Topic : Online App Store

Group no : MLB_02.01_08

Campus : Malabe

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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Part 1

1.User Requirements

- A guest can Register to the system as a Regular user or as a app developer by providing first name, last name, user name, password and email.
- Regular user can search apps and download free apps
- If the app the user is looking for is not found, another related suggestion will be displayed.
- Regular user can share apps.
- User can View newsfeed
- Regular user can report apps
- Regular user can purchase paid apps by doing a payment via credit card or PayPal
- System validates the payment
- Regular users can rate and provide feedback on apps that they have downloaded
- App developer can upload their apps by entering the price and app details.
- App developer cans Give updates or remove apps which they upload before
- Advertiser can post their advertisement
- Advertiser can renew advertisement
- Advertisers should pay for app advertisements based on their type and duration.
- Both app developer and Regular user can edit their profiles.
- Administrators could update the newsfeed, ban, and validate apps, and control all user requests.

2.Noun/verb Analysis

Nouns are in red, Verbs are in blue

- A guest can Register to the system as a Regular user or as an app developer by providing first name, last name, username, password, and email.
- Regular user can search apps and download free apps
- If the app the user is looking for is not found, another related suggestion will be displayed.
- Regular user can share apps.
- User can View newsfeed
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- Advertisers should pay for app advertisements based on their type and duration.
- Both app developer and Regular user can edit their profiles.
- Administrator could update the newsfeed, ban, and validate apps, and control all user requests.

Nouns

Regular user

App developer

First name

Last name

Username

Password

Email

User

Apps

Free Apps

Suggestions

News feed

Support page

Paid apps

Amount

Credit card

PayPal

Feedback

Price

App details

Advertisement

Advertiser

Admin

Profile

- Regular user - Subclass
- App developer - Subclass
- First name - Attribute
- Last name – Attribute
- Username - Attribute
- Password – Attribute
- Email – Attribute
- User – Class
- Apps – Class
- Free Apps - Redundant
- Suggestions - Attribute
- News feed - Class
- Paid apps – Redundant
- Amount – Attribute
- Credit card – Redundant
- PayPal – Redundant
- Feedback – Attribute
- Price – Attribute
- App details – Attribute
- Advertisement -Class
- Advertiser – Class
- Admin – Out of scope
- Payment - Class

Part 02 : CRC cards

Class Name: Regular User	
Responsibilities	Collaborators
Edit profile	Profile
Download apps	App
Share apps	App
Search apps	App
Report apps	App
Buy apps	Payment

Class Name: App	
Responsibilities	Collaborators
Store Details	User, Developer
Display Details	Payment

Class Name: News Feed	
Responsibilities	Collaborators
Store Details	
Display Details	

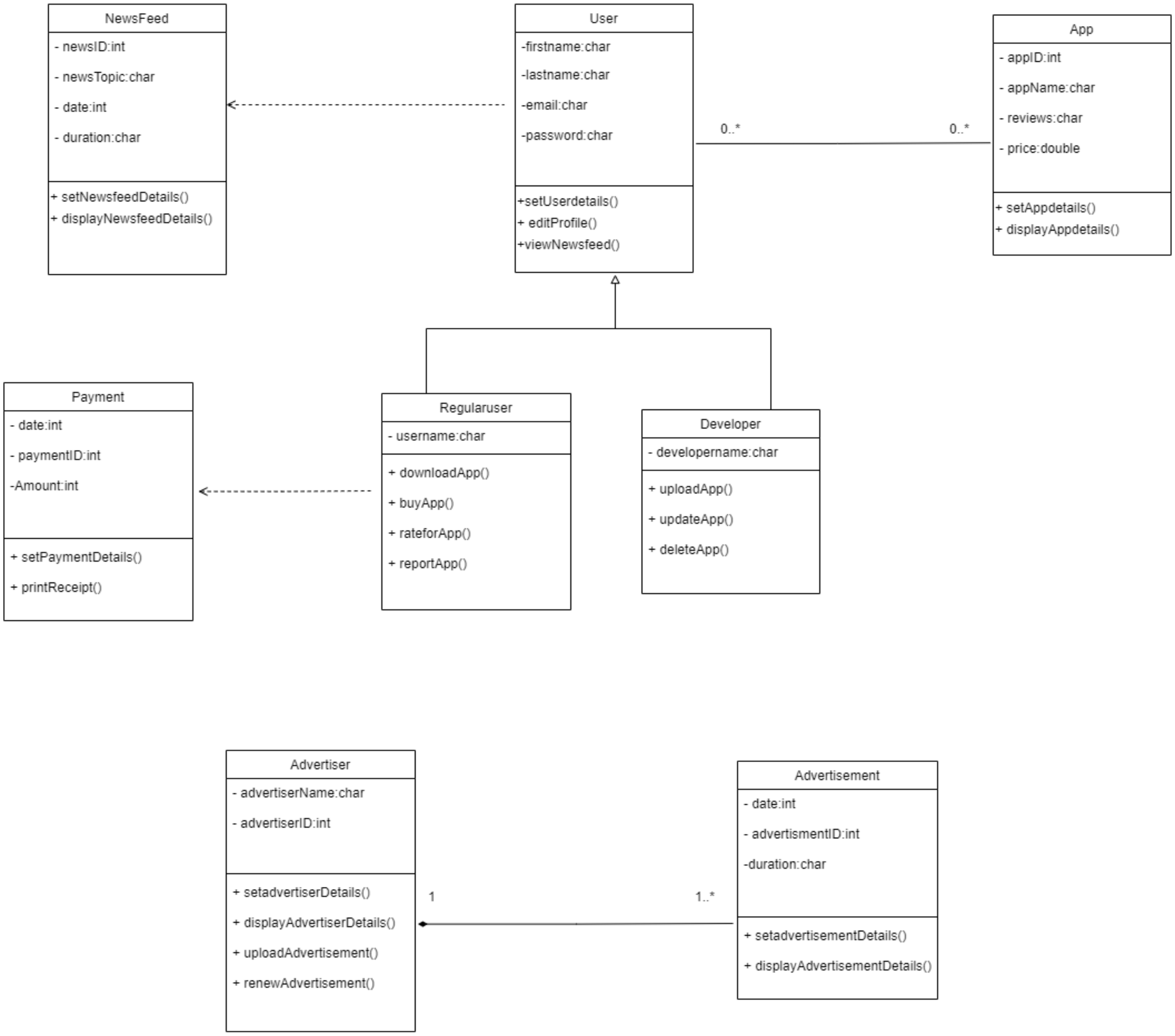
Class Name: Advertiser	
Responsibilities	Collaborators
Post Advertisements	Advertisement
Pay for Advertisement	Advertisement, Payment
Renew Advertisement	Advertisement, Payment

Class Name: Payment	
Responsibilities	Collaborators
Store Payment Details	
Validate Payment	

Class Name: Advertisement	
Responsibilities	Collaborators
Store Advertisement Details	Advertiser, Payment
Display Details	

Class Name: App Developer	
Responsibilities	Collaborators
Upload Apps	App
Remove Apps	App
Update Apps	App
Edit Profile	

Class Name: User	
Responsibilities	Collaborators
Edit Profile	
View Newsfeed	


NewsFeed
- newsID:int
- newsTopic:char
- date:int
- duration:char
+ setNewsfeedDetails()
+ displayNewsfeedDetails()
User
-firstname:char
-lastname:char
-email:char
-password:char
+setUserdetails()
+ editProfile()
+viewNewsfeed()
0..*
0..*
App
- appID:int
- appName:char
- reviews:char
- price:double
+ setAppdetails()
+ displayAppdetails()
Payment
- date:int
- paymentID:int
-Amount:int
+ setPaymentDetails()
+ printReceipt()
Regularuser
- username:char
+ downloadApp()
+ buyApp()
+ rateforApp()
+ reportApp()
Developer
- developername:char
+ uploadApp()
+ updateApp()
+ deleteApp()
Advertiser
- advertiserName:char
- advertiserID:int
+ setadvertiserDetails()
+ displayAdvertiserDetails()
+ uploadAdvertisement()
+ renewAdvertisement()
1
1..*
Advertisement
- date:int
- advertismentID:int
-duration:char
+ setadvertisementDetails()
+ displayAdvertisementDetails()

Exercise 4

App.h

```
#include <iostream>
#include<string.h>
#define SIZE 10;
using namespace std;

class App
{
private:
  int AppID;
  char appName [10];
  char reviews [20];
  double price;
  User* user;

public:
  App(int pAppID,const char pappName[],const char previews[], double pprice, User* puser);

  void displayApps();
};
```

App.cpp

```
#include<iostream>

#include"RegulareUser.h"

#include<string.h>

#include "App.h"

App::App(int pAppID, const char pappName[], const char previews[], double pprice, User* puser)


{

  AppID = pAppID;

  strcpy(appName, pappName);

  strcpy(reviews, previews);

  price = pprice;

  user = puser;

  user->addApp(this);

}


void App::displayApps()

{

  cout << "AppID = " << AppID << endl;

  cout << "AppName =" << appName << endl;

  if (price <= 1)

  {

    cout << "FREE APP" << endl;

  }

  else

  {

  cout << "$" << price << endl;
  }
  cout << reviews << endl;
  cout << "----------------------------------------" << endl;
}
```

Developer.h

```
#include <iostream>
#include "User.h"
using namespace std;

class Developer : public User
{
private:
    char developername[20];
public:
    Developer(char developername ,char fName[], char lName[], char Email[], char pw[], char devName[]);
    char uploadApp();
    char updateApp();
    char deleteApp();

    ~Developer();
};
```

Developer.cpp

```
#include <iostream>

#include <string.h>

#include "Developer.h"

using namespace std;

Developer::Developer(char developername ,char fName[], char lName[], char Email[], char pw[],
char devName[]) : User(fName, lName, Email, pw)

{

    developername = devName;

}

{

    void Developer::uploadApp()

}

{

    void Developer::updateApp()

}

{

    void Developer::deleteApp()

}

{

    Developer::~Developer()

}
```

NewsFeed.h

```
class NewsFeed
{
private:
    int newsID;
    char newsTopic[20];
    int date;
    char duration[20];
public:
    void setNewsfeedDetails(int nID, const char nTopic[], int nDate, const char nDuration[]);
    void displayNewsfeedDetails();
};
```

NewsFeed.cpp

```
#include "NewsFeed.h"
#include <iostream>
#include <cstring>
using namespace std;
void NewsFeed::setNewsfeedDetails(int nID, const char nTopic[], int nDate, const char
nDuration[])

{
   newsID = nID;
```

```
 strcpy(newsTopic, nTopic);
    date = nDate;
    strcpy(duration, nDuration);
}
void NewsFeed::displayNewsfeedDetails()
{
    cout << "News ID = " << newsID << endl;
    cout << "News Topic = " << newsTopic << endl;
    cout << "Date = " << date << endl;
    cout << "Duration = " << duration << endl;
    cout << endl;
}
```

Payment.h

```
#include <iostream>
class Payment
{
private:
    int paymentID;
    int date;
    double amount;

public:
 void setPaymentDetails(int pID, int pDate, double pAmount);
    void printReceipt();
};
```

Payment.cpp

```
#include "Payment.h"
#include <iostream>
using namespace std;
void Payment::setPaymentDetails(int pID, int pDate, double pAmount)


{
    paymentID = pID;
    date = pDate;
    amount = pAmount;
}
void Payment::printReceipt()
{
    cout << "Payment ID = " << paymentID << endl;
    cout << "Date = " << date << endl;
    cout << "Amount = " << amount << endl;
    cout << endl;
}
```

RegulareUser.h

```
#include <iostream>

#include"User.h"

#include"Payment.h"

using namespace std;


class RegulareUser : public User

{

private:

    char userName[50];


public:

    RegulareUser();

    RegulareUser(char uName[], char fName[], char lName[], char Email[], char pw[]);

    void downloadApp(char appName[]);

    int buyApp(char userName[],Payment*p);

    int rateForApp();

    int reportApp();

    ~RegulareUser();

};
```

RegulareUser.cpp

```
#include <iostream>

#include <string.h>

#include "RegulareUser.h"

using namespace std;

RegulareUser::RegulareUser()

{

    strcpy(userName, "");

}

RegulareUser::RegulareUser(char uName[], char fName[], char lName[], char Email[], char pw[]) :
User(fName,lName,Email,pw){



    strcpy(userName,uName);



}



 int buyApp(char userName[],Payment*p){



 }

int rateForApp(){



}

int reportApp(){
}
RegulareUser::~RegulareUser(){
}
```

User.h

```
#include <iostream>
#include "App.h"
#include "NewsFeed.h"
using namespace std;
#define SIZE 10

class User
{
protected:
    char firstName[50];
    char lastName[50];
    char email[50];
    char password[50];
    App * app[SIZE];

public:
    User();
    User(char fName[], char lName[], char Email[], char pw[]);
    void setUserDetail(char fName[], char lName[], char Email[], char pw[]);

    void editProfile();

    void viewNewsFeed(NewsFeed * newsfeed);

    ~User();

};
```

User.cpp

```
=#include <iostream>

#include <string.h>

#include "NewsFeed.h"

#include "User.h"

using namespace std;


User::User()

{

    strcpy(firstName, "");

    strcpy(lastName, "");

    strcpy(email, "");

    strcpy(password, "");

}

User::User(char fName[], char lName[], char Email[], char pw[])

{

    strcpy(firstName, fName);
}

    strcpy(lastName, lName);

    strcpy(email, Email);

    strcpy(password, pw);


}

void User::setUserDetail(char fName[], char lName[], char Email[], char pw[])

{

    strcpy(firstName, fName);

    strcpy(lastName, lName);

    strcpy(email, Email);

    strcpy(password, pw);




}


void User::editProfile()

{

}

void User::viewNewsFeed(NewsFeed*newsfeed)

{

}

User::~User()

{
}
```

advertisement.cpp

```
#include"advertisement.h"

#include<cstring>

advertisement::advertisement(int ad_date,int advertisement_ID, char ad_duration[] )

{

date=ad_date;

advertisementID=advertisement_ID;

strcpy(duration,ad_duration);

};
```

advertisement.h

```
class advertisement{

private:

int date;

int advertisementID;

char duration[25];

public:

//constructor

advertisement();

advertisement(int ad_date,int advertisement_ID, char ad_duration[] );
void setadvertisementDetails(int ad_date,int advertisement_ID, char ad_duration[]);
void displayadvertisementDetails();
//destructor
~advertisement();
};
```

advertiser.cpp

```
#include"advertiser.h"
#include"advertisement.h"
advertiser::advertiser(){
AD[0]=new advertisement(0,0,0);
AD[1]=new advertisement(0,0,0);
//.......
};
advertiser::advertiser(int date1,int adID1,char duration1[]){
AD[0]=new advertisement(date1, adID1,duration1 );
AD[1]=new advertisement(date1, adID1,duration1);
};
```

advertiser.h

```
#include"advertisement.h"
#define SIZE 15;
class advertiser{
```

```
private:

advertisement*AD['SIZE'];

char advertiserName;

int advertiserID;

public:

//constructor

advertiser();

//overload constructor

advertiser(int date1,int adID1,char duration1[]);

void setAdvertiserDetails();

void DisplayAdvertiserDetails();

void uploadavdertisement();

void renewAdvertisement();

~advertiser();

};
```

main.cpp

```
#include <iostream>

#include "App.h"

#include "Developer.h"

#include "NewsFeed.h"

#include "Payment.h"

#include "RegulareUser.h"
```

```
#include "User.h"

int main() {



  char ua;

            Developer* U1 = new
Developer("User101","Perera","YKT","pereraYKT@gmail.com","Perera123#");

            RegulareUser* U2 = new
RegulareUser("User21","Sakuni","samara","sakusamara@gmail.com","Ssamra123#");

            App* A1 = new App("A001","Facebook","Positive",0.00,U2);

            App* A2 = new App("A002", "NewStates", "Good",5.00, U2);

  NewsFeed *NF = new NewsFeed(2021,"top News",20211011, "2days");

  Payment * pmt =new Payment(9001,20212124,2.11);




  delete U1;

  delete U2;

  delete A1;

  delete A2;

  delete NF;

  delete pmt;




}
```