



CS251

Software Engineering I

GOFO APP

Final Draft Assignment-4

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- **Sign in class:**

```
package GoFoAPP;

import java.util.ArrayList;

import java.util.Scanner;

public class Sign in {

    Scanner input = new Scanner (System.in);

    ArrayList<Sign in>userArray=new ArrayList<Sign in>();

    public userInformation user=new userInformation();


    public booking b1=new booking();

    public Sign in()

    {

    }

    public int Sign_Up()

    { String name,password,e_mail,Choice = null,address,phone_number;

    int carry,user_role,carry2 = 0;

    int id;

    System.out.println(" Please Enter Username :");

    name=input.next();

    user.set_username(name);


    System.out.println(" Please Enter Your Email:");

    e_mail=input.next();

    if (booking.validation(e_mail))

    {

    user.set_e_mail(e_mail);

    }
```

else

{

while(!booking.validation(e_mail))

{

System.out.println("Incorrect Email \n ");

e_mail = input.next();

user.set_e_mail(e_mail);

}

}

System.out.println(" Please Enter Your ID:");

id=input.nextInt();

user.set_id(id);

System.out.println("Continue as : [1] player / [2] playground owner :");

user_role=input.nextInt();

if(user_role==1)

{

Choice="player";

carry2=1;

}

else if(user_role==2)

{

Choice="playground owner"; carry2=2;

}

user.set_user_Choice(Choice);

```
do {

    System.out.println("Please Enter Your Password:");

    password=input.next();

    user.set_Password(password);

    carry=check_password(password);

}while(carry==0);

    System.out.print(" please Enter Your code : ");

    int code =input.nextInt();

    System.out.println("Successfully Registered");


return carry2;

}

public int check_password(String password)

{

    boolean letter = false;

    boolean digit = false;

    if (password.length() >= 8) {

        for (int i = 0; i < password.length(); i++) {

            char w = password.charAt(i);

            if (Character.isLetter(w)) { letter = true;

            }

            else if (Character.isDigit(w)) {

                digit = true;

            }

            if(letter && digit){

                break;

            }

        }

    }

}
```

```

    }

    if (letter && digit) {

        System.out.println("Valid");

        return 1;

    }

    else {

        System.out.println("Invalid");

        return 0;

    }

}

else {

    System.out.println("Minimum 8 Charcters");

    return 0;

}

}public void add_users(Sign in x)

{

    userArray.add(x);

}

public void create_playground()

{

    System.out.println("");

}

public String toString ()

{

    StringBuilder ob = new StringBuilder();

    ob.append("the username is : ").append(user.get_username()).append("\n");

    ob.append("the id is:").append(user.get_id()).append("\n");

```

```

ob.append("the account password is :
").append(user.get_Password()).append("\n");

ob.append("the location is:").append(user.get_address()).append("\n");

ob.append("the email is:").append(user.get_e_mail()).append("\n");

ob.append("the user choice is:").append(user.get_user_Choice()).append("\n");

ob.append("the phone_number is:").append(user.get_phone_number()).append("\n");

return ob.toString(); }

public void show_users()

{

if(userArray.size()==0)

{

System.out.println("No users expected");

}

else {

for(int i=0;i<userArray.size();i++)

{

System.out.println(userArray.get(i));

}

}

}

public int check(user p)

{

for(int i=0;i<userArray.size();i++)

{

String x,z;

x=userArray.get(i).user.get_username();

z=p.get_username();

if(x.equalsIgnoreCase(z)&& p.get_Password().equalsIgnoreCase(userArray.get(i).use

```

```
r.get_Password())  
  
{  
  
return 1;  
  
}  
  
return 0;  
  
}
```

- **User class:**

```
package GoFoAPP;  
  
import java.util.Scanner;  
  
public class user  
  
{  
  
Scanner input = new Scanner (System.in);  
  
protected String username;  
  
protected String password;  
  
public user()  
  
{  
  
}  
  
  
  
public void set_username(String username)  
  
{  
  
this.username = username;  
  
}  
  
public String get_username()  
  
{  
  
return username;  
  
}
```

```
public void set_Password(String password)
```

```
{
```

```
this.password = password;
```

```
}
```

```
public String get_Password()
```

```
{
```

```
return password;
```

```
}
```

```
public void Sign in()
```

```
{
```

```
String name,password;
```

```
System.out.println(" Please Enter Your Name");
```

```
name=input.next();
```

```
set_username(name);
```

```
System.out.println(" Please Enter Your Password");
```

```
password=input.next();
```

```
set_Password(password);
```

```
System.out.println(" You have successfully logged in");
```

```
}
```

```
public void logout()
```

```
{
```

```
System.out.println(" Signed out successfully");
```

```
}}
```


• User Information class:

```
package GoFoAPP;

public class userInfo extends user

{ protected String phone_number;

protected String e_mail;

protected int id ;

protected String address;

protected String user_Choice;

public userInfo ()

{

}

public userInfo ( int id, String e_mail,String phone_number, String

address,String user_Choice)

{ this.phone_number = phone_number;

this.id = id;

this.user_Choice = user_Choice;

this.e_mail = e_mail;

this.address = address;

}

public void set_id(int id)

{

this.id= id;

}

public int get_id()
```

```
{  
  
return id;  
  
}  
  
public void set_e_mail(String e_mail)  
  
{  
  
this.e_mail = e_mail;  
  
}  
  
  
  
public String get_e_mail()  
  
{  
  
return e_mail;  
  
}  
  
public void set_user_Choice(String user_Choice)  
  
{  
  
this.user_Choice = user_Choice;  
  
}  
  
public String get_user_Choice() {  
  
return user_action;  
  
}  
  
public void set_address(String address) {  
  
this.address = address;  
  
}  
  
public String get_address()  
  
{  
  
return address;  
  
}  
  
public void set_phone_number(String phone_number)  
  
{
```

```
this.phone_number = phone_number;

}
```

```
public String get_phone_number()

{

return phone_number;

}

}
```

- **Available hours class:**

```
package GoFoAPP;

public class AvailableHours
{
    private String Hours;
        public AvailableHours(String h)
        {
            Hours=h;
        }
    public void setHours(String h)
    {
        this.Hours = h;
    }
    public String getHours()
    {
        return Hours;
    }
}
```

- **Book class:**

```
package GOFOAPP;

import java.util.Scanner;

import
java.util.regex.Pattern;
```

```
public class Booking
{
    private int hour;

    private String PlayGround;

    private playGroundOwner(b = null);

    public playGroundOwnerG= new playGroundOwner();

    public Booking(playGroundOwnerG)
    {
        ob = g;
    }

    public Booking()
    {
        //empty
    }

    public void setplayGround (String pg )
    {
        this.PlayGround= pg;
    }

    public String getPlayGround ()
    {
        return PlayGround;
    }

    public void setHour (int h)
```

```
{  
  
    this.hour= h;  
  
}  
  
public int getHour ()  
{  
  
    return hour;  
  
}
```

```
public String []arr=new String[1000];
```

```
Scanner input = new Scanner (System.in);
```

```
public void bookPlayGround()  
{  
  
    int x=0;  
    int y=0;  
  
    System.out.println("enter playground");  
  
    String name = input.next();  
  
    setPlayGround(name);  
  
    for(int c=0 ;ci<ob.array_ground.size(); c++)  
    {  
  
        String a=ob.array_ground.get(i).ground.getplayground_name();  
  
        if(name.equals(a))  
        {  
  
            System.out.println("this playground is available");  
  
            System.out.println("Information about this playground :");  
  
            System.out.println("playground name is : " + ob.array_ground.get(c).ground.getplayground_name());  
  
            System.out.println("playground location is : "  
+ob.array_ground.get(c).ground.getplayground_location()  
                );  
  
            System.out.println("playground booking number is : "  
+ob.array_ground.get(c).ground.getbooking_number());
```

```

        System.out.println("playground hours is : ");
        availableHours[] available =
        ob.array_ground.get(i).ground.get_available();for (int j = 0; j
        <ob.array_ground.get(c).ground.getAvailable_hour(); j++) {
            System.out.println(available[j].get_hours());
        }
        System.out.println("playground price is : " +ob.array_ground.get(c).ground.getprice());
        x++;
        y=c;
    }

}

if(x==0)
    System.out.println("this playground is not available ");

else

{

    System.out.println("this is avaiable hour for playground :");
    availableHours[] available =
    ob.array_ground.get(y).ground.get_available();for (int j = 0; j
    <ob.array_ground.get(y).ground.getAvailable_hour(); j++) {
        System.out.println(available[j].get_hours());
    }
    System.out.println("please enter time u
    want");int hour=input.nextInt();
    setHour(hour);
}
}

public void printInfo()
{
    for(int i=0 ; i<ob.array_ground.size(); i++)

```

```

{
    System.out.println("there is list with the playground that you can book ");

    System.out.println("playground name is : " +
        ob.array_ground.get(i).ground.getplayground_name());

    System.out.println("playground booking number is : "
+ob.array_ground.get(i).ground.getbooking_number());

    System.out.println("playground location is : "
+ob.array_ground.get(i).ground.getplayground_location())
; System.out.println("playground hours is : ");

    availableHours[] available =
        ob.array_ground.get(i).ground.get_available();for (int j = 0; j
<ob.array_ground.get(i).ground.getAvailable_hour(); j++) {
        System.out.println(available[j].get_hours());
    }

    System.out.println("playground price is : " +ob.array_ground.get(i).ground.getprice());

}

}

public void clear()
{
    int price,carry;

    int carry;

    String hour;

    System.out.println("choose what you want filter
it");System.out.println(" 1:Hours");

    System.out.println("
2:price");

    carry=input.nextInt();

    if(carry==1)
    {
        System.out.println("please choose
hour");hour=input.next();

        for(int i=0;i<ob.array_ground.size(); i++)
        {

```

```
available_hours[] available = ob.array_ground.get(i).ground.get_available();
```



```

        for (int j = 0; j < ob.array_ground.get(i).ground.getAvailable_hour(); j++) {
            if(hour.contentEquals(available[j].get_hours()))
            {
                System.out.println("playgrounds");

                System.out.println("playground name is : " +
ob.array_ground.get(i).ground.getplayground_name());

                System.out.println("playground location is : "
+ob.array_ground.get(i).ground.getplayground_location());

                System.out.println("playground booking number is : "
+ob.array_ground.get(i).ground.getbooking_number());

                for (int s = 0; s < ob.array_ground.get(i).ground.getAvailableHour(); s++) {
                    System.out.println(available[s].getHours());
                }

                System.out.println("playground price is : "
+ob.array_ground.get(i).ground.getprice());

                System.out.println("*****");
            }

        }

    }

}

else if(carry==2)
{
    System.out.println("Enter price you
want");price=input.nextInt();

    for(int i=0;i<ob.array_ground.size(); i++)
    {
        double
        price_filt=ob.array_ground.get(i).ground.getprice();

        if(Math.abs(price_filt-price)<=10)
        {

            System.out.println("playgrounds");

```

```

        System.out.println("playground name is : "
+ob.array_ground.get(i).ground.getplayground_name());

        System.out.println("playground location is : "
+ob.array_ground.get(i).ground.getplayground_location());

        System.out.println("playground booking number is : "
+ob.array_ground.get(i).ground.getbooking_number());

        System.out.println("playground hours is : "
+ob.array_ground.get(i).ground.get_available());

        System.out.println("playground price is : " +ob.array_ground.get(i).ground.getprice());

    }

}

}

}

public void randCode (){
// from codefroces

int min = 1000;

int max = 10000;

System.out.print("your code is :

");

int random_int = (int)(Math.random() * (max - min+ 1) + min);

System.out.println(random_int);

}

public void team()

{

    System.out.println("Please Enter number of players you want to add for the team");

    Scanner input = new Scanner (System.in);

    int n=input.nextInt();

    for(int x=0 ; x<n ;

x++)

{

        System.out.println("Please Enter Player's Email : " + (x+1) );

```

```

String m = input.next();

if (validation(m))
{
    array[x]=m;
}
else
{
    while(!validation(m))
    {
        System.out.println("This is invalide E-mail & please enter valide
one");m = input.next();
        array[x]=m;
    }
}

System.out.println("your team E-mails had added successfully");
}

```

```

public static boolean validation(String email)

```

```

{ //from code forces

```

```

String email2 = "^[a-zA-Z0-9_+&*-
]+(?:\\." + "[a-zA-Z0-9_+&*-
]+)*@" + "(?:[a-zA-Z0-9-
]+\\.)+[a-z" +
"A-Z]{2,7}$";

```

```

Pattern pat =

```

```

Pattern.compile(email2);if (email ==
null)

```

```

return false;

```

```

        return pat.matcher(email).matches();
    }
}

```

- **Player class:**

```

package GOFOAPP; import
java.util.Scanner; public
class player
{
    Scanner input = new Scanner (System.in);
    private int money ;
    private int pass;
    private int accountID;

    private String playerAccount ;
    private String playGroundwnerAccount ;

    public void set_Pass (int pass)
    {
        this.pass = pass ;
    }

    public int getPass()
    {
        return pass ;
    }

    public void setMoney(int money)
    {
        this.money = money;
    }

    public int getMoney()
    {
        return money;
    }

    public void setAccountID(int id)
    {
        this.accountID = id;
    }

    public int getAccountID()
    {
        return accountID;
    }

    public void setPlayGroundOwnerAccount(String playGroundownerAccount)
    {
        this.playGroundwnerAccount = playGroundownerAccount;
    }

    public String getPlayGroundOwnerAccount() {
        return playGroundwnerAccount;
    }
}

```

```

        public void setPlayerAccount(String playerAccount)
        {
            this.playerAccount = playerAccount;
        }
        public String getPlayerAccount()
        {
            return playerAccount;
        }
    }

    public void payEwallet()
    {
        System.out.println(" please Enter the account");
        String player = input.next();
        setPlayerAccount(player);
        System.out.println(" please Enter your id ");
        int acc= input.nextInt();
        setAccountID(acc);
        System.out.println(" please Enter the playground owner account pay for
");
        String owner = input.next();
        setPlaygroundOwnerAccount(owner) ;
        System.out.println("please Enter the money you will
pay");int Money= input.nextInt();
        setMoney(Money);
        System.out.println("done successfully");
    }
    public void cancelEwallet()
    {
        System.out.println("Do you want to cacnel booking (yes/no)");
        String choice= input.next();
        if("yes".equals(choice))
        {
            System.out.println("Enter money you want to return ");
            int amount= input.nextInt();
            if(amount <=get_money())
            {
                System.out.println("done succssesfully");
                money= money - amount;
                System.out.println(money);
            }
        }
        else
        {
            System.out.println("your mony = " + get_money());
        }
    }

```

• Playground class:

```

package GOFOAPP;
public class playGround

{ private int bookingNumber;
  private String playgroundName;

```

```

private String playgroundLocation ;
private double Price;
private AvailableHours[] available;
private String ArrayHour[];
private int availableHour;

public playGround()
{
}

public void setAvailable_hour(int available_hour)
{
this.availableHour = available_hour;
}
public int getAvailable_hour()
{
return availableHour;
}

public void setplayground_name(String namePlayground)
{
this.playgroundName = namePlayground;
}
public String getplayground_name()
{
return playgroundName;
}
public void setplayground_location(String location)
{
this.playgroundLocation = location;
}
public String getplayground_location()
{
return playgroundLocation;
}

public void setPrice(double Price) {
this.Price = Price;
}
public double getprice() {
return Price;
}
public void set_available(available_hourS[] available)
{
this.Available = Available;
}
public AvailableHours[] get_available()
{
return Available;
}

public void setbooking_number(int bookingNum)
{
this.bookingNumber = bookingNum;
}

public int getbooking_number() {
return bookingNumber;
}
}

```

- **playGroundOwner class:**

```

package GOFOAPP;
import java.util.Scanner;
import java.util.ArrayList;
public class playGroundOwner extends user_information
{
    public playGround ground = new playGround();

    ArrayList<playGroundOwner>array_ground=new ArrayList<playGroundOwner>();
    public availableHours []available =new availableHours[1000];
    public void add_playground()
    {
        String gName;
        String gLocation;
        int bookingNumber =0;
        int availableHours = 0;
        double price;
        String gHour;

        System.out.println("Enter the playGround information,Please...");
        Scanner inp = new Scanner (System.in);
        System.out.println(" Enter the playGround Name:");
        gName=inp.next();
        Ground.setplayground_name(gName);

        System.out.println(" Enter the plauGround Location:");
        gLocation=inp.next();
        Ground.setplayground_location(gLocation);
        System.out.println("Enter the playGround price:");
        price=inp.nextDouble();
        Ground.setPrice(price);

        System.out.println( "Enter the playGround bookingNumber ");
        bookingNumber=inp.nextInt();
        Ground.setbooking_number(bookingNumber);

        System.out.println(" Enter the playGround availibleHours");
        availableHours=inp.nextInt();
        Ground.setAvailable_hour(availableHours);

        System.out.println("Enter the playGround availibleHours from hour ...To hour ...");

        for(int c=0;i<availableHours;c++)
        {
            gHour=inp.next();
            Available[c]=new availableHours(gHour);
        }
        Ground.set_available(Available);
    }
    public void add_Playgrounds(playGroundOwner ground)
    {
        arrGround.add(ground);
    }
}

```

- **main class:**

```

package GOFOAPP;

import java.util.Scanner;

public class GOFOAPP {

```

```

public static void main(String[] args) {

Scanner inp = new Scanner(System.in);

playGroundOwner PO = new playGroundOwner();

player p = new player();

Booking BOOK = new Booking();

Login Temp = new Login() ;

user P1=new user();

int chck ;

int Choice;

int Choice1 = 0;

do{

System.out.println("1: Register");

System.out.println("2: Login");

System.out.println("3:printUsers");

System.out.println("4: create the team");

System.out.println("5:The payament ");

System.out.println("6:Cancel the payment");

System.out.println("7:Logouting");

Choice = inp.nextInt();


switch(Choice)

{

case 1:

{

int B;

Login U1 = new Login() ;

B=U1.register();

Temp.add_users(U1);

if(B==1)

{

BOOK.print_info();

}

}

}

}

```



```
else if(B==2)
{
    playGroundOwner Owner = new playGroundOwner();
    Owner.add_playground();
    PO.add_Playgrounds(Owner);
    BOOK.clear();
}
Break;
}
```

```
case 2:
{ do{
    P1.login();
    chck = Temp.chck(P1);
    System.out.println(chck);
    if(chck == 1)
    {
        System.out.println("Welcome at GOFO system");
    }
    else
    {
        System.out.println("Oh,Sorry it is not valid");
    }
}while(chck == 0);
```

```
Break;
}
```

```
case 3:
{
    Temp.showUsers ();
    Break;
}
```

```
case 4:
```

```
{  
    BOOK.Team();  
    Break;  
}  
case 5 :  
{  
    p.payEwallet();  
    Break;  
}  
  
case 6:  
{  
    p.cancelEwallet();  
    Break;  
}  
case 7:  
{  
    System.out.println("Thank you...");  
    Break;  
}  
  
default:  
{  
    System.out.println("It is unvalid choice , please enter the right");  
    Break;  
}  
  
}  
  
}while(Choice!=7);  
  
}
```

}

