Topic   : **Diet Planning and Health Checkup System**

Group no   : MLB_WD_CSNE_13 .11

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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Contents

System Requirements for Diet Planning and Health Checkup System

1. A guest user can browse the system overview about health care packages and services.

2. A guest user can request an inquiry about diet plans and health care packagers.

3. A guest user can register as a member on the website.

4. To become a member, they must register with the system by providing details such as Name, Address, NIC, Email, contact.

5. A member can login to the website using a username and a password.

6. A registered member can view their profile, delete profile, or edit profile details.

7. A Member is required to provide their personal medical information to request a diet plan.

8. Members can request appointments for a health checkup.

9. Members can make their payments through the websites using credit cards, online money transfer or EFT.

10. After the payment member will receive the requested service or the diet plan by email.

11. Admins need to login to the website in order to resume their activities.

12. Admins are in charge of viewing the medical records of the members.

13. Admins are able to view the requests for diet plans and health care packages.

14. Admins are in charge of suggesting diet plans for the customer according to the given medical information.

15. After a member request for an appointment, admin checks available date slots and send an email to the member through the system.

Noun & Verb Analysis

- Nouns in Red color
- Verbs in Blue color

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Identified Classes using Noun Verb Analysis

Identified Classes:

- Guest User
- Member
- Admin
- Diet Plans
- Health Checkup Packagers
- Medical Information
- Appointment
- Payment

CRC Cards

Member	
Responsibilities	**Collaborations**
Login to the system	
View profile	
Delete profile	
Edit profile details	
Request for a diet plan	Admin
Request an appointment for a health care checkup	Admin
Make payment	Payment

Admin	
Responsibilities	**Collaborations**
Login to the system	
View requests for appointments	Member
View requests for diet plans	Member
Suggest diet plans	Diet plans, Member
Update appointment schedule	Appointment
maintain medical records	Medical information

Guest user	
Responsibilities	**Collaborations**
Register to the system	
Request an inquiry	
Allow to browse health care packages	Health Checkup Packagers
Allow to browse diet plans	Diet Plans

Health Checkup Packagers	
Responsibilities:	**Collaborations:**
Display Health Checkup Packagers details	
Update Health Checkup Packagers details	Admin

Diet plans	
Responsibilities	**Collaborations**
Display diet plan details	
Update diet plan details	Admin

Appointment	
Responsibilities:	**Collaborations:**
Book an Appointment	
Check availability	
Calculate the Appointment price	Member

Payment	
Responsibilities:	**Collaborations:**
View payment details	
Validate the payment	
Save payment details	Member

Medical Information	
Responsibilities:	**Collaborations:**
Update medical records	Member

Class diagram
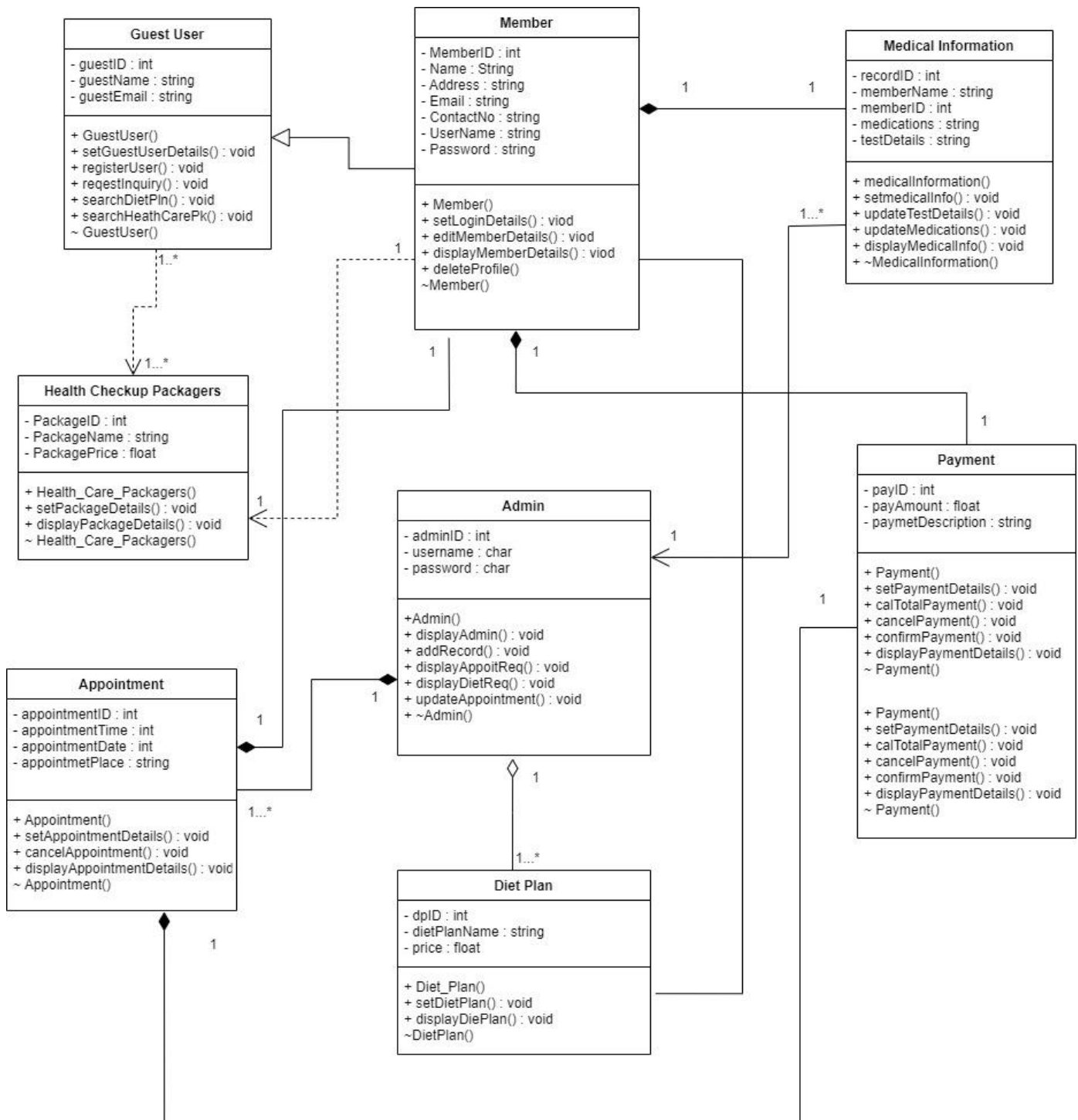
Member.h

```cpp
class Member{
      private:
            int memberID;
            string Name;
            string Address;
            string Email;
            int contactNo;
            string username;
            string password;


      public:
            Member();
            Member(int mID, string mName, string mAddress, string mEmail,
int mCNo);
            void setLoginDetails();
            void editMemberDetails();
            void deleteProfile();
            void displayMemberdetails();
            ~Member();
};
```

Member.cpp

```cpp
Member::Member(){

}

Member::Member(int mID, string mName, string mAddress, string mEmail,
int mCNo){
      memberID=mID;
      Name=mName;
      Address=mAddress;
      Email=mEmail;
      contactNo=mCNo;

}

void Member::setLoginDetails(){


}

void Member::editMemberDetails(){
```

```cpp
}

void Member::deleteProfile(){

}

void Member::displayMemberdetails(){
        cout<<"Member ID is : "<<memberID<<endl;
        cout<<"Member Name is : "<<Name<<endl;
        cout<<"Member Address is : "<<Address<<endl;
        cout<<"Member Email is : "<<Email<<endl;
        cout<<"Member Contact Number is : "<<contactNo<<endl;
        cout<<endl;
}

Member::~Member(){

}
```

Admin.h

```cpp
class Admin
{
    private:
        int adminID;
        char username[20];
        char password[30];

    public:
      Admin();
        Admin(int padminID, char pUserName[], char ppassword[]);
        void displayAdmin();
        void addRecord();
        void displayAppoitReq();
        void displayDietReq();
        void updateAppointment();
        ~Admin();
};
```

Admin.cpp

```cpp
Admin::Admin(int padminID, char pUserName[], char ppassword[]) {
    int adminID = padminID;
    strcpy (username, pUserName);
    strcpy (password, ppassword);
}

void Admin::displayAdmin() {
    cout << "Admin ID : " << adminID << endl;
    cout << "Username : " << username << endl;

}

Admin::Admin() {}

void Admin::addRecord() {}

void Admin::displayAppoitReq() {}

void Admin::displayDietReq() {}

void Admin::updateAppointment() {}

Admin::~Admin() {}
```

guestUser.h

```cpp
class GuestUser{
    private :
        int guestID;
        string guestName;
        string guestEmail;


    public :
        GuestUser();
        GuestUser(int GId, string GName,string GEmail);
        void displayGuestUserDetails();
        void registerUser();
        void searchDietPln();
        void searchHealthCarePk();
        void reqestInqury();
        ~GuestUser();

};
```

guestUser.cpp

```cpp
GuestUser::GuestUser(){

}

GuestUser::GuestUser(int GId, string GName, string GEmail){

    guestID=GId;
    guestName=GName;
    guestEmail=GEmail;
}

void GuestUser::displayGuestUserDetails(){
    cout<<"Guest ID is :"<<guestID<<endl;
    cout<<"Guest Name is :"<<guestName<<endl;
    cout<<"Guest Email is :"<<guestEmail<<endl;
    cout <<endl;
}


void GuestUser::registerUser(){
}

void GuestUser::searchDietPln(){
}

void GuestUser::searchHealthCarePk(){
}

void GuestUser::reqestInqury(){

}

GuestUser::~GuestUser(){

}
```

HealthCheackupPackages.h

```cpp
class HealthCheckupPackagers{
    private :
        int PackageID;
        string PackageName;
        float PackagePrice;

    public :
        HealthCheckupPackagers();
        HealthCheckupPackagers(int PId,string PName,float PPrive);
        void displayPackageDetails();
        ~HealthCheckupPackagers();
};
```

HealthCheackupPackages.cpp

```cpp
HealthCheckupPackagers::HealthCheckupPackagers(){

}

HealthCheckupPackagers::HealthCheckupPackagers(int PId,string
PName,float PPrice){
    PackageID=PId;
    PackageName=PName;
    PackagePrice=PPrice;
}

void HealthCheckupPackagers::displayPackageDetails(){
    cout<<"Package ID is : "<<PackageID<<endl;
    cout<<"Package Name is : "<<PackageName<<endl;
    cout<<"Package Price is : "<<PackagePrice<<endl;
}

HealthCheckupPackagers::~HealthCheckupPackagers(){

}
```

DietPlan.h

```cpp
class DietPlan {
      private:
            int DietPlanId ;
            string DietPlanName ;
            float Price ;

      public:
            DietPlan();
            DietPlan(int DpId , string dpName , float p);
            void displayDietPlanDetails();
            ~DietPlan();

};
```

DietPlan.cpp

```cpp
DietPlan::DietPlan(int DpId , string dpName , float p)
{
      DietPlanId = DpId ;
      DietPlanName = dpName ;
      Price = p ;
}

void DietPlan::displayDietPlanDetails()
{
      cout << "Diet plan Id: " << DietPlanId << endl ;
      cout << "Diet plan name: " << DietPlanName << endl ;
      cout << "Diet plan price: " << Price << endl ;
      cout << endl ;
}

DietPlan::~DietPlan(){

}
```

Appointment.h

```cpp
class Appointment {

    private:
        int AppointmentId ;
        string AppointmentTime ;
        string AppointmentDate ;
        string AppointmentPlace ;
        string Member ;

    public:
        Appointment();
        Appointment(int aid , string Atime , string Adate , string
Aplace , string Mname);
        void cancelAppointment();
        void displayAppointmentDetails();
        ~Appointment();
};
```

Appointment.cpp

```cpp
Appointment::Appointment(){

}

Appointment::Appointment(int aid , string Atime , string Adate , string
Aplace , string Mname)
{
    AppointmentId = aid ;
    AppointmentTime = Atime ;
    AppointmentDate = Adate ;
    AppointmentPlace = Aplace ;
    Member = Mname ;
}

void Appointment::cancelAppointment(){

}

void Appointment::displayAppointmentDetails()
{
    cout << "Appointment Id is: " << AppointmentId << endl ;
    cout << "Appointment time is: " << AppointmentTime << endl ;

    cout << "Appointment date is: " << AppointmentDate << endl ;
    cout << "Appointment place is: " << AppointmentPlace << endl ;
    cout << "Member name: " << Member << endl ;
```

```cpp
        cout << endl;
}

Appointment::~Appointment(){

}
```

Payment.h

```cpp
class Payment {
    private:

        int PayId ;
        float PaymentAmount ;
        string PaymentDescription ;

    public:
        Payment();
        Payment (int pid , float Pamount , string pDes);
        void displayPaymentDetails();
        void cancelPayment();
        void confirmPayment();
        void calculateTotalPayment();
        ~Payment();
};
```

Payment.cpp

```cpp
Payment::Payment(){

}

Payment::Payment(int pid , float Pamount , string pDes)
{
    PayId = pid ;
    PaymentAmount = Pamount ;
    PaymentDescription = pDes ;
}

void Payment::displayPaymentDetails()
{
```

```cpp
    cout << "Payment Id is: " << PayId << endl ;
    cout << "Amount paid: " << PaymentAmount << endl ;
    cout << "Payment description: " << PaymentDescription << endl ;
    cout << endl ;
}

void Payment::cancelPayment(){

}

void Payment::confirmPayment(){

}

void Payment::calculateTotalPayment(){

}

Payment::~Payment(){

}
```

MedicalInformation.h

```cpp
class MedicalInformation{

    private :
        int recordID;
        string memberName;
        string medications;
        string testDetails;
        float height;
        float weight;

    public :
        MedicalInformation();
        MedicalInformation(int pID, string pMName, string med,
string pTDetails, float h, float w);
        void updateTestDetails();
        void updateMedications();
        void displayMedicalInfo();
        ~MedicalInformation();

};
```

MedicalInformation.cpp

```cpp
MedicalInformation::MedicalInformation(){

}

MedicalInformation::MedicalInformation(int pID, string pMName,
string med, string pTDetails, float h, float w){

    recordID = pID;
    memberName = pMName;
    medications = med;
    testDetails = pTDetails;
    height = h;
    weight = w;
}

void MedicalInformation::updateTestDetails(){

}

void MedicalInformation::updateMedications(){

}

void MedicalInformation::displayMedicalInfo() {

    cout<<"Personal Record ID : "<<recordID<<endl;
    cout<<"Member name : "<<memberName<<endl;
    cout<<"Medication Details : "<<medications<<endl;
    cout<<"Test Details : "<<testDetails<<endl;
    cout<<"Height : "<<height<<" ft"<<endl;
    cout<<"weight : "<<weight<<" Kg"<<endl;

}

MedicalInformation::~MedicalInformation(){

}
```

Main.cpp

```cpp
#include "Member.h"
#include "Admin.h"
#include "guestUser.h"
#include "HealthCheackupPackages.h"
#include "DietPlan.h"
#include "Appointment.h"
#include "Payment.h"
#include "MedicalInformation.h"

#include<iostream>
using namespace std;

int main(){

    //member main
    Member m1 (1, "Kevin Woods", "122/4, Halloluwa, kandy",
    "Kevin12345@gmail.com", 0613452677);

    m1.displayMemberdetails();
    m1.editMemberDetails();
    m1.setLoginDetails();
    m1.deleteProfile();


    //Admin main
    Admin A1(12, (char*)"Peter", (char*)"ABCD13");

    A1.displayAdmin();
    A1.addRecord();
    A1.displayAppoitReq();
    A1.displayDietReq();
    A1.updateAppointment();

    cout << "\n" << endl;


    //GuestUser main
    GuestUser g1(12345, "Pathum Nissanka", "pathumni54367@gmail.com");

    g1.displayGuestUserDetails();
    g1.registerUser();
    g1.reqestInqury();
    g1.searchDietPln();
    g1.searchHealthCarePk();


    //HealthCheckupPackages main
    HealthCheckupPackagers hcp1(1, "Gold", 25000.00);
```

```cpp
    hcp1.displayPackageDetails();


    //DietPlan main
    DietPlan d1(2495 , "The Ultra-Low-Fat Diet" , 14590.00) ;

    cout << "In here you can find details about your preffered diet
    plan...." << endl ;
    cout << endl ;
    d1.displayDietPlanDetails();


    //Appointment main
    Appointment a1(1 , "23:05" , "2022/10/05" , "Petersburgh" , "Kevin
Woods");

    cout << "In here you can find details about your appointment...."
<< endl ;
    cout << endl ;

    a1.displayAppointmentDetails();
    a1.cancelAppointment();



    //Payment main
    Payment p1(96561 , 19150.53 , "X-Ray fees") ;

    cout << "Inhere you can find payment details......" << endl ;
    cout << endl ;

    p1.displayPaymentDetails();
    p1.calculateTotalPayment();
    p1.cancelPayment();
    p1.confirmPayment();



    //MedicalInformation main
    MedicalInformation M1(1, "Peter Parker", "Diabetic meds, Presure
meds, aszma meds", "Blood report, Liver report", 5.4, 75);

    M1.updateTestDetails();
    M1.updateMedications();
    M1.displayMedicalInfo();

    cout << "\n" << endl;

    return 0;
}
```

Individual Contributions

IT21306372 - B.M.I.R.B. Basnayake

- Created and documented a part of user requirements and noun verb analysis.
- Created the CRC card for member class.
- Created the class diagram for member class.
- Created the classes and coded the member class.

IT21295010 – M.K.Y.S. Yapa

- Created and documented a part of user requirements and noun verb analysis
- Created the CRC card for admin class.
- Created the class diagram for admin class.
- Created the classes and coded the admin class.
- Created the final pdf document

IT21361890 – M.N.AMMAAR

- Created the CRC card for guest user class and health checkup class.
- Created the class diagram for guest user class and health checkup class.
- Created the classes and coded the guest user class and health checkup class.

IT21210860 - D.L.B.S Liyanaarachchi

- Created and documented a part of user requirements.
- Created the CRC card for appointment class and payment class.
- Created the class diagram for appointment class and payment class.
- Created the classes and coded the appointment class and payment class.

IT21157714 - N.M.R.J.K Nishshanka

- Created the CRC card for diet plans class and medical information class.
- Created the class diagram for diet plans class and medical information class.
- Created the classes and coded the diet plans class and medical information class.