
#include<cstring>

using namespace std;

GuestUser::GuestUser() {
	strcpy_s(userName, "");
	strcpy_s(password, "");
}

GuestUser::GuestUser(const char* username, const char* pass) {
	strcpy_s(userName, username);
	strcpy_s(password, pass);
}

void GuestUser::display() {
	cout << userName << endl << password << endl;
}

void GuestUser::login() {

}

void GuestUser::validateUser() {

}

GuestUser::~GuestUser() {

}
```

RegisteredUser.h

```
#pragma once
#include "GuestUser.h"
#include "Appointment.h"
#include "Feedback.h"
#define SIZE 2


class RegisteredUser : public GuestUser
{
private:
	char userID[50];
	char name[50];
	char dob[50];
	char address[100];
	char contactNo[50];
	char email[50];

	Feedback *feed[SIZE];
	Appointment* appointment[SIZE];

public:
	RegisteredUser();
		RegisteredUser(const char* u_username, const char* u_pass, const char* u_id,
			const char* u_name, const char* u_dob, const char* u_address, const char*
u_contactNo,
			const char* u_email);

	void display();
	void makeapp();
	void viewTestRes();
	void viewMedHistory();
	void addFeedback();

	void addFeed(const char* feed_id, const char* feed_username, const char*
feed_description,
		int feed_rate);
	void displayFeed();

	void addApp(const char* app_id, const char* app_date);
	void displayApp();

	~RegisteredUser();
};
```

RegisteredUser.cpp

```
#include <iostream>
#include "Doctor.h"
#include "RegisteredUser.h"
#include "Appointment.h"
#include "Feedback.h"
#include <cstring>

using namespace std;

RegisteredUser::RegisteredUser() {
	strcpy_s(userID, "");
	strcpy_s(name, "");
	strcpy_s(dob, "");
	strcpy_s(address, "");
	strcpy_s(contactNo, "");
	strcpy_s(email, "");
}

RegisteredUser::RegisteredUser(const char* u_username, const char* u_pass, const char* u_id,
	const char* u_name, const char* u_dob, const char* u_address, const char* u_contactNo,
	const char* u_email)
	:GuestUser(u_username, u_pass) {
	strcpy_s(userID, u_id);
	strcpy_s(name, u_name);
	strcpy_s(dob, u_dob);
	strcpy_s(address, u_address);
	strcpy_s(contactNo, u_id);
	strcpy_s(email, u_email);
}

void RegisteredUser::display() {
	GuestUser::display();
	cout << userID << endl << name << endl << dob << endl << address << endl <<
		contactNo << endl << email << endl;
}

void RegisteredUser::makeapp() {

}
void RegisteredUser::viewTestRes() {

}
void RegisteredUser::viewMedHistory() {

}
void RegisteredUser::addFeedback() {

}

void RegisteredUser::addFeed(const char* feed_id, const char* feed_username, const char*
feed_description,
	int feed_rate) {

	feed[0] = new Feedback(feed_id, feed_username, feed_description, feed_rate);
}

void RegisteredUser::displayFeed() {
```

```
	feed[0]->showFeed();
}

void RegisteredUser::addApp(const char* app_id, const char* app_date)
{
	appointment[0] = new Appointment(app_id, app_date);
}

void RegisteredUser::displayApp() {
	appointment[0]->showDetailes();
}

RegisteredUser::~RegisteredUser() {

}
```

Manager.h

```
#pragma once
#include "GuestUser.h"
class Manager : public GuestUser {
private:
	char Manager_ID[10];
	char managerUserName[20];

public:
	Manager();
	Manager(const char* m_ID, const char* mUserNam);
	void showManagerDetails();
	~Manager();
};
```

Manager.cpp

```
#include "Manager.h"
#include <iostream>
#include <cstring>

using namespace std;

Manager::Manager() {

	strcpy_s(Manager_ID, "");
	strcpy_s(managerUserName, "");

}

Manager::Manager(const char* m_ID, const char* mUserNam) {

	strcpy_s(Manager_ID, m_ID);
	strcpy_s(managerUserName, mUserNam);

}
void Manager::showManagerDetails() {
	cout << Manager_ID << endl << managerUserName << endl;
}
Manager::~Manager() {
}
```

CustomerSupport.h

```
#pragma once
#include "GuestUser.h"
#include "Feedback.h"
#include "Doctor.h"
#include "Appointment.h"

class CustomerSupport : public GuestUser {
private:
	char cusSup_ID[10];

public:
	CustomerSupport();
	CustomerSupport(const char* M_username, const char* M_pass, const char* cs_ID);
	void display();
	void ScheduleApp();
	void manageUser();
	void manageFeed();
	~CustomerSupport();
};
```

CustomerSupport.cpp

```
#include "CustomerSupport.h"
#include <iostream>
#include <cstring>

using namespace std;

CustomerSupport::CustomerSupport() {
	strcpy_s(cusSup_ID, "");
}

CustomerSupport::CustomerSupport(const char* cs_username, const char* cs_pass, const char*
cs_ID)
	:GuestUser(cs_username, cs_pass) {
	strcpy_s(cusSup_ID, cs_ID);
}

void CustomerSupport::display() {
	GuestUser::display();
	cout << cusSup_ID << endl;
}
void CustomerSupport::ScheduleApp() {
}
void CustomerSupport::manageUser() {
}
void CustomerSupport::manageFeed() {
}
CustomerSupport::~CustomerSupport() {
}
```

Doctor.h

```
#pragma once
#include "GuestUser.h"
class Doctor : public GuestUser{

private:

	char doctor_ID[10];
	char name[20];
	char specialization[20];

public:
	Doctor();
	Doctor(const char* d_ID, const char* nam, const char* spec);
	void showDocDetails();
	~Doctor();
};
```

Doctor.cpp

```
#include "Doctor.h"
#include <iostream>
#include <cstring>
#include "RegisteredUser.h"

using namespace std;

Doctor::Doctor() {

	strcpy_s(doctor_ID, "");
	strcpy_s(name, "");
	strcpy_s(specialization, "");
}

Doctor::Doctor(const char* d_ID, const char* nam, const char* spec) {

	strcpy_s(doctor_ID, d_ID);
	strcpy_s(name, nam);
	strcpy_s(specialization, spec);

}
void Doctor::showDocDetails() {

	cout << doctor_ID << endl << name << endl << specialization << endl;

}
Doctor::~Doctor() {
}
```

Appointment.h

```
#pragma once
class Appointment
{
private:
	char appID[50];
	char appDate[50];

public:
	Appointment();
		Appointment(const char* aID, const char* aDate);
		void showDetailes();
		~Appointment();
};
```

Appointment.cpp

```
#include <iostream>
#include "Appointment.h"
#include "RegisteredUser.h"
#include <cstring>

using namespace std;

Appointment::Appointment() {
	strcpy_s(appID, "");
	strcpy_s(appDate, "");
}

Appointment::Appointment(const char* aID, const char* aDate)
{
	strcpy_s(appID, aID);
	strcpy_s(appDate, aDate);
}

void Appointment::showDetailes() {
	cout << appID << endl << appDate << endl;
}

Appointment::~Appointment() {

}
```

Feedback.h

```
#pragma once
class Feedback
{
private:
	char feed_ID[10];
	char userName[20];
	char description[100];
	int rate;

public:
	Feedback();
	Feedback(const char* f_id, const char* f_username, const char* f_description, int
f_rate);
	void showFeed();
	~Feedback();
};
```

Feedback.cpp

```
#include <iostream>
#include "Feedback.h"
#include "RegisteredUser.h"
#include <cstring>

using namespace std;

Feedback::Feedback() {
	strcpy_s(feed_ID, "");
	strcpy_s(userName, "");
	strcpy_s(description, "");
	rate = 0;
}
Feedback::Feedback(const char* f_id, const char* f_username, const char* f_description, int
f_rate) {
	strcpy_s(feed_ID, f_id);
	strcpy_s(userName, f_username);
	strcpy_s(description, f_description);
	rate = f_rate;

}
void Feedback::showFeed() {
	cout << userName << endl << description << endl << rate << endl;
}
Feedback :: ~Feedback() {

}
```