Group 13

Virtual Gym System

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Member information

Group Number:<13>

Group Members:

Name	QM No.	BUPT No.
Shiwei Ma	190014168	2018212613
Hongtian Shan	190013138	2018212606
Weirui Sun	190014489	2018212609
Youguang Zhou	190015198	2018212619
Yueyan Cao	190015349	2018212591
Zhexu Liu	190015659	2018212618

1. Introduction

[1]Hired by “London Fitness”, our team aim to develt home using Agiop a virtual gym system which allows gym members doing workouts ale methods. Iterations are planned and Agile methods are used in all activities, from requirements, to analysis/design, and implementation and testing.

2. Project Management

2.1. The Standard Approach (project management technique)

[2]The standard approach to project management is plan driven. Agile project benefits the stability of the whole project, which requires a different approach, which is adapted to incremental development and the particular strengths of agile methods. (Scrum approach).

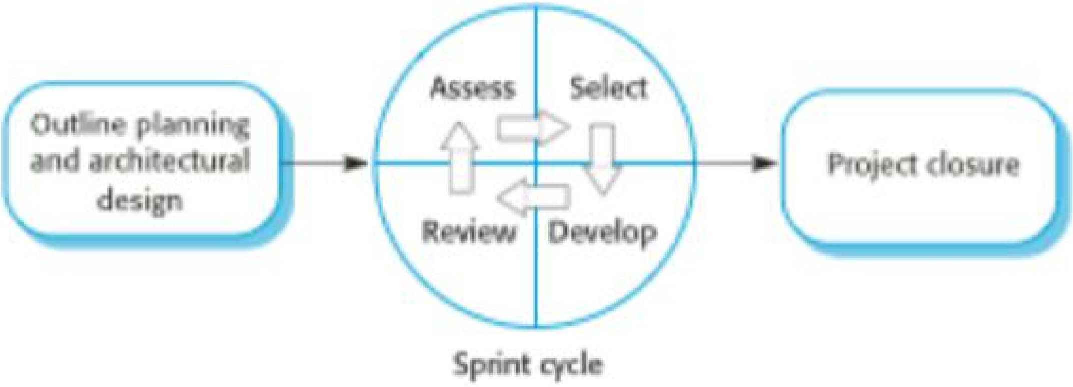


Figure 1: Sprint cycle

2.2. Agile team

Shiwei Ma:

Group leader, assigned tasks to other members and hold several meetings to maintain the communication among members. I was responsible for Administrators' parts in the code and uploaded the code to the QMplus Hub for version control.

Hongtian Shan:

Responsible for the design and implementation of the coach interface, the coach watch video, transfer video, delete video, teach course, specified info getter, file deletion and CSV read and write module independently. Watch video module for layout modifications. Optimized interface and completed the production of promotional videos. Lead the team in code integration. Participate in prototyping, the creation of the homepage.

Weirui Sun:

Be responsible for the design and implementation of Welcome UI (homepage) , Register UI, Login in UI， TDD code of Register test. Participate in CSV read and write, design the CSV file system. Test the code， write the project management and requirements, Analysis and Design, Implementation and Testing, integrate and modify the reports.

Yueyan Cao:

Be responsible for making product prototype and writing code. The code includes the play video page and the select coach page of the user page. The play video page realizes the function that the user can select and watch the video according to the uploaded video, and can use the search function to find the video they want. The select coach page realizes the function of selecting coaches according to the existing coaches. Also participated in the analysis phase.

Youguang Zhou:

Group member, mainly responsible for making product prototype and providing interface template through web page. Responsible for the design and code writing of user interface user-information and progress-checking, including the user recharge, VIP upgrade, and coach schedule query, and also includes the changes of the current weight and target weight of the user.

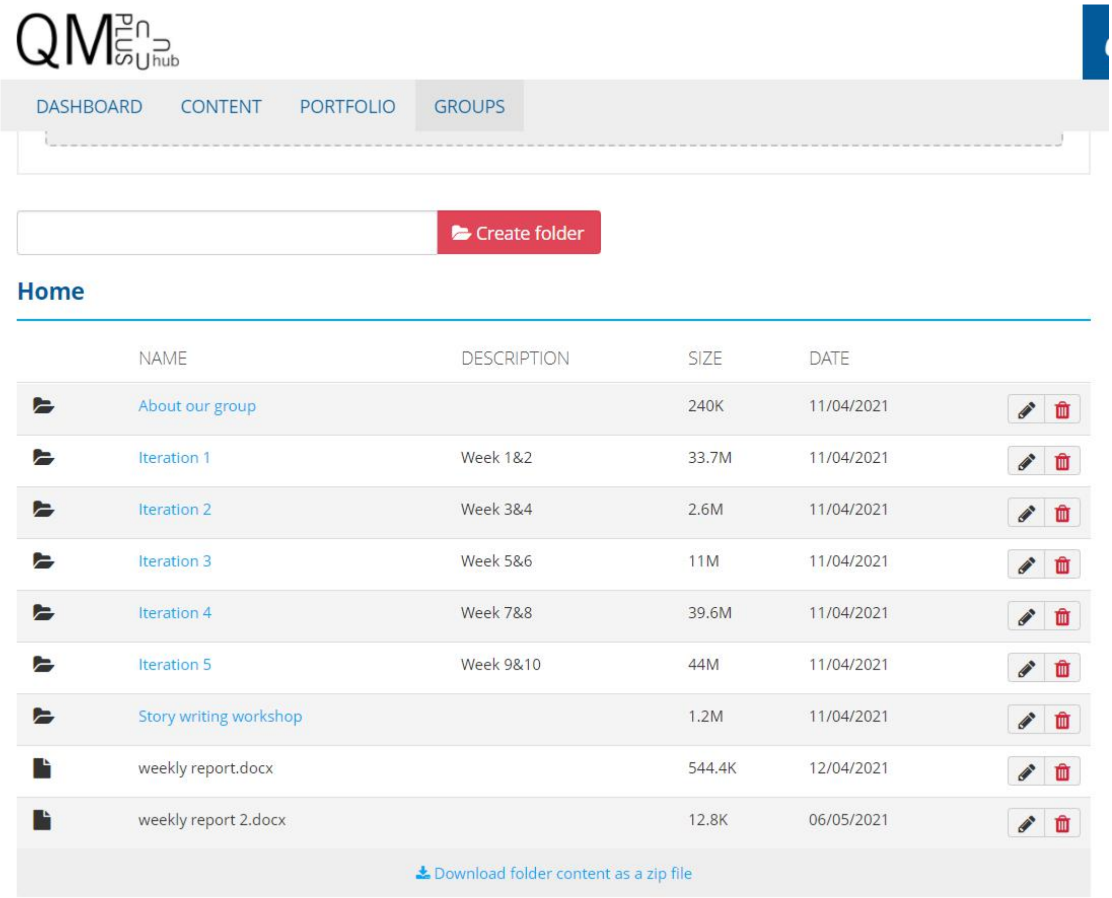
Zhexu Liu:

Be responsible for the design and implementation of Welcome UI (homepage) , Register UI, Login in UI, the login logic part and register logic part. Also design the CSV file system. Participate in CSV read and write. Test the code， write the project management, Analysis and Design, Implementation and Testing.Integrate and modify the reports.

2.3. Project management tools

The assembly language we use is Java, and we use WindowBuilder to design the layout. The IDE is Eclipse IDE. During the process of the project, we mainly use WeChat to keep the communication of information and code. Besides, we hold regular meetings once a week to discuss the process.

2.4. QMplus Hub Management



NAME	DESCRIPTION	SIZE	DATE
About our group		240K	11/04/2021
Iteration 1	Week 1&2	33.7M	11/04/2021
Iteration 2	Week 3&4	2.6M	11/04/2021
Iteration 3	Week 5&6	11M	11/04/2021
Iteration 4	Week 7&8	39.6M	11/04/2021
Iteration 5	Week 9&10	44M	11/04/2021
Story writing workshop		1.2M	11/04/2021
weekly report.docx		544.4K	12/04/2021
weekly report 2.docx		12.8K	06/05/2021

2.5. Outline Planning

2.5.1. Previous Preparation:

We discuss the requirements and make the division of labour in our first meeting. We split the program into several parts and allocate them to members. We record the main contents and results of each meeting and decide the time and goals of the next meeting.

2.5.2. Software Structure

The software has four parts: Register and Login part, Customer part, Coach part and Administrator part.

Regist and Login part： This part is consisted of Welcome UI, Register UI and Login UI. The functions are Welcome users (the entrance of Register and Login); Register as Normal or Coach and Login account, respectively.

Customer part: This part is consisted of UserCheckProgressUI, UserInfomationUI, UserSelectCoachUI, UserVideoUI. Just as their names imply, the functions are check progress userof tasks; show the information of current account; select coach (only Prime); watch videos, respectively.

Coach part: This part includes CoachVideoUI, CoachUploadUI, CoachTeachUI, CoachManageUI, CoachMyUI. The functions are watch videos; upload videos and covers from local computer; teach and allocate tasks to members who choose the coach; delete videos this coach upload; show the information of current account, respectively.

Administrator part: This part includes Admin_Watch_Video, Admin_Upload_Video, Admin_Post_Activities, Admin_Look_Up_Info, Admin_Del_Video, Admin_Mine.

The functions are watch videos; upload videos and covers from local computer; post the price of becoming VIP; check all information of accounts; delete videos this coach upload; show the information of current account, respectively.

2.6. Iterative development

1) Iteration 1st

[3]We have meetings face to face to discuss our work in cooperation with a due division of labour and recustomized the plan, because the backlog we have made before, does not provide the tasks for each stage. In iteration 1st , We achieve the login and register. Just the functions are satisfied, but the GUI is very simple. And we also have revised the backlog according to the current plan.

2) Iteration 2nd

We discuss and brainstorm with social networking software, WeChat mostly. In iteration 2nd, the function of jump in GUI is optimized, and the function of member and administrator has updated, too.

3) Iteration 3rd

Before iteration 3rd, we hold the third meeting. We discuss the results we have achieved, and decide what will we add to iteration 3—the Administrator Page. In iteration 3rd, we add Administrator Page with function look up information of all accounts, post the price of becoming VIP and Mine Page.

4) Iteration 4th

Iteration 4th can be seen as a giant leap forward, we conquer two issues that trouble us for a long time: watch videos and upload videos. And we add these two functions to Administrator Page. Besides, we finished coach part. In teach UI of coach part, coach can teach students who choose this coach, he or she can allocate task videos and check the progress of students. By the way, video search function is realized in this iteration, too.

5) Iteration 5th

Iteration 5th is nearly the final software version, expect for the videos and covers. Compared to Iteration 4th, customer interfaces are developed. In customer pages, customers can watch videos, recharge and become VIP. Also, prime can choose coach and set strength and targets. And during developing this iteration, we gather together to test and implement. We work together to debug. We run the software respectively and repeatedly. Several bugs were found and corrected, we test all possibilities to make sure the stability and correctness.

Also, we optimized the appearance of the interface.

2.7. Management technique

Task	Week1-2	Week3	Week4	Week5	Week6-7	Week8
Planning	🟦					
Iteration 1		🟦				
Iteration 2		🟦	🟦			
Iteration 3			🟦	🟦		
Iteration 4				🟦	🟦	
Iteration 5					🟦	🟦
Report						🟦

Chart 1: Gantt Chart 1

Member /process	Planning	Homepage	Administrator page	Coach page	User page	Debug and test	Report
Shiwei Ma(A)	🟧		🟧			🟧	
Hongtian Shan(B	🟧	🟧		🟧		🟧	
Weirui Sun(C	🟧	🟧				🟧	🟧
Yueyan Cao (D	🟧				🟧	🟧	
Yougaung Zhou(E	🟧				🟧	🟧	
Zhexu Liu(F)	🟧	🟧				🟧	🟧

Chart 2: Gantt Chart 2

2.8. Time Estimation

Functions and process	**Estimate time**	**Member**	**Content**
Planning	1 week	ABCDEF	Make plans for the whole software developments and next iteration
Register and Login	1 week	CF	Welcome UI and Register UI and Login UI
Watch and upload videos	2-2.5weeks	ABDE	Watch videos in watchvideo UI and upload videos from local computer

Check information	0.5 week	A	Check information of all accounts and current account
Teach students	1 week	B	Allocate tasks to students who choose the coach
VIP system	0.5 week	ADE	Post VIP price and becoming VIP page
Itegration	1 week	ABCDEF	Integrate all parts into a whole software
Report	1 week	CF	Write report

Chart 3: Time Estimation

2.9. Risk Analysis

Technology Risks:

1. File read / write operations may read or write error data.
2. The code may be suspended caused by bugs which may delay the process.

Communication risk:

Lake of communication may lead to repeated codes and collision

Task assignment risk:

Unequal task allocation may cause contradiction between team members.

2.10. Decision making

Regular meetings are hold every week in order to report work progress, check plan completion degree and discuss the next step towards the next iteration. We discuss the hinders we came across and work on them together. In addition, we discussed every changes and decisions in our codes even if they are not considerable. To a certain extent, we never stop making decisions in WeChat, everyone has participated in decision making.

3. Requirements

3.1. Requirements Finding Techniques

3.1.1. Background

“London Fitness” is a small gym operating in London. It used to be very busy, however, the pandemic has forced it to close. They can no longer provide onsite classes, personal training, clubs and they have to freeze the membership scheme. Even if it’s allowed to reopen later this year, it will have to adapt to the new normal as people will keep social distancing and will be cautioned to join classes. To keep the business running, the gym has to shift the focus from physical spaces towards virtual spaces. A digital gym system is urgently needed to allow gym members doing workouts at home.

3.1.2. Requirements

Virtual classes should be provided in addition to the physical classes. The gym members should be able to watch videos provided by the gym and follow the workouts at their own time at home. It should provide a variety of categories, e.g., Yoga, HIIT, Strength etc.

The gym premier members can book live sessions with a personal trainer. The personal trainer can design specific exercises according to the member's targets and physical abilities.

Keeping the existing members and attracting new members is very important for the gym business. The gym should provide several different types of memberships. The gym should do a promotion to attract new members.

Basic restrictions and error checking must be considered: for example, the format of the date, email, phone number etc.

It should be easy to use: that is, the user should be able to operate the software with common sense or with simple instructions.

The software should be user friendly: for example, the user should be able to cancel the operation at any time; it should display messages promptly to the user during the operation; etc.

3.2. Iteration Planning

Iterations	Estimate time	Content
Iteration 1st	1 week	Basic UI, Register and Login UI
Iteration 2nd	1 week	Page jump in GUI
Iteration 3rd	2 weeks	Administrator Part
Iteration 4th	2 weeks	Coach Part. Watch videos and upload videos
Iteration 5th	1 week	Customer part and dubugging

Chart 4: Iteration Planning

3.3. Adapting to changes

During coding the program, we modularize the code consciously in order to enhance the ability to adapt to changes. Changes usually affect just several modular.

Keeping communication allows us to adapt to changes more easily, too.

4. Analysis and Design

4.1. Class Diagram and Justification

4.1.1. Class Diagram

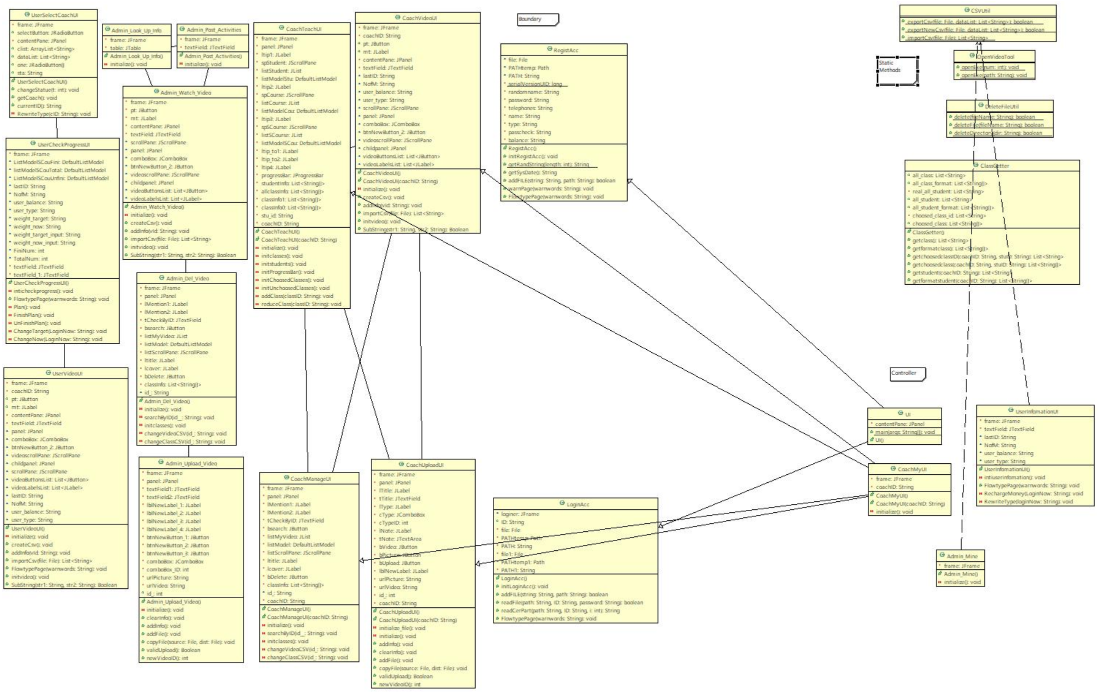


Figure 3: Class Diagram

4.1.2. Issue of Reusability and Adaptability to Change

In terms of the reusability of system components, we have a lot of such codes. For example, classGetter.java contains data for obtaining classid and csvutil.java for obtaining CSV.

In order to adapt to changes, we first divide the system into four layers, namely user, admin, coach and registration. Each layer cooperates with each other and remains independent. Therefore, if we want to make some changes to a certain function, we don't need to modify all of them. The only thing we need to do is to find a way to perform this function and modify it.

4.2. Design of Software

4.2.1. Architectural Design

The first is Entity classes. For example, classGetter.java contains the data to get the classid and csvutil.java to get the CSV. This piece of code improves reusability by making it available to many classes.

Then there are Boundary classes. In Boundary classes, it often involves receiving (presenting) information and requests from (and to) users and external systems.

For example, in the case of UserInfoMationUi.java, the Java code reads the CSV file to get all the information and provides the information to other relevant subclasses. This improves reusability. At the same time, in order to adapt to the change, we first divided the system into four layers. Each layer cooperates with and remains independent of others' code. Therefore, if we want to change the function, we don't need to change it all. The only thing we need to do is find the code that performs this functionality and modify it.

We have several control classes. The main function is in UI.java. That's the main Control classes. He is responsible not only for the basic UI styling, but also for evoking subsequent file-generating programs and guiding users to them.

4.2.2 How we meets the main design principles of programming

We have a good abstraction. Some of our code have good implementation but others not. All the UI page can be instantiated and it is extensible. But for the data manage file they cannot be instantiated and this make the data secure.

We have good Encapsulation. We use a lot of private type data and use some class which can hold and get some important data such as the ClassGetter.java. We can promise that all our data is security.

As for the Modularity. We have separated the functionality of a program into independent, interchangeable modules and it expresses the elements that are provided and required by the module. [6]

At last, our code has good coupling. It is loose because only the data are independently computing in some independent java codes and most of the java code just remember the information. But we must use the account.csv to compute all the userUI system that means it is not very loose, because if the account.csv is wrong, our program will go wrong.

5. Implementation and Testing

5.1. Implementation strategy and testing strategy

5.1.1. Implementation strategy

Our implementation subsystems consist of components and interfaces. So, at first, we designed these components and interfaces in the design and analysis part. In the implementation part, we used a controllable, intuitive way to allocate this step. We first completed discrete components and then integrated them into a whole. This process is concentrated in the first four Iterations.

5.1.2. Iteration/built plan:

For each Iterations, we use a different plan, but these plans have a death-first process:

(1) The first step is to present the expected functionality at the beginning of the process.

(2) Second, indicate which files need to be modified or created to implement these functions, and list the subsystems and components needed to implement the building of the desired functions.

(3) Implement test strategies and test techniques

5.2. Testing strategy:

We used TDD to test the method, and these tests were automated. Use manual testing for higher level testing (such as modifying files in extreme cases, uploading, and deleting videos). Most tests involve both normal and false input methods. This is an effective way to find out whether the fault-tolerant mechanism is sound. The criteria for success are 100% pass of test cases for TDD tests and 90% pass for higher level tests.

5.3. Test techniques

We use both white and black box testing. We also use Partition testing, Scenario-based testing, and Regression Testing.

(1) Partition testing

This kind of techniques means that Input data and output results often fall into different classes where all members of a class are related: we use it in TDD and checked whether the user ID is right, the user password is right, the file reading and writing system is right.

(2) Scenario-based testing

We use this in manual testing. We use this to test can we use UI.java to call other user's UI(such as the adminUIs). Because our user's UI are divided into at least four parts, so it is really good to use Scenario-based testing to test the system. For example, we initiated UserInfomationUI.java for getting user information that are known to be present and known not to be present. And then UserCheckProgressUI.java, and then UserSelectCoachUI.java and then UserVideoUI.java, etc.

(3) Regression Testing

We use Regression Testing case to test the functionality of each method.

Because this development is incremental, the number of test cases steadily increases as new functionality is added to the build. These test cases will be used for each iteration phase. We will continue to run all the tests for each build to ensure that earlier functionality is not broken by build updates.

In our program, we divided our development into several phases. In case the test fails, no new functionality is added and must be checked immediately. The original feature must also work when developing a new feature. So we tested them here as well as earlier feature stages and kept adding new features and testing them. After repeated testing, we were able to make sure that all the features we added to the program worked.

5.4. Testing case design

There are many possible situations. I only show one example of test case.

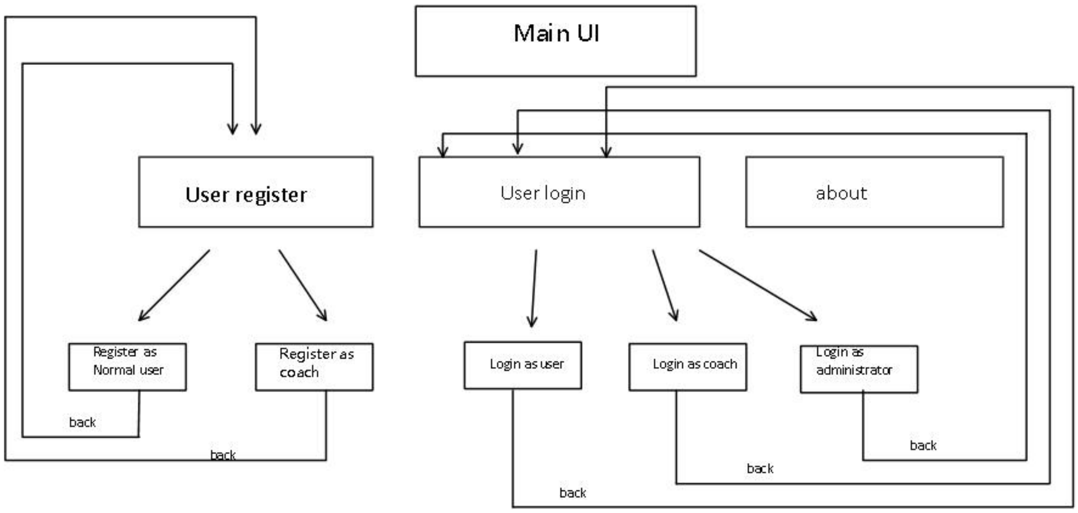


Figure 4: Test Case Design

5.5. The using of TDD

We used TDD to automate detection in our projects to reduce our testing workload. We used JUnit5 as a tool to check that the system was performing as I expected. Only when these methods work correctly can we develop other things. The TDD loop is as follows:

1. Write a specification in the form of code and unit tests. This test validates a functional unit of the code.
2. The demo test failed. Write code to meet specification requirements.
3. The demonstration test was successful.
4. Refactor the code to ensure that the system still has the cleanest code base. Once done, it executes the loop repeatedly.

A screenshot of the JUnit test is shown in the appendix.

APPENDIX A Reference

[1] EBU6304_GroupProjectHandout_2021 Page 4 of 7

[2] EBU6304-Project Management (1) Page 26 of 30

[3] EBU6304-Project Management (2) Page 5,9,21 of 30

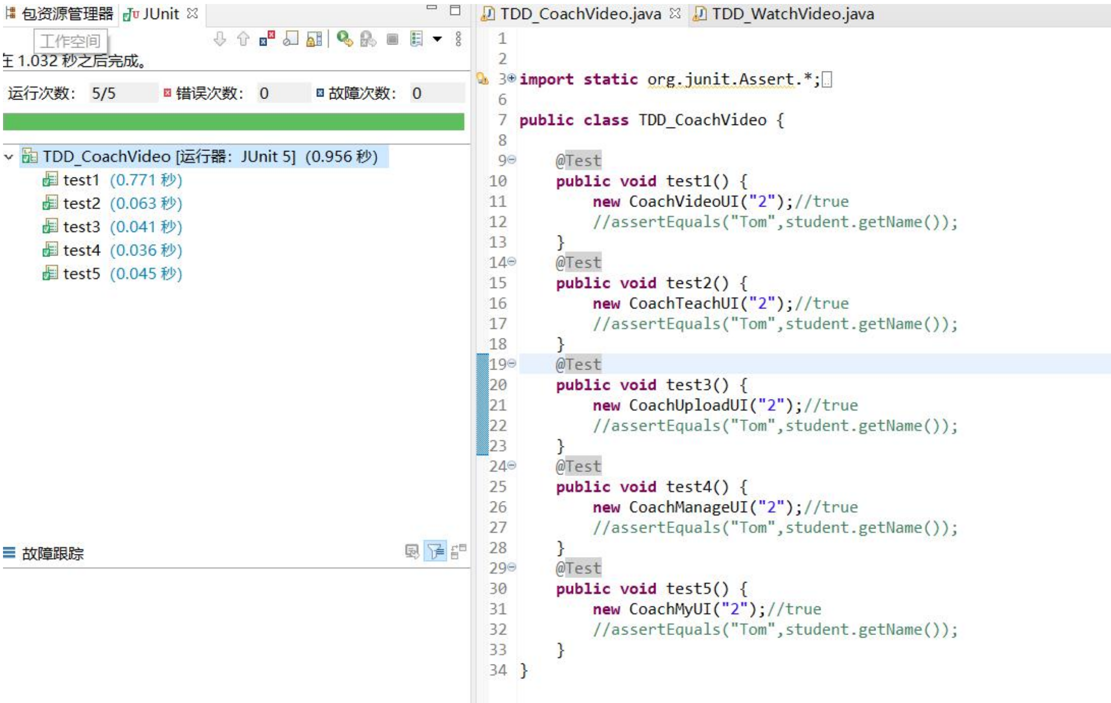
[4] EBU6304_W4_Live_Analysis_Exercises_Case Study Page 13-16

[5] EBU6304_W5_Rec_Implementation_Testing Page 30-32

[6] EBU6304_W4_Rec2_Software Architecture Page 12-14

APPENDIX B TDD

TDD for CoachVideoUI:



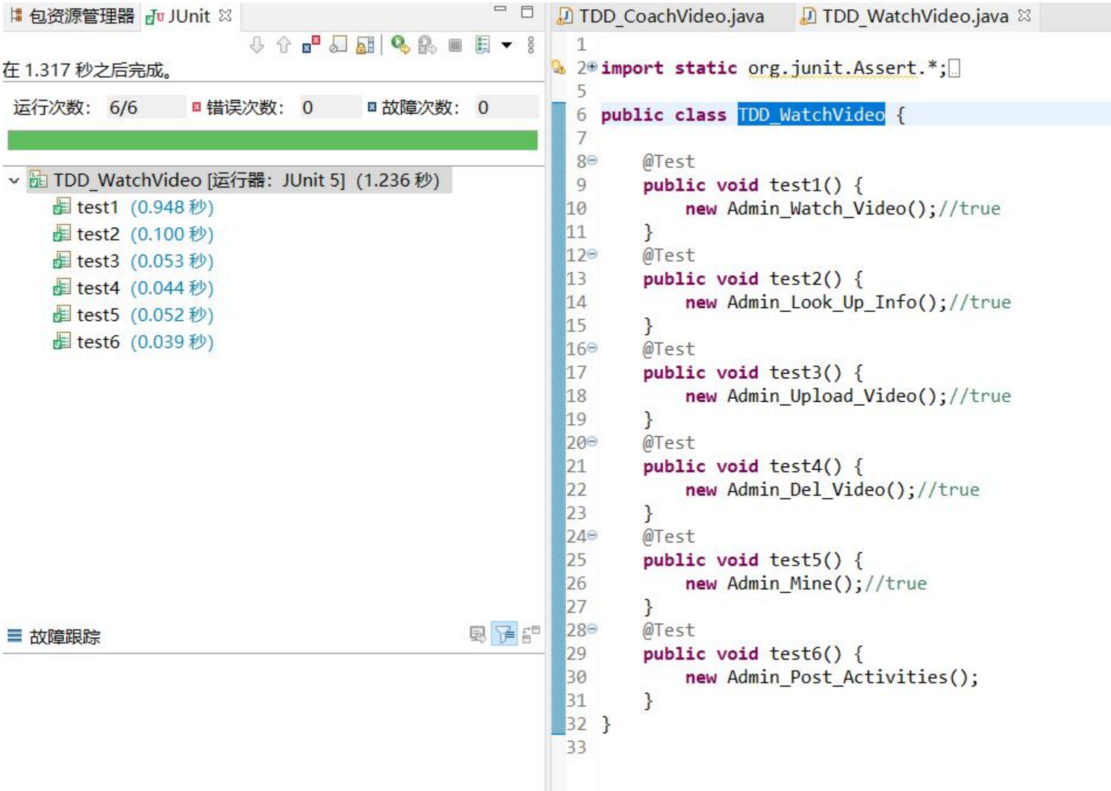
王 1.032 秒之后完成。

运行次数： 5/5　错误次数： 0　故障次数： 0

```
TDD_CoachVideo [运行器： JUnit 5]  (0.956 秒)
    test1  (0.771 秒)
    test2  (0.063 秒)
    test3  (0.041 秒)
    test4  (0.036 秒)
    test5  (0.045 秒)
```

```java


import static org.junit.Assert.*;

public class TDD_CoachVideo {

    @Test
    public void test1() {
        new CoachVideoUI("2");//true
        //assertEquals("Tom",student.getName());
    }
    @Test
    public void test2() {
        new CoachTeachUI("2");//true
        //assertEquals("Tom",student.getName());
    }
    @Test
    public void test3() {
        new CoachUploadUI("2");//true
        //assertEquals("Tom",student.getName());
    }
    @Test
    public void test4() {
        new CoachManageUI("2");//true
        //assertEquals("Tom",student.getName());
    }
    @Test
    public void test5() {
        new CoachMyUI("2");//true
        //assertEquals("Tom",student.getName());
    }
}
```

TDD for Administrator watch video part:



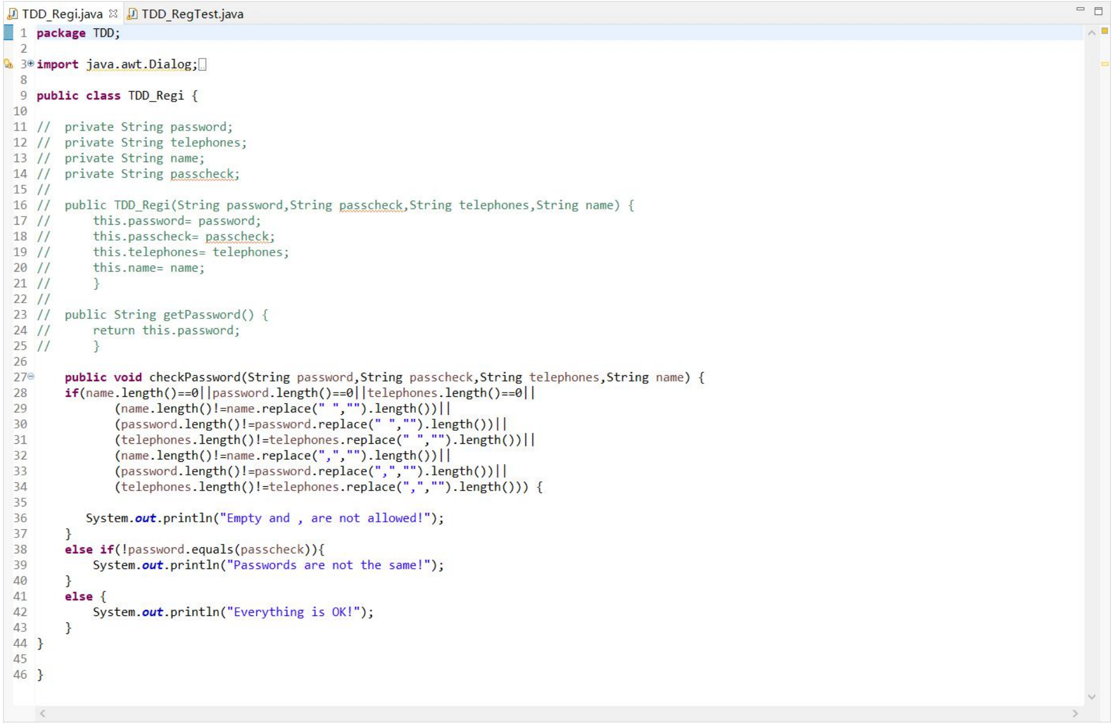
在 1.317 秒之后完成。

运行次数： 6/6　错误次数： 0　故障次数： 0

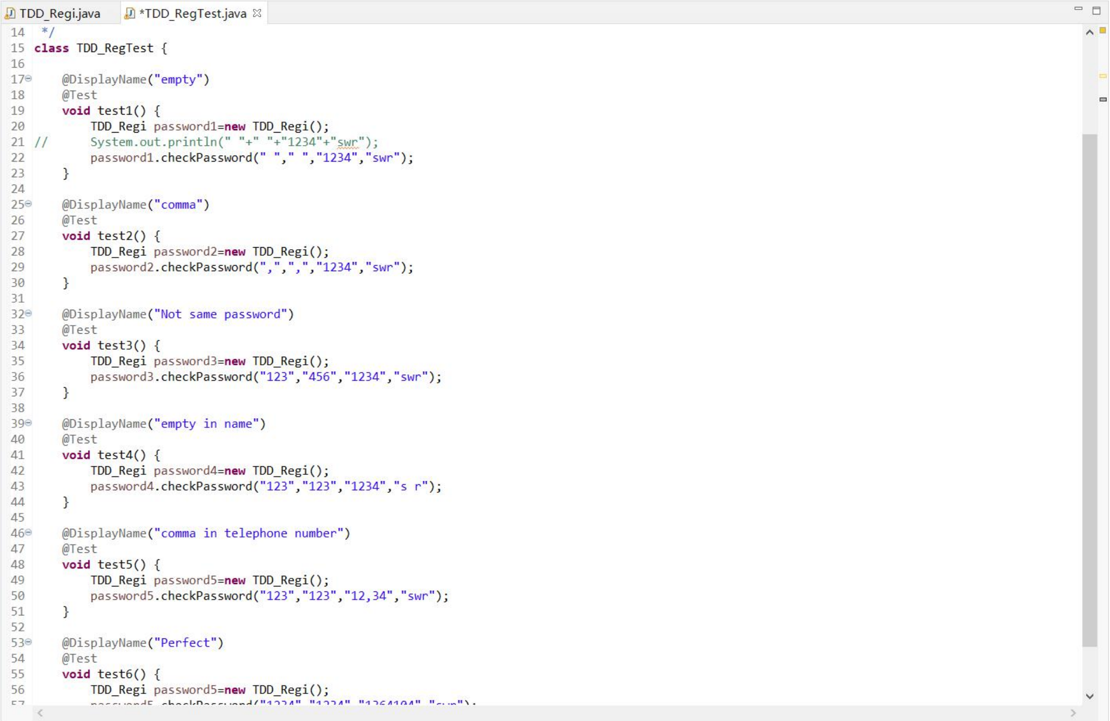
```
TDD_WatchVideo [运行器： JUnit 5] (1.236 秒)
    test1 (0.948 秒)
    test2 (0.100 秒)
    test3 (0.053 秒)
    test4 (0.044 秒)
    test5 (0.052 秒)
    test6 (0.039 秒)
```

```java

import static org.junit.Assert.*;

public class TDD_WatchVideo {

    @Test
    public void test1() {
        new Admin_Watch_Video();//true
    }
    @Test
    public void test2() {
        new Admin_Look_Up_Info();//true
    }
    @Test
    public void test3() {
        new Admin_Upload_Video();//true
    }
    @Test
    public void test4() {
        new Admin_Del_Video();//true
    }
    @Test
    public void test5() {
        new Admin_Mine();//true
    }
    @Test
    public void test6() {
        new Admin_Post_Activities();
    }
}

```

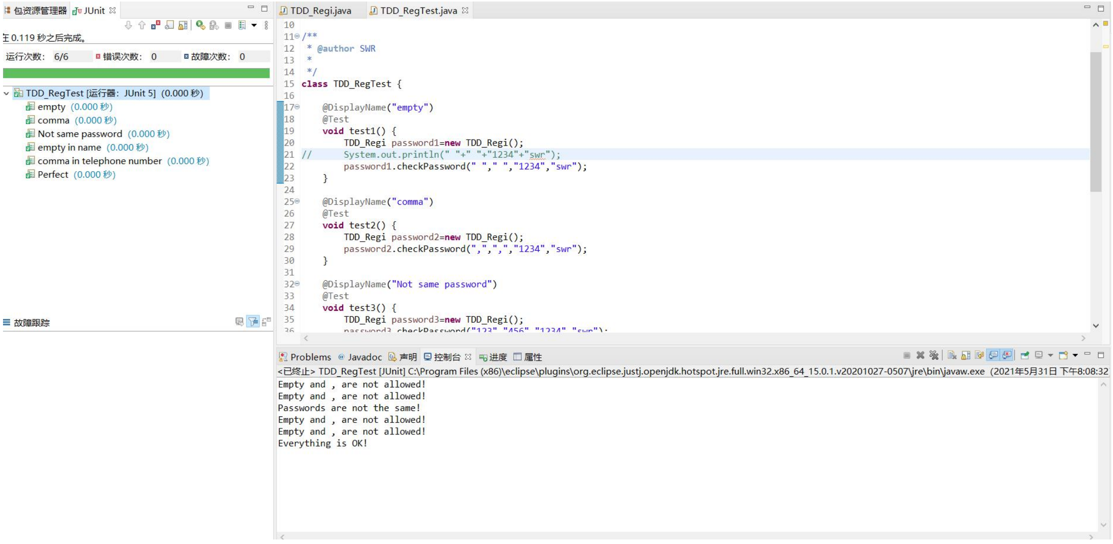
TDD for Register format restrictions:



```java
package TDD;

import java.awt.Dialog;

public class TDD_Regi {

//  private String password;
//  private String telephones;
//  private String name;
//  private String passcheck;
//
//  public TDD_Regi(String password,String passcheck,String telephones,String name) {
//      this.password= password;
//      this.passcheck= passcheck;
//      this.telephones= telephones;
//      this.name= name;
//      }
//
//  public String getPassword() {
//      return this.password;
//      }

    public void checkPassword(String password,String passcheck,String telephones,String name) {
    if(name.length()==0||password.length()==0||telephones.length()==0||
            (name.length()!=name.replace(" ","").length())||
            (password.length()!=password.replace(" ","").length())||
            (telephones.length()!=telephones.replace(" ","").length())||
            (name.length()!=name.replace(",","").length())||
            (password.length()!=password.replace(",","").length())||
            (telephones.length()!=telephones.replace(",","").length())) {

       System.out.println("Empty and , are not allowed!");
    }
    else if(!password.equals(passcheck)){
        System.out.println("Passwords are not the same!");
    }
    else {
        System.out.println("Everything is OK!");
    }
}

}
```



```java
 */
class TDD_RegTest {

    @DisplayName("empty")
    @Test
    void test1() {
        TDD_Regi password1=new TDD_Regi();
//      System.out.println(" "+" "+"1234"+"swr");
        password1.checkPassword(" "," ","1234","swr");
    }

    @DisplayName("comma")
    @Test
    void test2() {
        TDD_Regi password2=new TDD_Regi();
        password2.checkPassword(",",",","1234","swr");
    }

    @DisplayName("Not same password")
    @Test
    void test3() {
        TDD_Regi password3=new TDD_Regi();
        password3.checkPassword("123","456","1234","swr");
    }

    @DisplayName("empty in name")
    @Test
    void test4() {
        TDD_Regi password4=new TDD_Regi();
        password4.checkPassword("123","123","1234","s r");
    }

    @DisplayName("comma in telephone number")
    @Test
    void test5() {
        TDD_Regi password5=new TDD_Regi();
        password5.checkPassword("123","123","12,34","swr");
    }

    @DisplayName("Perfect")
    @Test
    void test6() {
        TDD_Regi password5=new TDD_Regi();
```



在 0.119 秒之后完成。

运行次数： 6/6　错误次数： 0　故障次数： 0

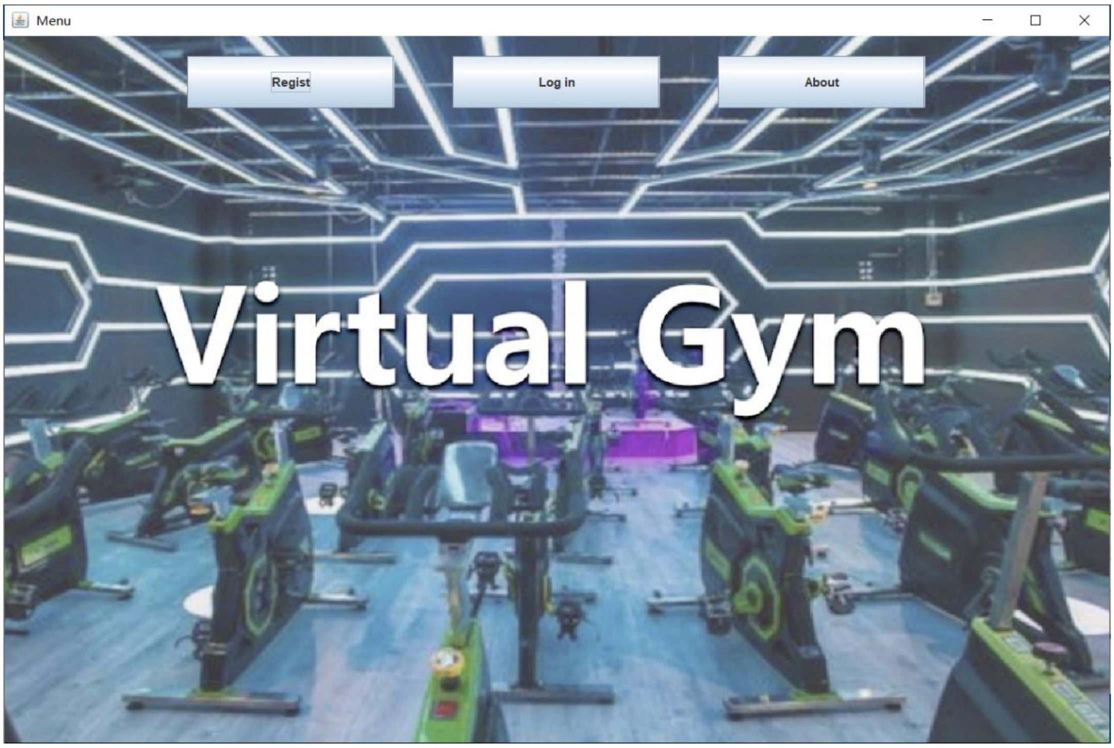
```
TDD_RegTest [运行器: JUnit 5] (0.000 秒)
    empty (0.000 秒)
    comma (0.000 秒)
    Not same password (0.000 秒)
    empty in name (0.000 秒)
    comma in telephone number (0.000 秒)
    Perfect (0.000 秒)
```

```java

/**
 * @author SWR
 *
 */
class TDD_RegTest {

    @DisplayName("empty")
    @Test
    void test1() {
        TDD_Regi password1=new TDD_Regi();
//      System.out.println(" "+" "+"1234"+"swr");
        password1.checkPassword(" "," ","1234","swr");
    }

    @DisplayName("comma")
    @Test
    void test2() {
        TDD_Regi password2=new TDD_Regi();
        password2.checkPassword(",",",","1234","swr");
    }

    @DisplayName("Not same password")
    @Test
    void test3() {
        TDD_Regi password3=new TDD_Regi();
```

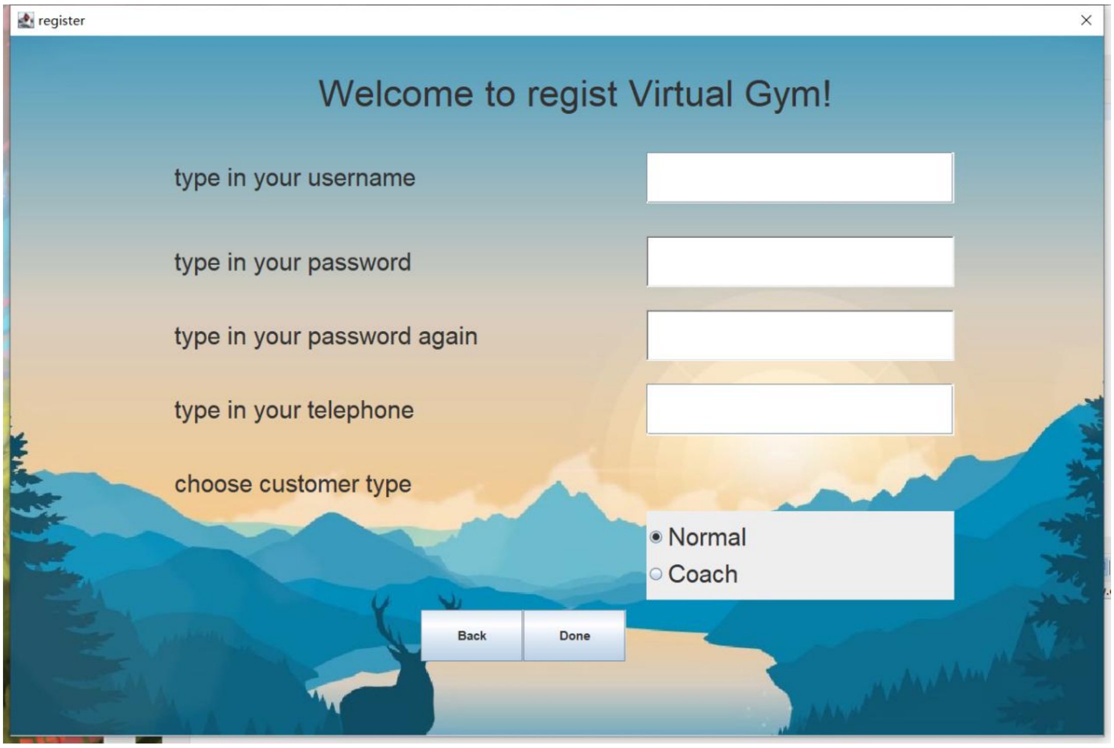
```
<已终止> TDD_RegTest [JUnit] C:\Program Files (x86)\eclipse\plugins\org.eclipse.justj.openjdk.hotspot.jre.full.win32.x86_64_15.0.1.v20201027-0507\jre\bin\javaw.exe  (2021年5月31日 下午8:08:32
Empty and , are not allowed!
Empty and , are not allowed!
Passwords are not the same!
Empty and , are not allowed!
Empty and , are not allowed!
Everything is OK!
```

APPENDIX C Screenshot

Homepage



Register Page



Welcome to regist Virtual Gym!

type in your username

type in your password

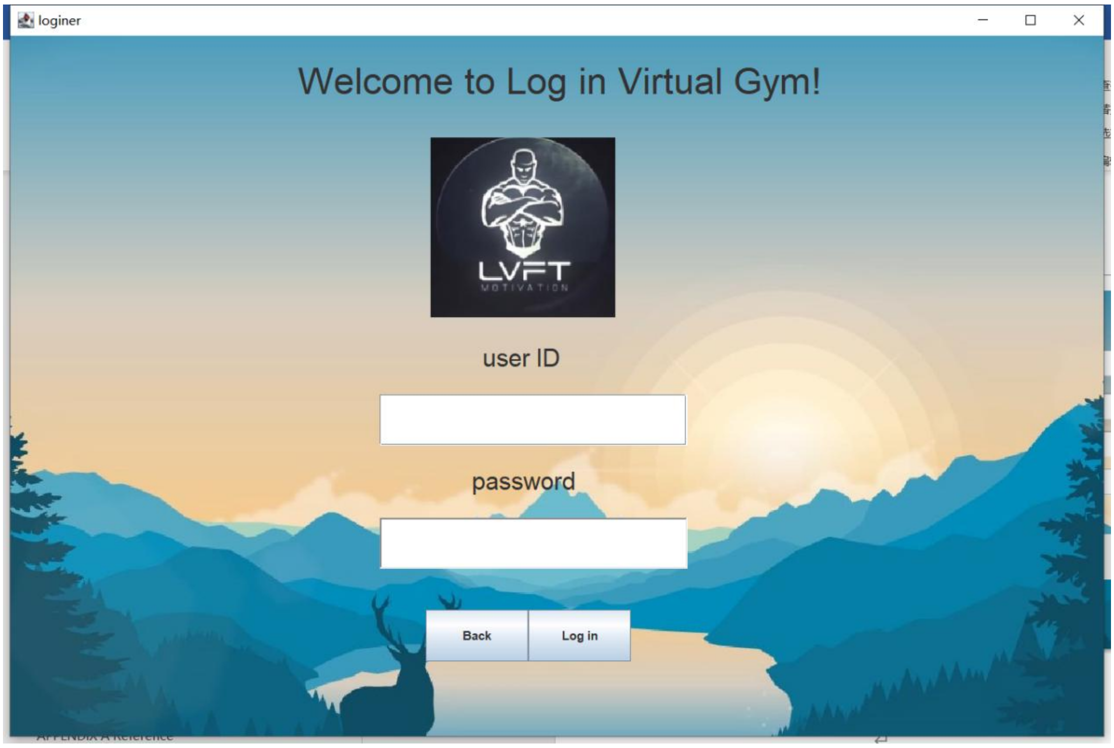
type in your password again

type in your telephone

choose customer type

● Normal
○ Coach

Login page

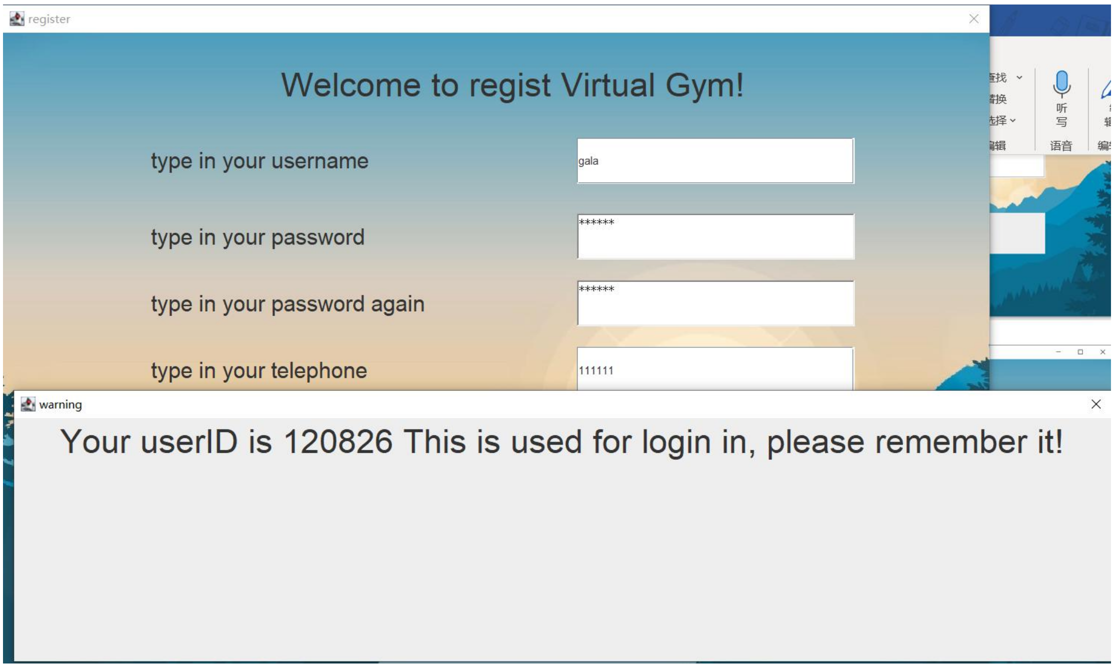


Welcome to Log in Virtual Gym!

user ID

password

Successfully-Register



Welcome to regist Virtual Gym!

type in your username gala

type in your password ******

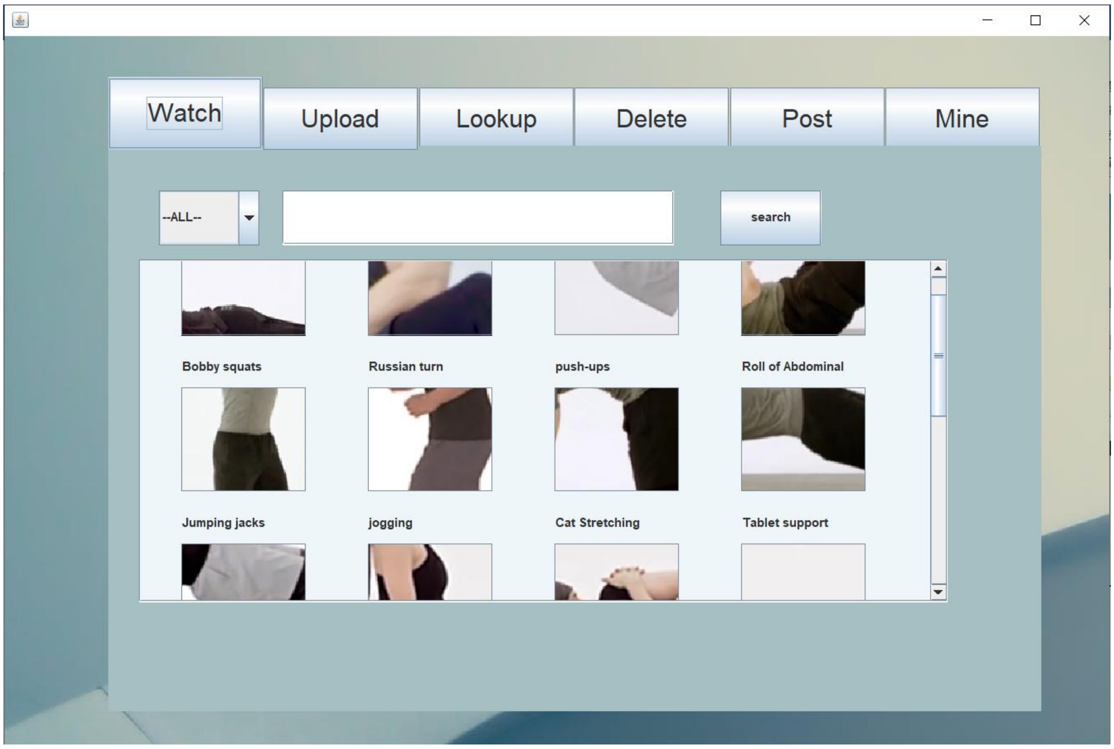
type in your password again ******

type in your telephone 111111

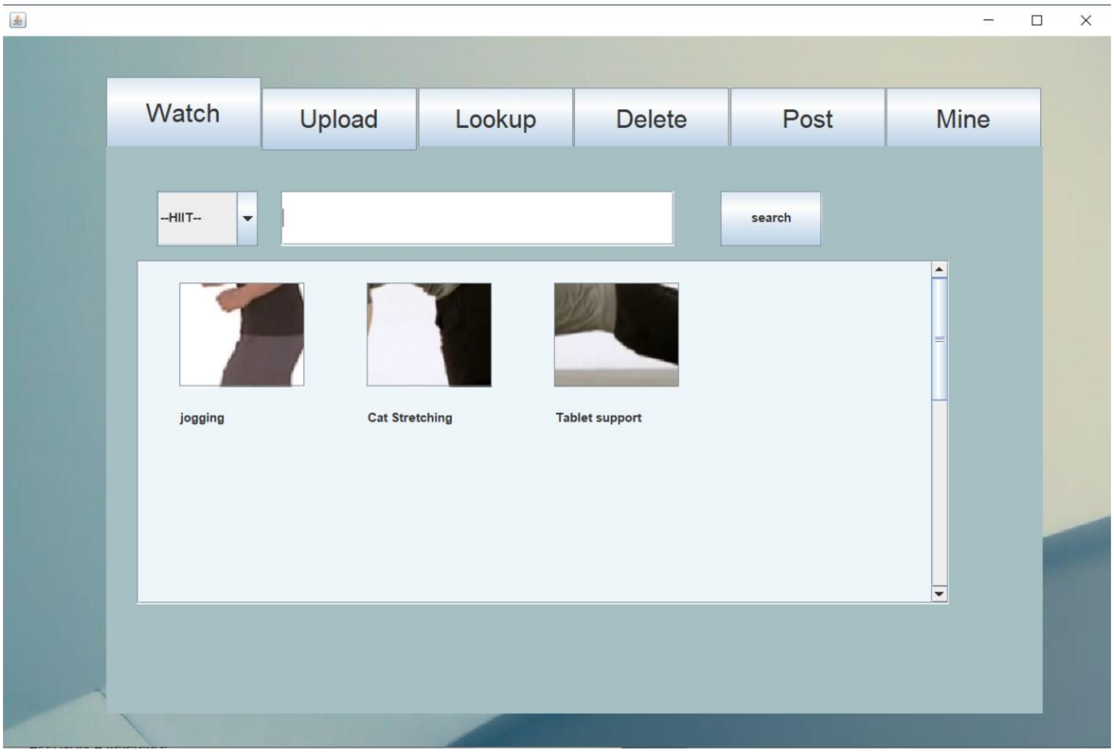
Your userID is 120826 This is used for login in, please remember it!

Administrator Page

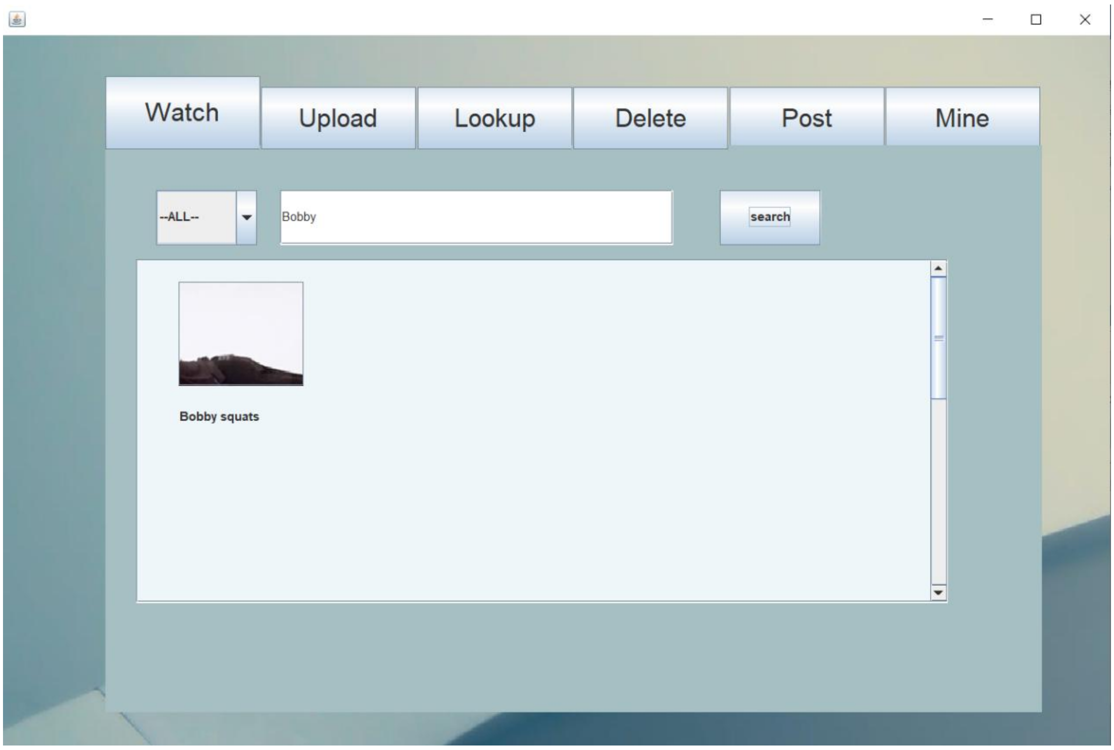
All videos



Certain type



Video Search

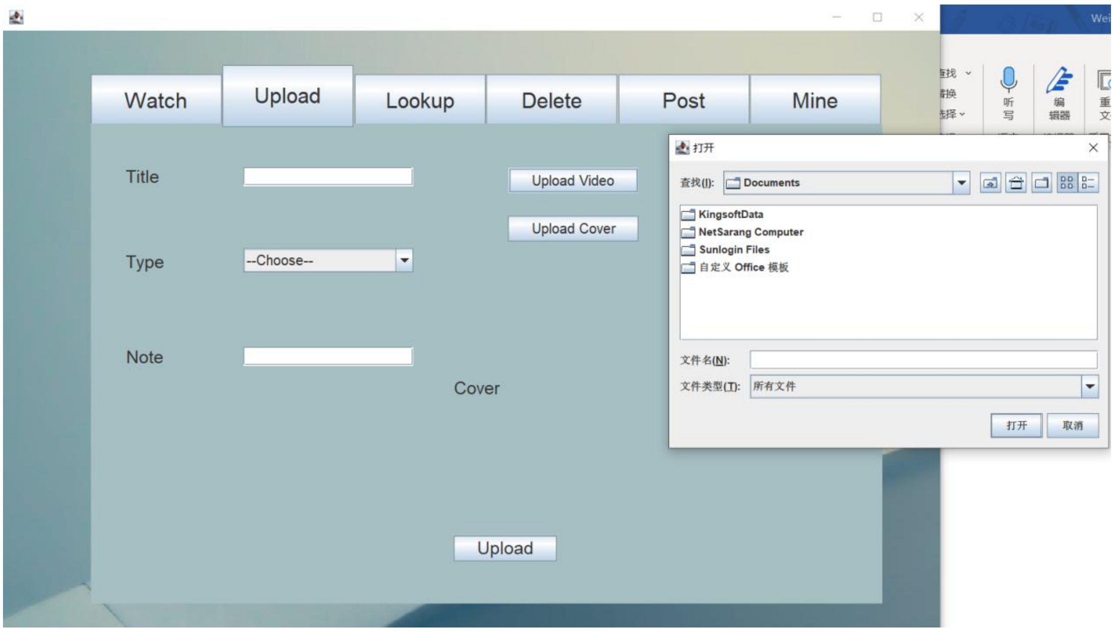


--ALL--

Bobby

Bobby squats

Video upload



Title

Type --Choose--

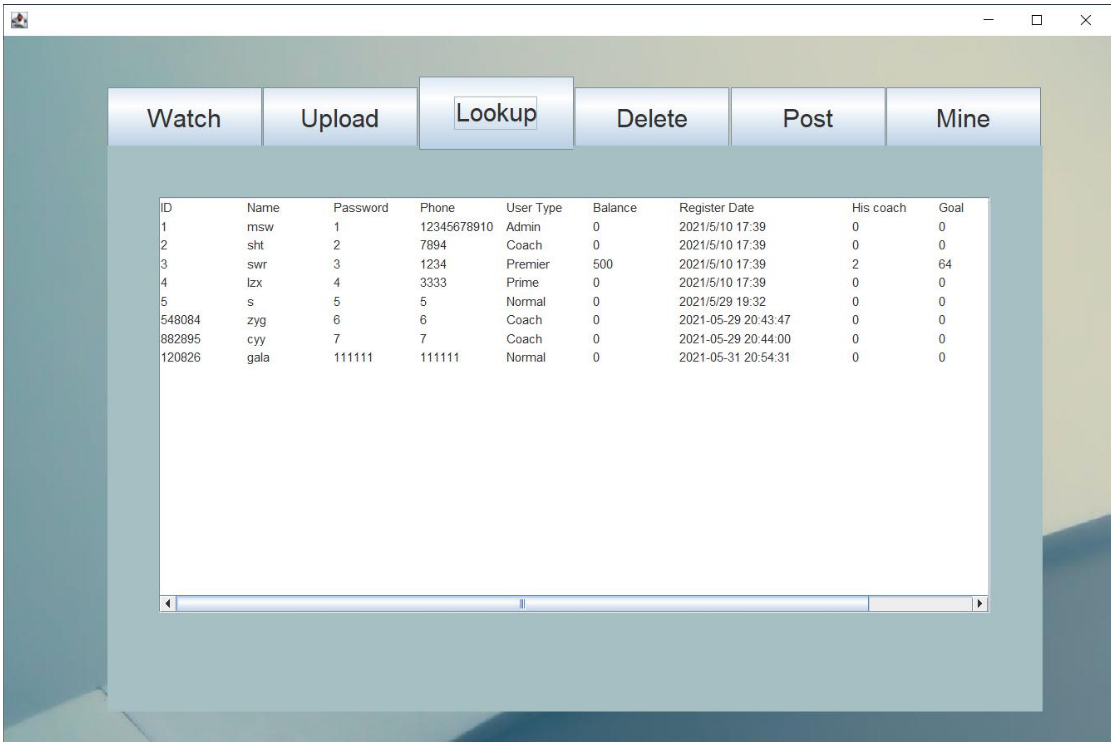
Note

查找(I): Documents

文件名(N):

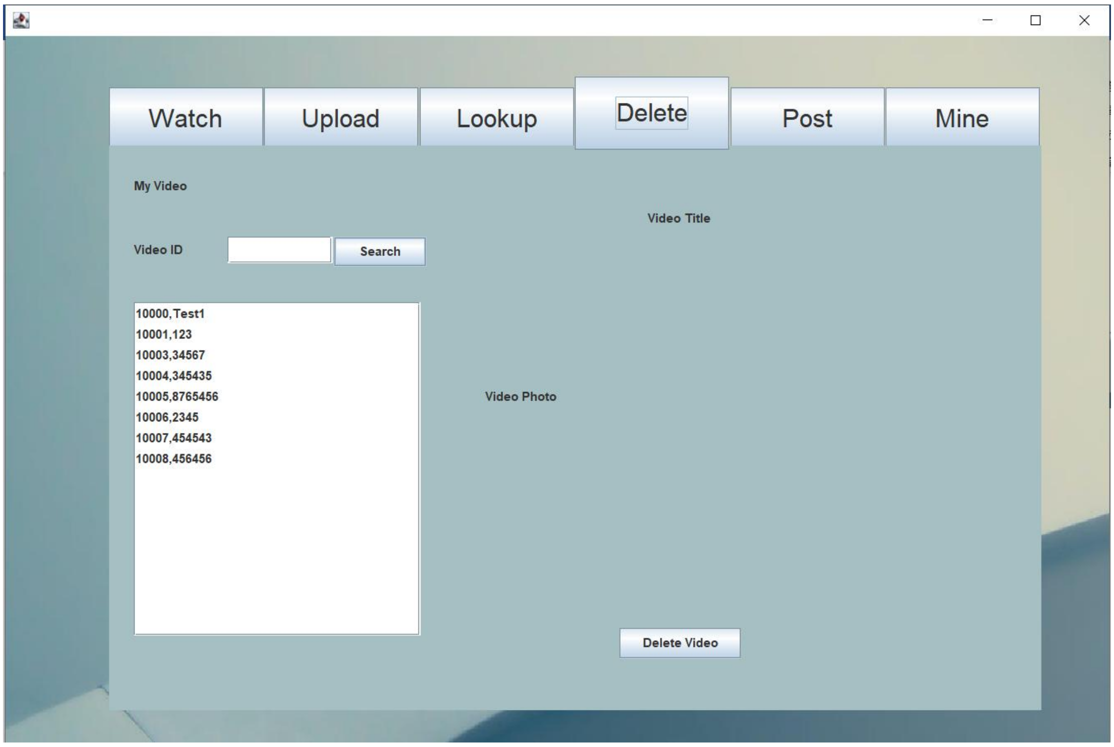
文件类型(T): 所有文件

Account information lookup



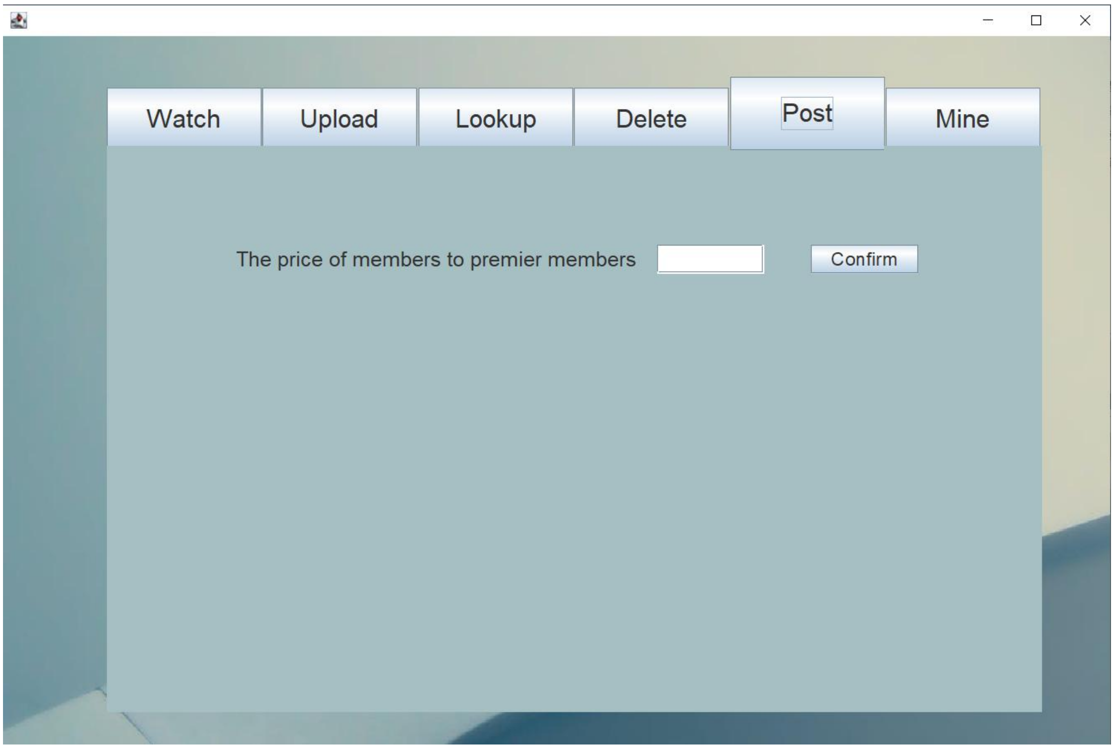
ID	Name	Password	Phone	User Type	Balance	Register Date	His coach	Goal
1	msw	1	12345678910	Admin	0	2021/5/10 17:39	0	0
2	sht	2	7894	Coach	0	2021/5/10 17:39	0	0
3	swr	3	1234	Premier	500	2021/5/10 17:39	2	64
4	lzx	4	3333	Prime	0	2021/5/10 17:39	0	0
5	s	5	5	Normal	0	2021/5/29 19:32	0	0
548084	zyg	6	6	Coach	0	2021-05-29 20:43:47	0	0
882895	cyy	7	7	Coach	0	2021-05-29 20:44:00	0	0
120826	gala	111111	111111	Normal	0	2021-05-31 20:54:31	0	0

Video delete



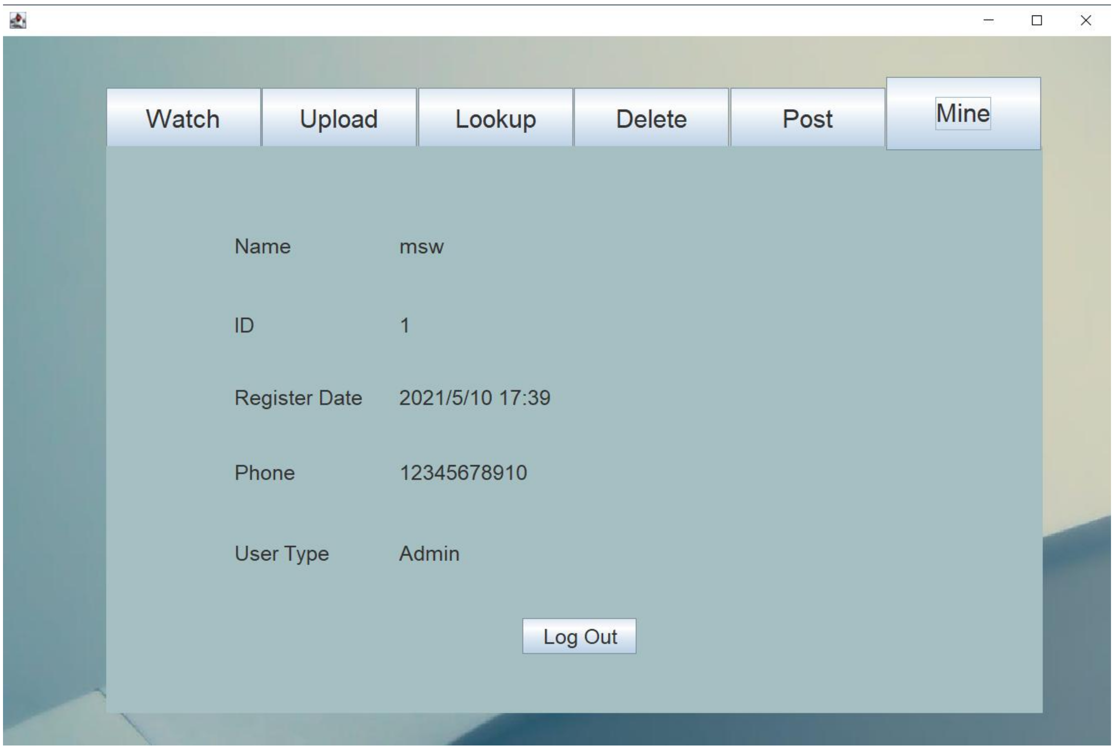
10000,Test1
10001,123
10003,34567
10004,345435
10005,8765456
10006,2345
10007,454543
10008,456456

Price Post



The price of members to premier members

Mine page



Name msw

ID 1

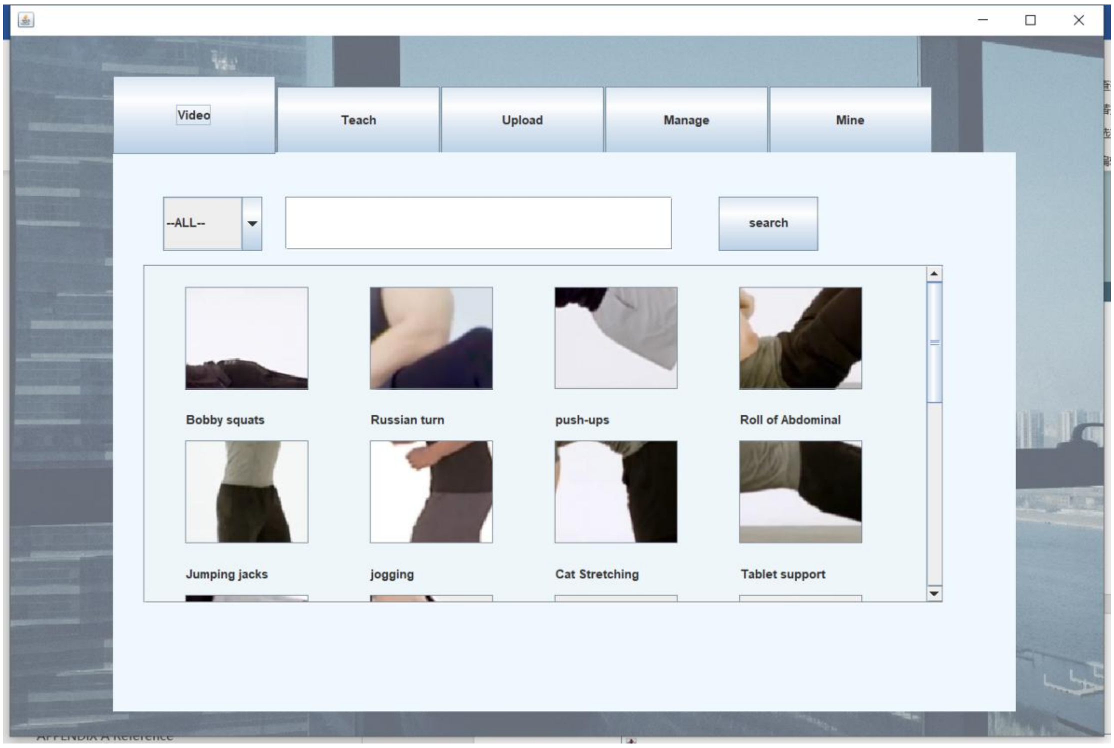
Register Date 2021/5/10 17:39

Phone 12345678910

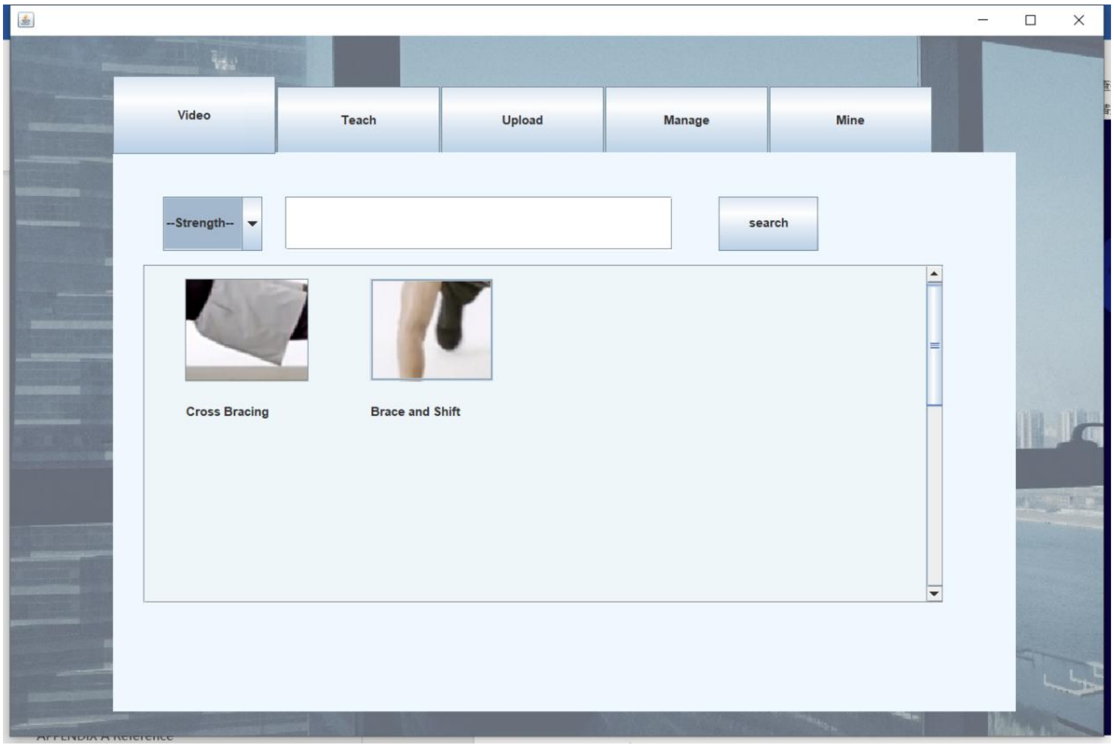
User Type Admin

Coach Page

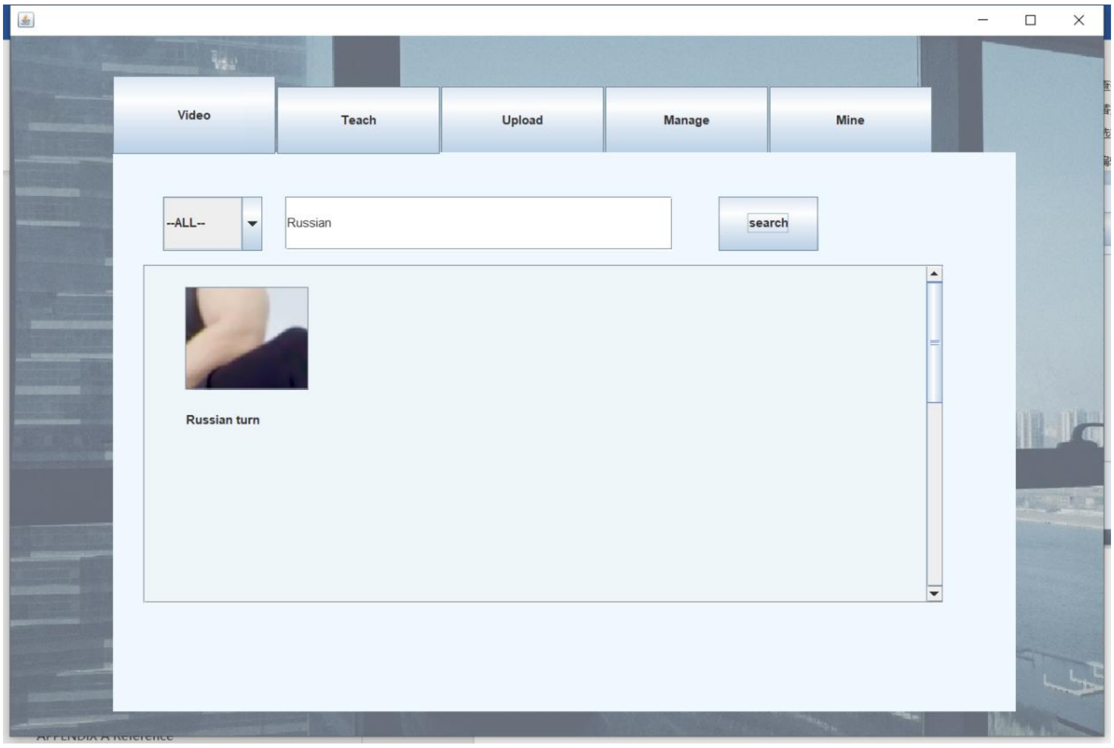
Coach Video:



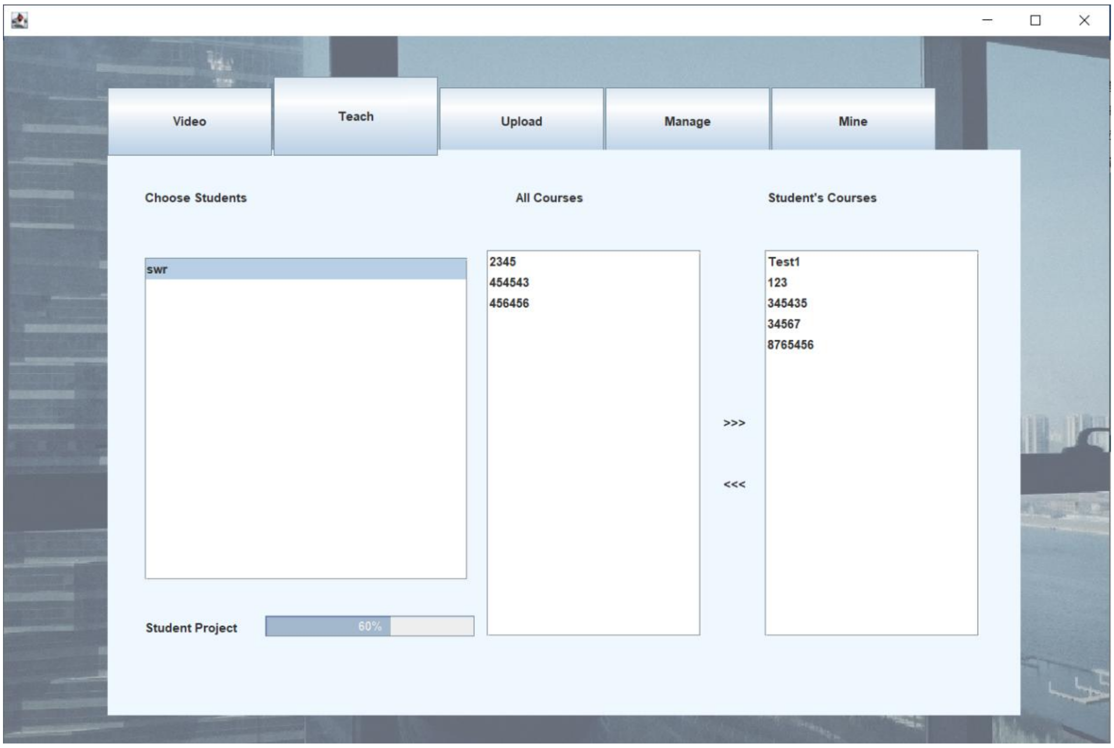
Certain type



Search:



Teach



Choose Students

swr

All Courses

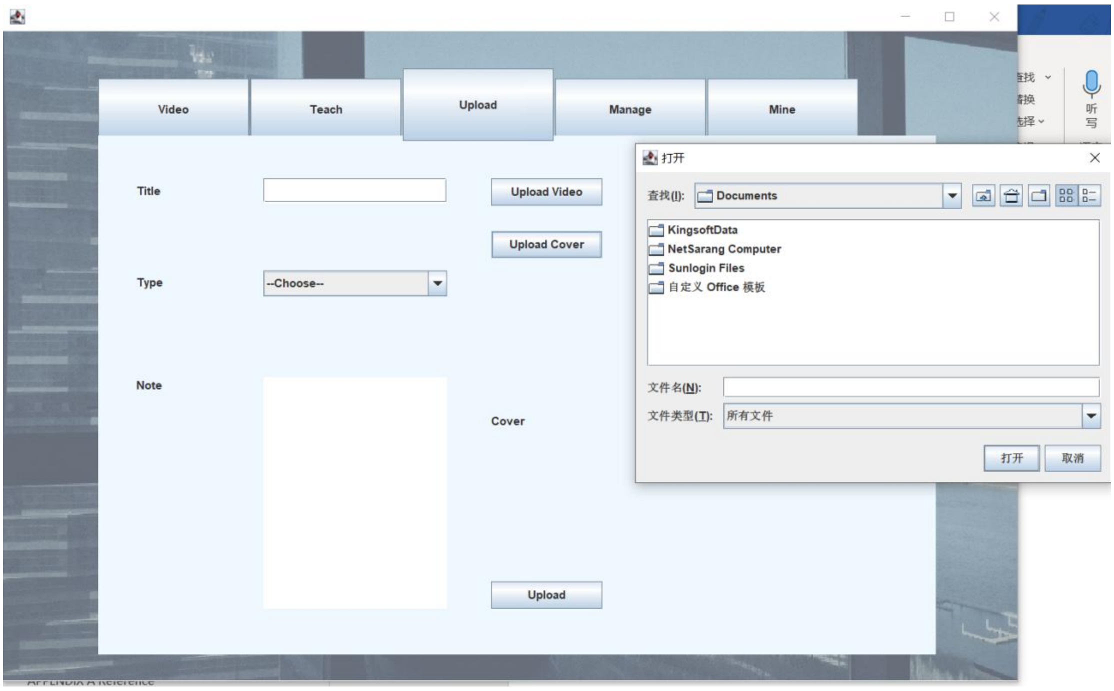
2345
454543
456456

Student's Courses

Test1
123
345435
34567
8765456

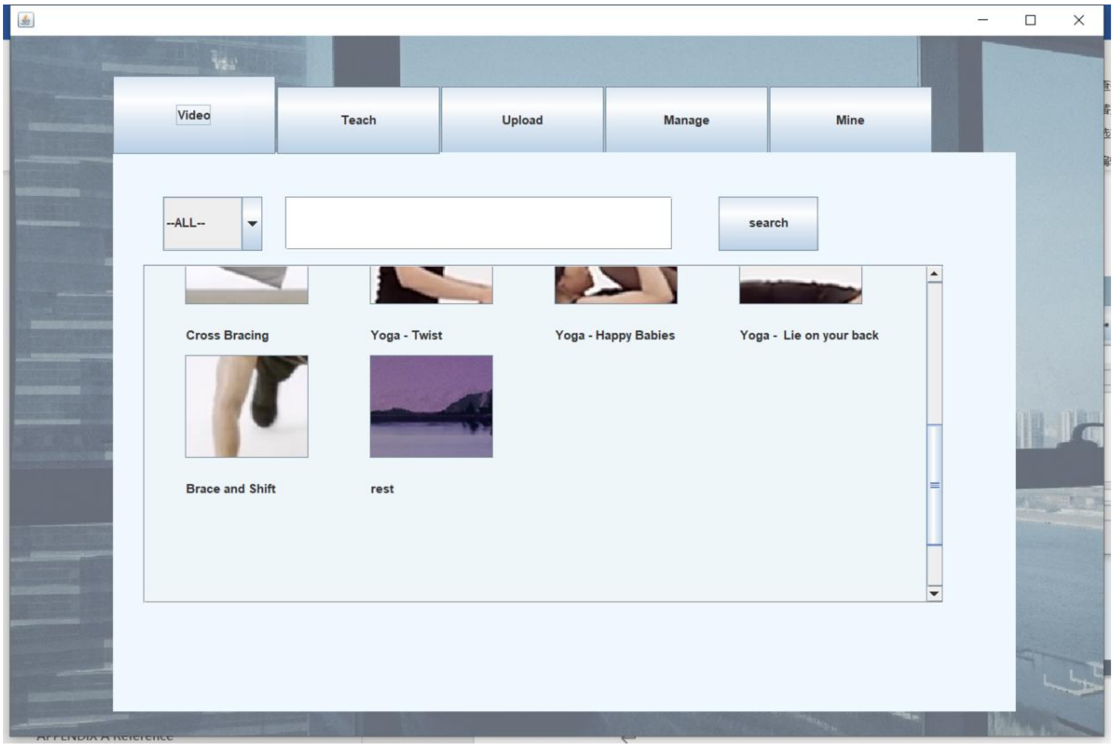
Student Project 60%

Video upload

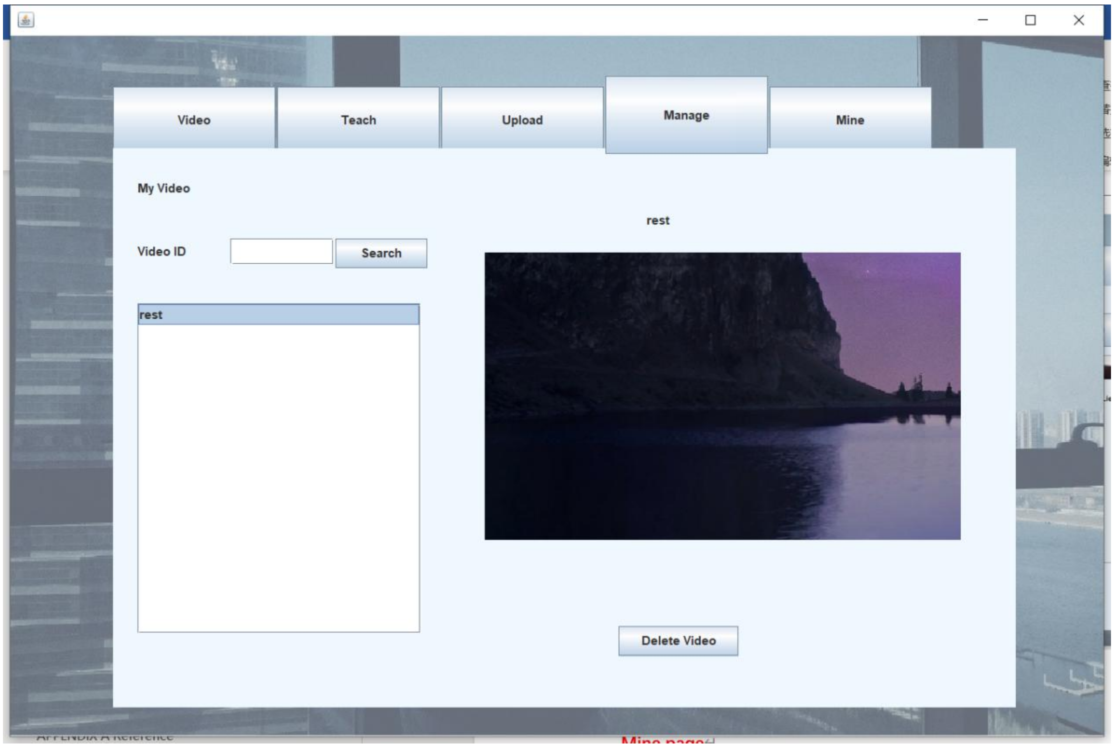


Manage Video:

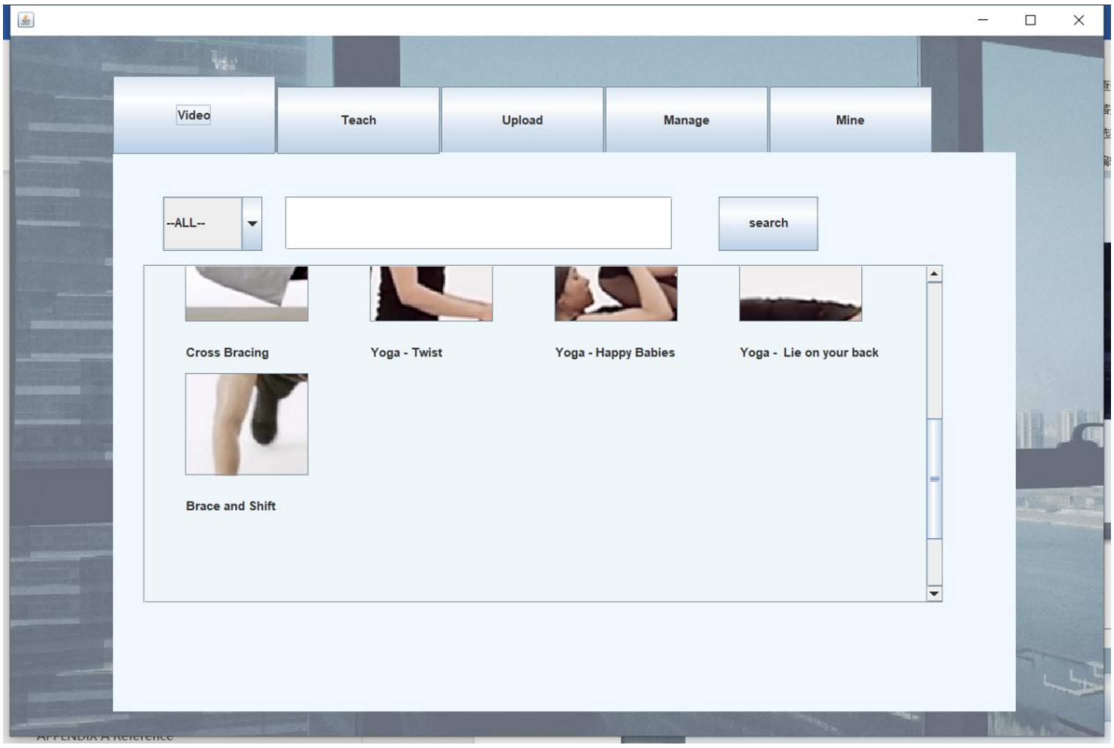
Rest is the video this coach upload



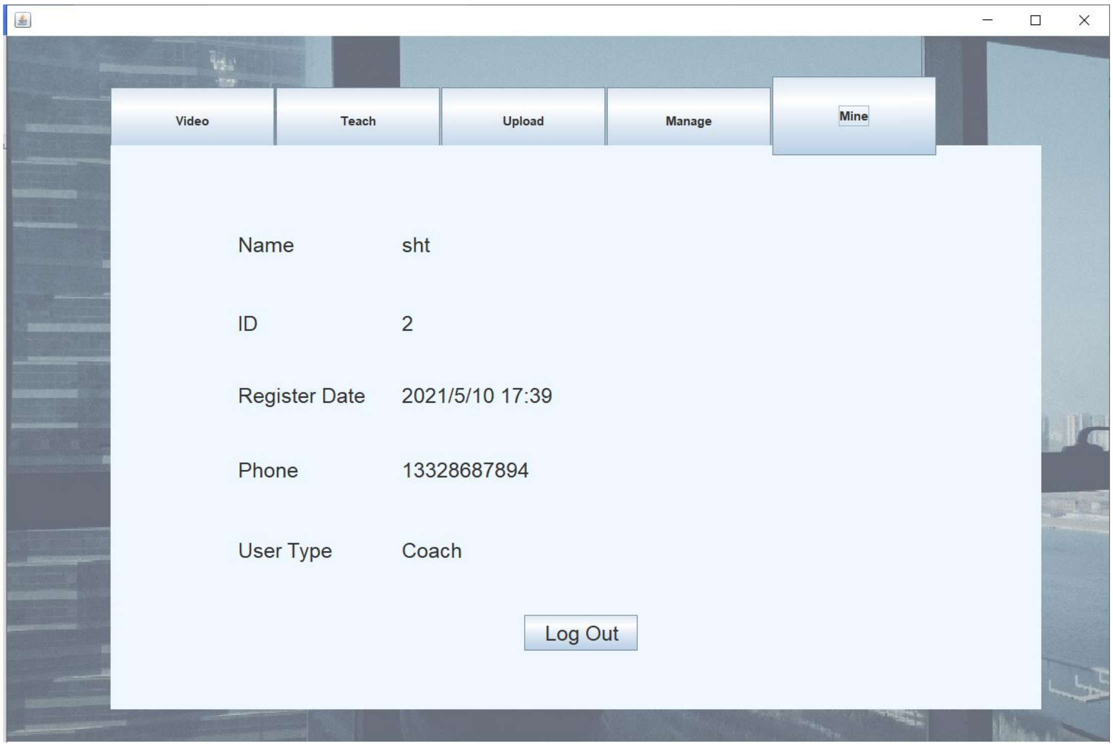
Manage it



Press delete Video



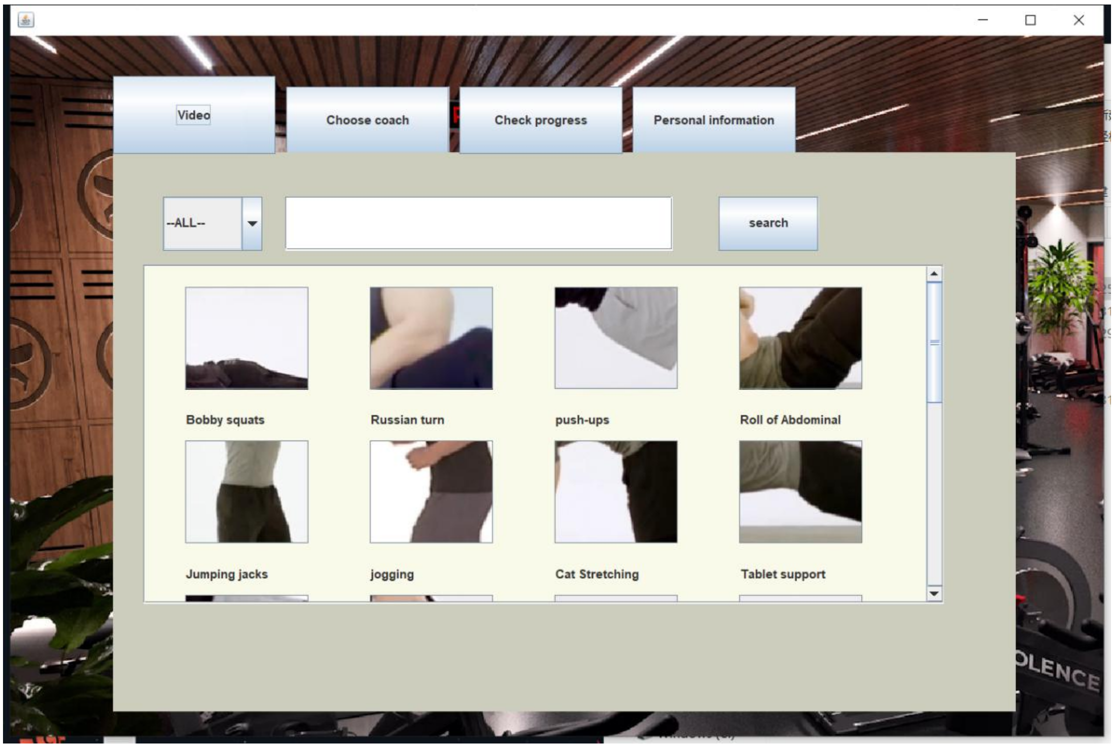
Mine page

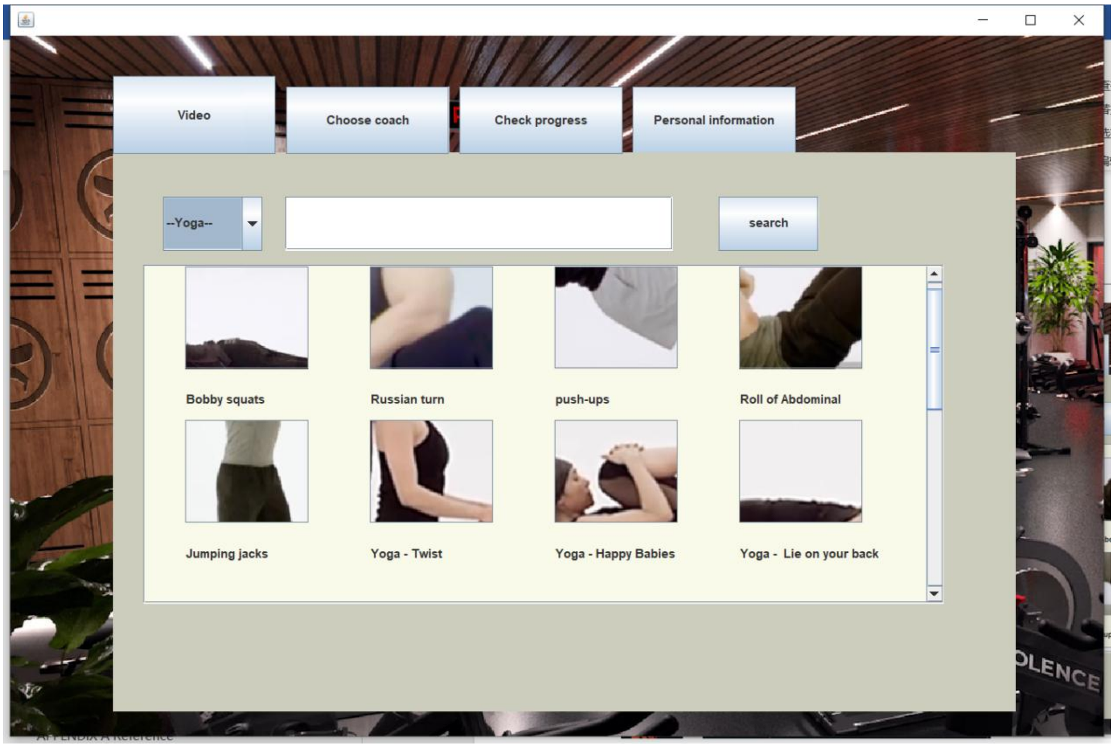


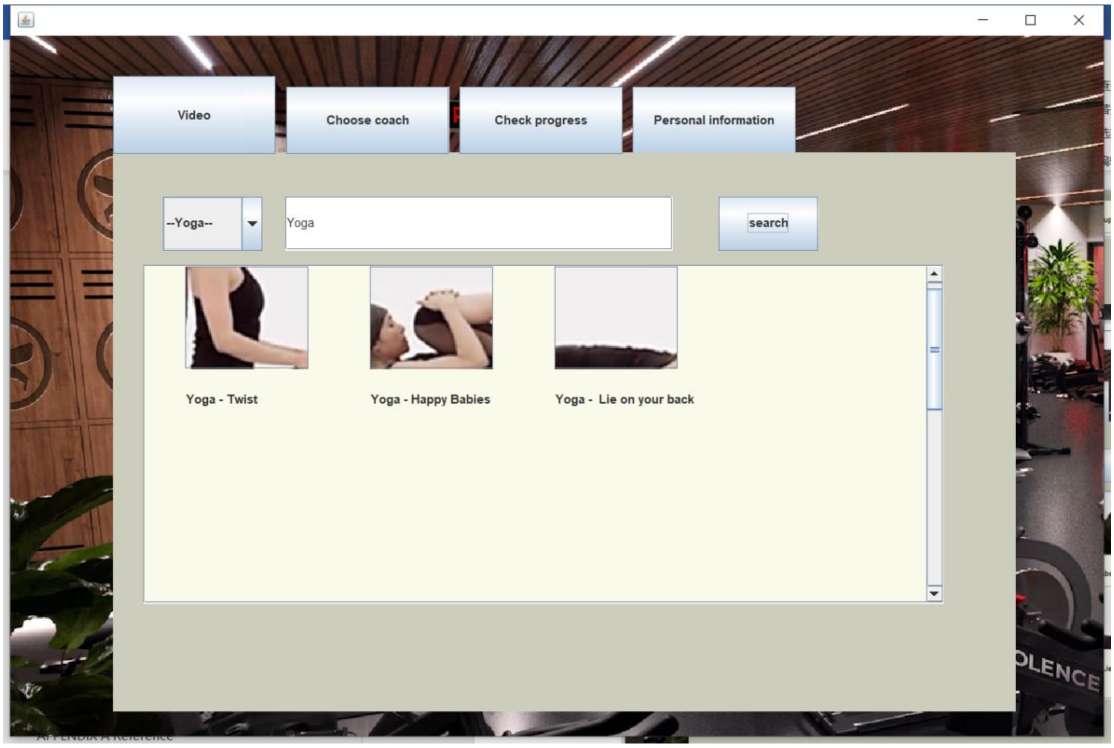
Name	sht
ID	2
Register Date	2021/5/10 17:39
Phone	13328687894
User Type	Coach

Customer Page

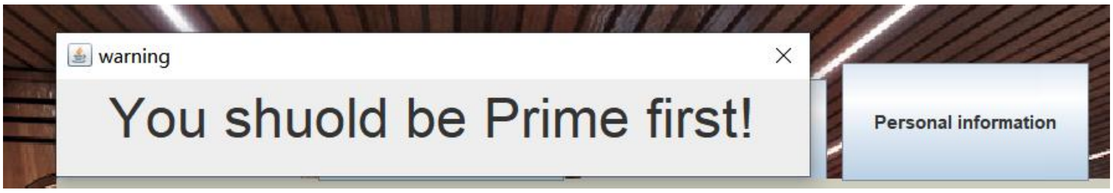
Watch videos





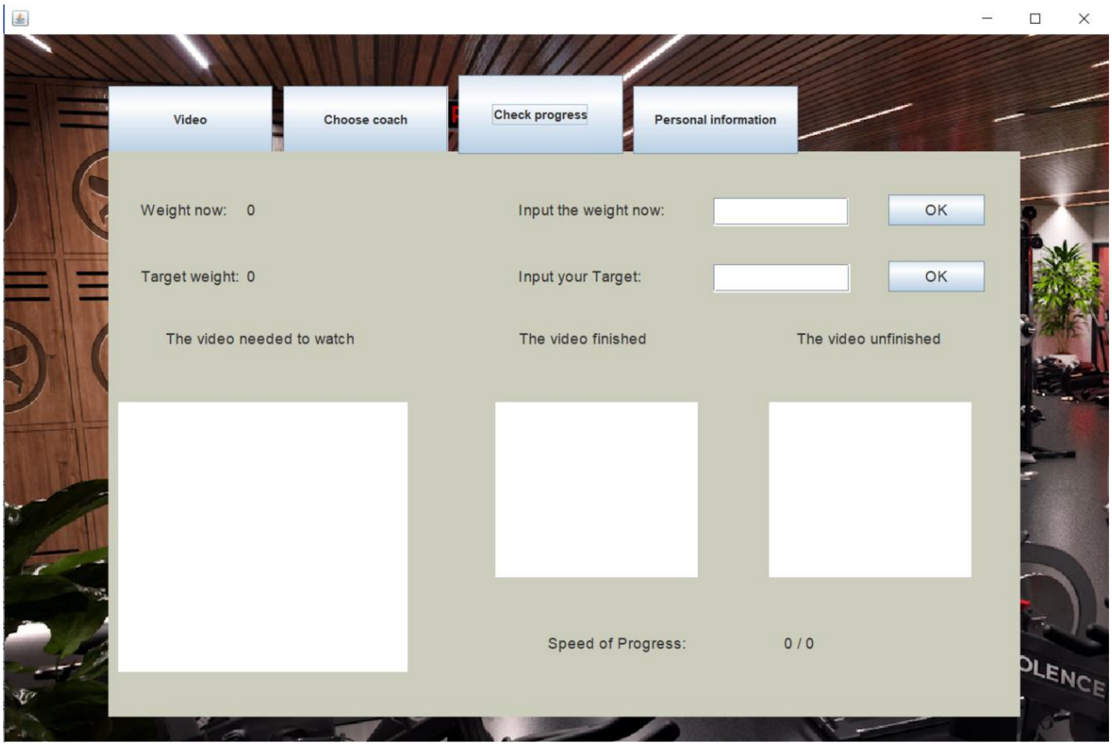


Choose coach



You shuold be Prime first!

Check progress



Weight now: 0

Input the weight now:

Target weight: 0

Input your Target:

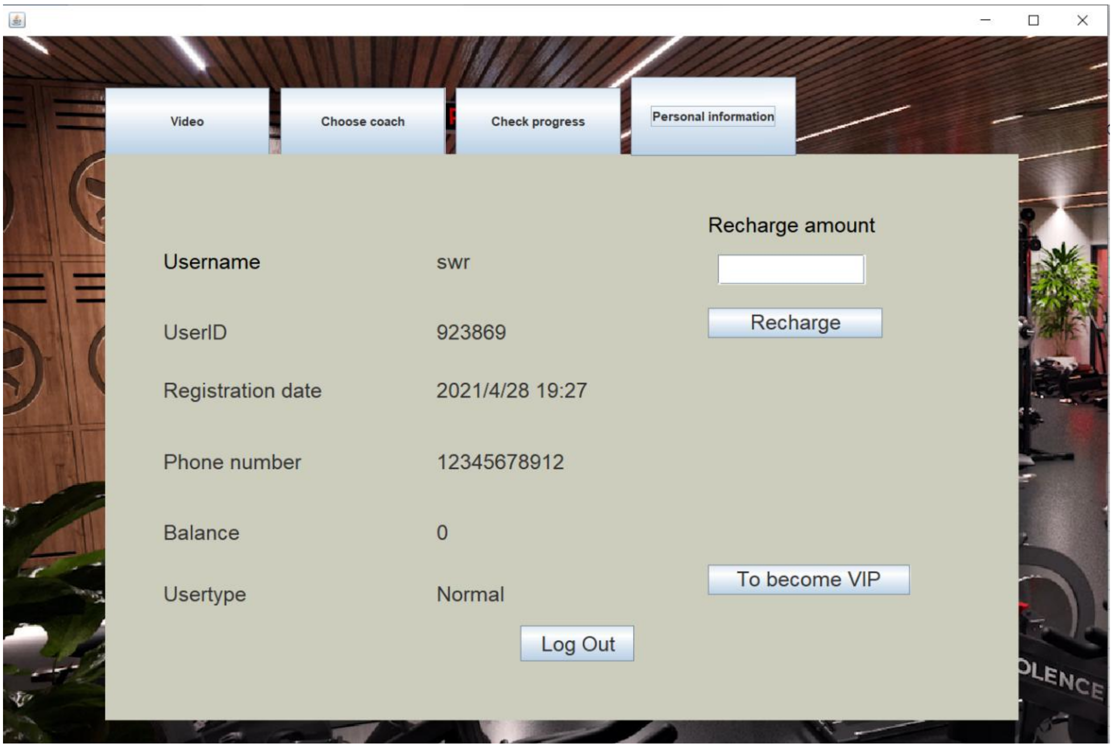
The video needed to watch

The video finished

The video unfinished

Speed of Progress: 0 / 0

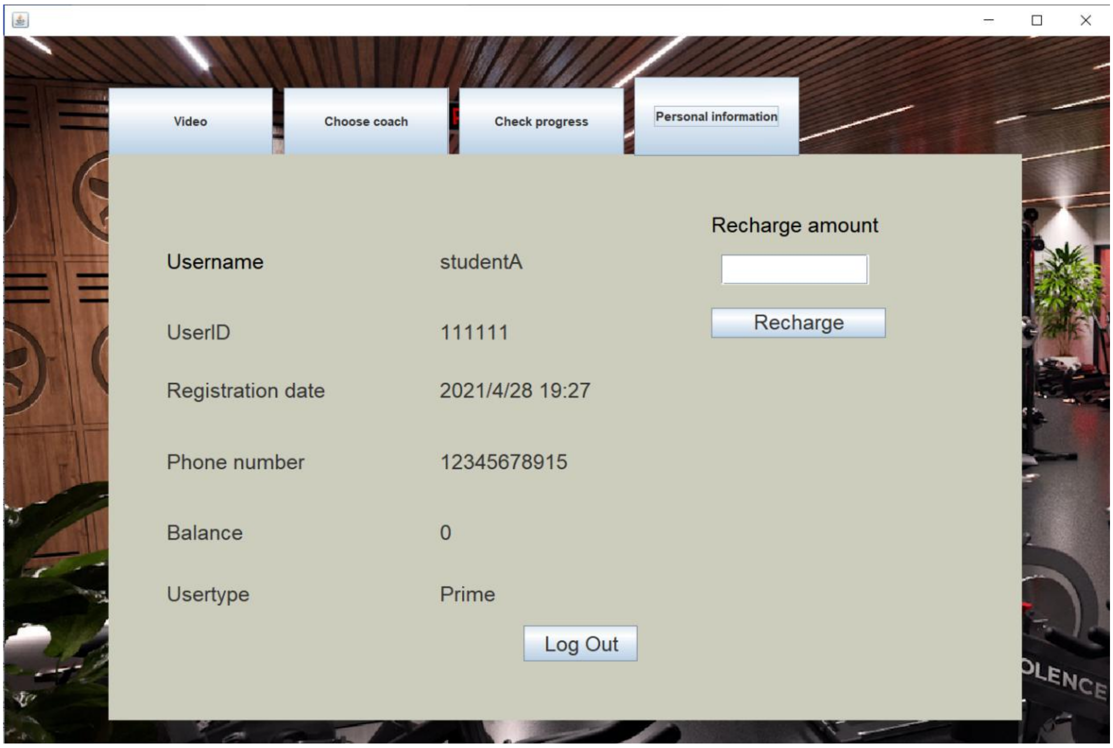
Mine page



Username	swr
UserID	923869
Registration date	2021/4/28 19:27
Phone number	12345678912
Balance	0
Usertype	Normal

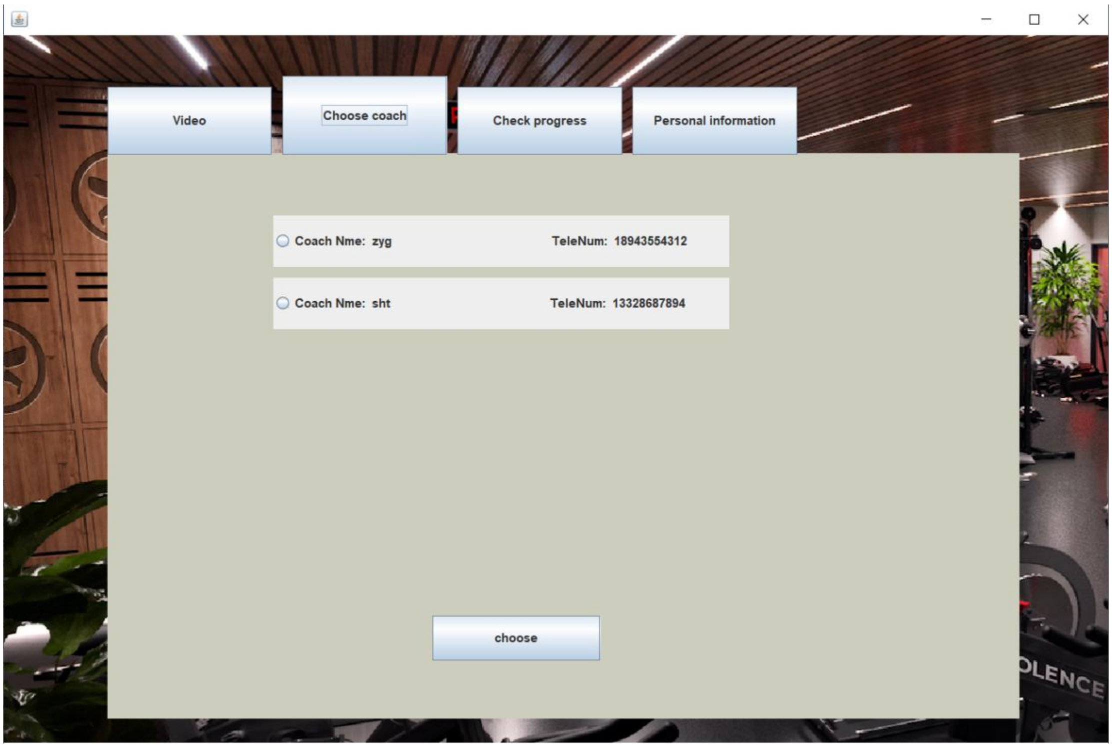
Recharge amount

Prime:



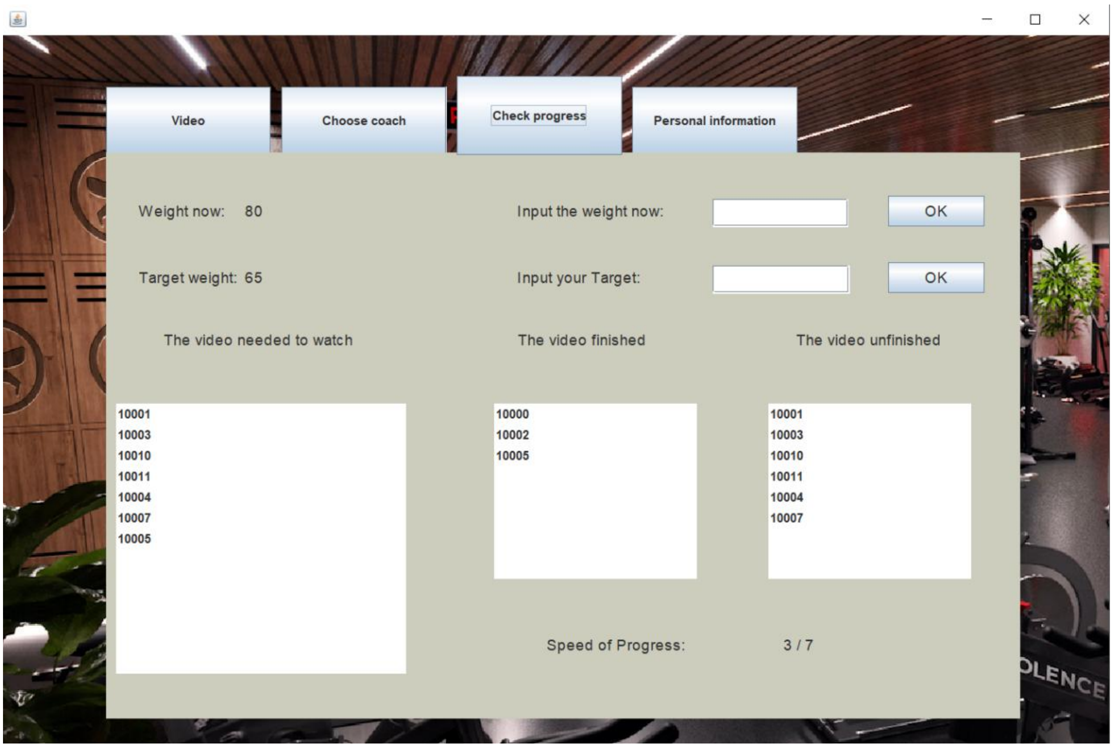
Recharge amount

Username	studentA
UserID	111111
Registration date	2021/4/28 19:27
Phone number	12345678915
Balance	0
Usertype	Prime



○ Coach Nme: zyg TeleNum: 18943554312

○ Coach Nme: sht TeleNum: 13328687894



Weight now: 80

Target weight: 65

Input the weight now:

Input your Target:

The video needed to watch

10001
10003
10010
10011
10004
10007
10005

The video finished

10000
10002
10005

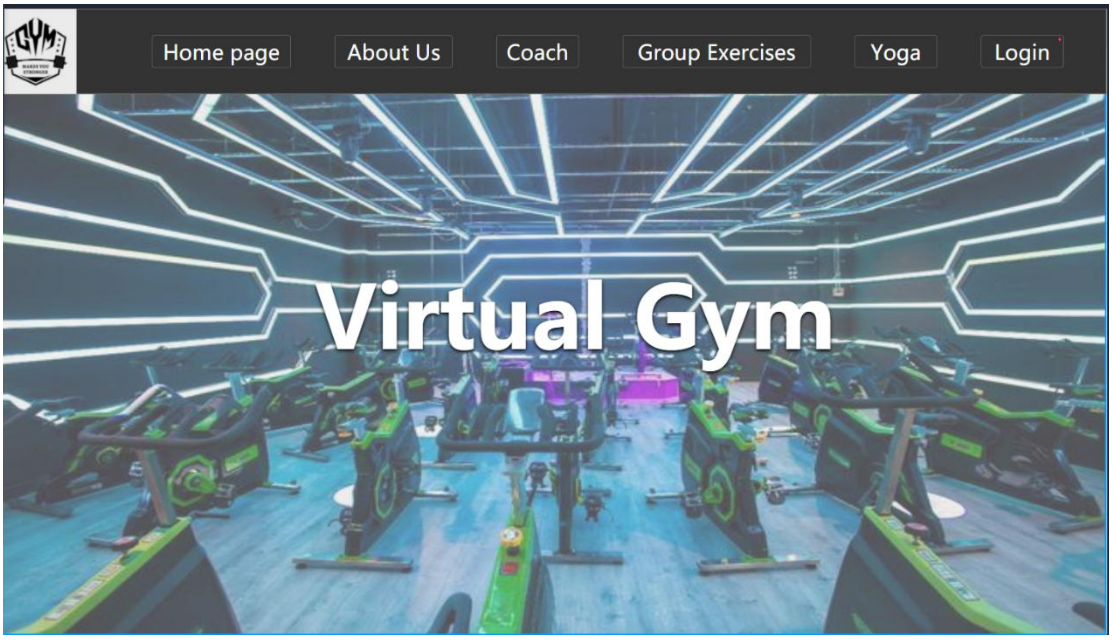
The video unfinished

10001
10003
10010
10011
10004
10007

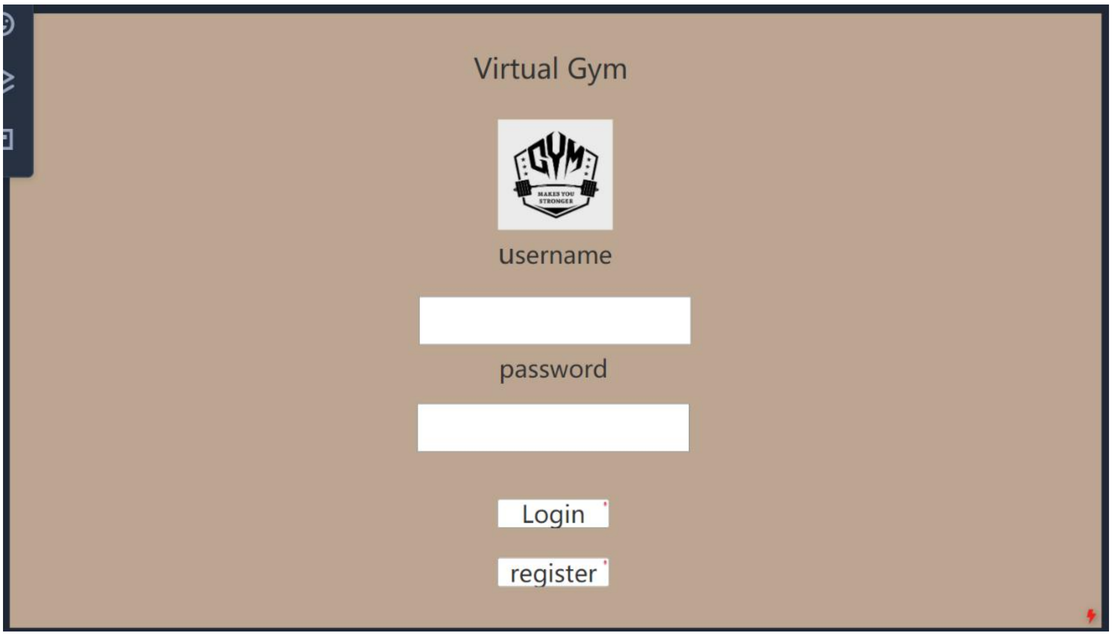
Speed of Progress: 3 / 7

APPENDIX D Prototype

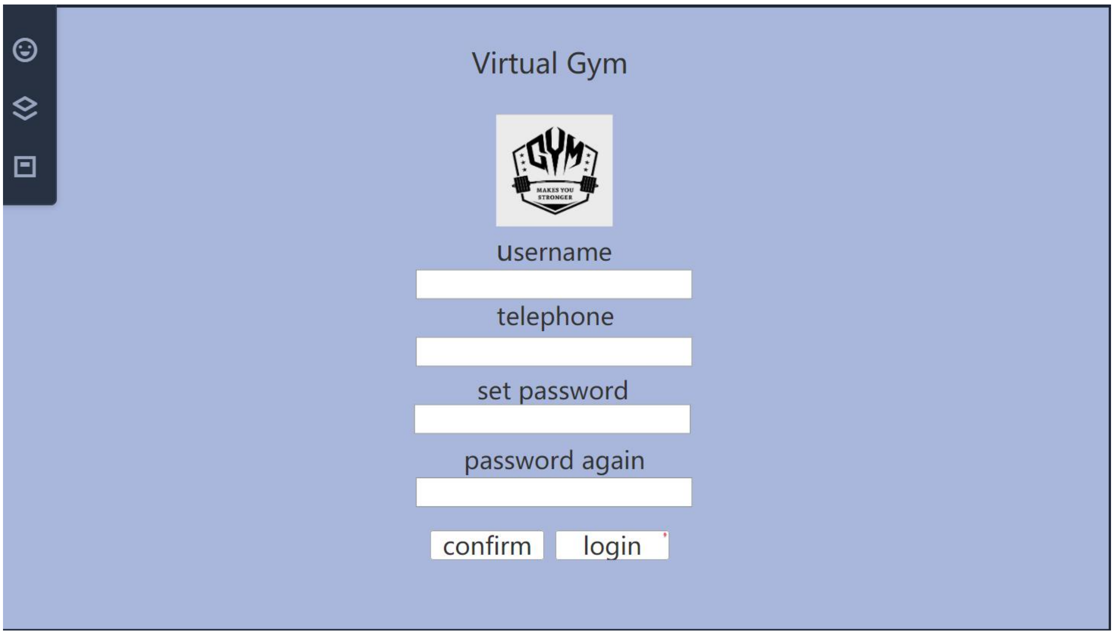
Homepage



Login Page



Register Page



Virtual Gym

username

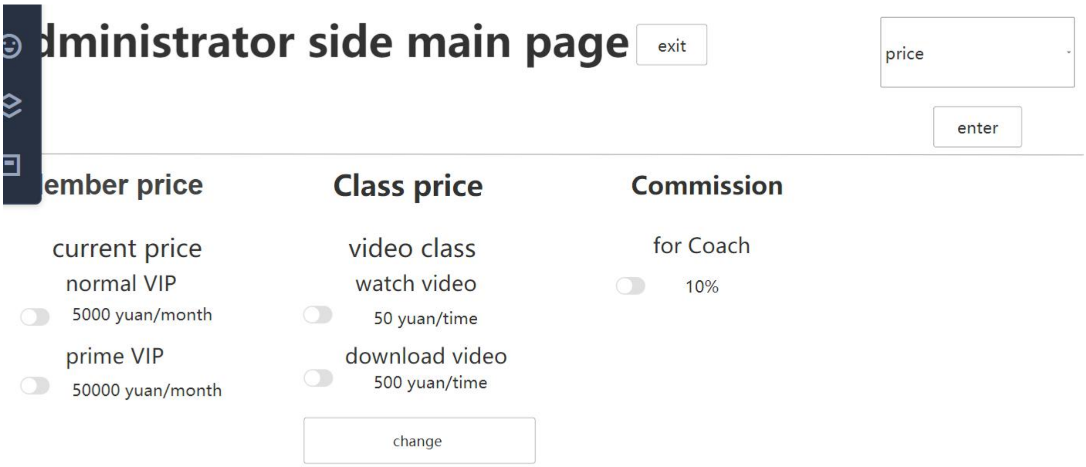
telephone

set password

password again

confirm login

Administrator Page



dministrator side main page

ember price

current price

normal VIP

5000 yuan/month

prime VIP

50000 yuan/month

Class price

video class

watch video

50 yuan/time

download video

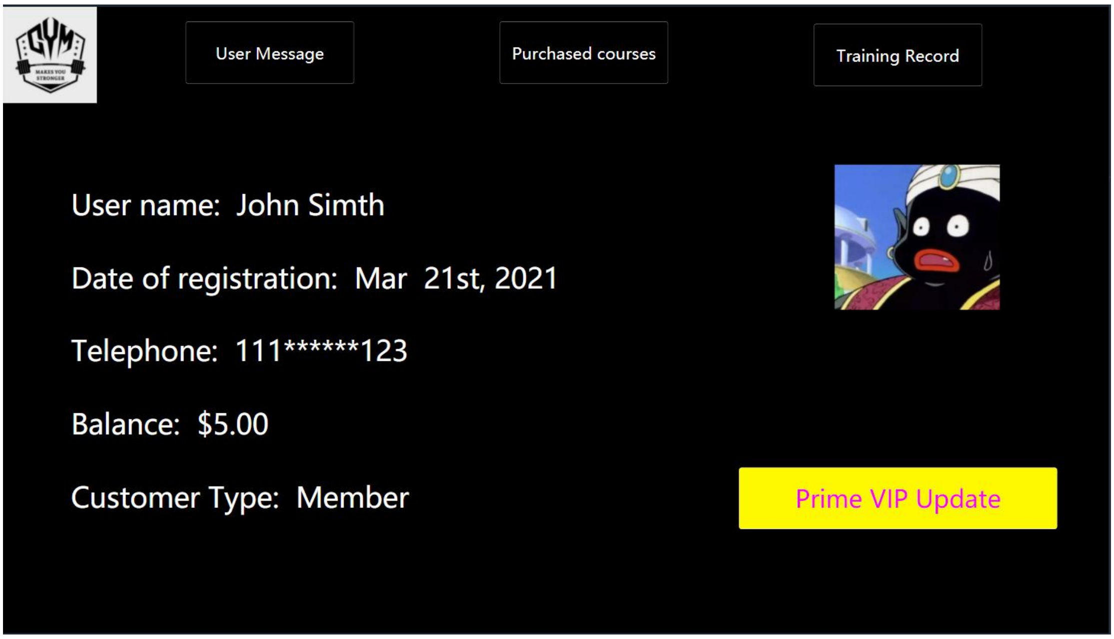
500 yuan/time

Commission

for Coach

10%

User Page



User name: John Simth

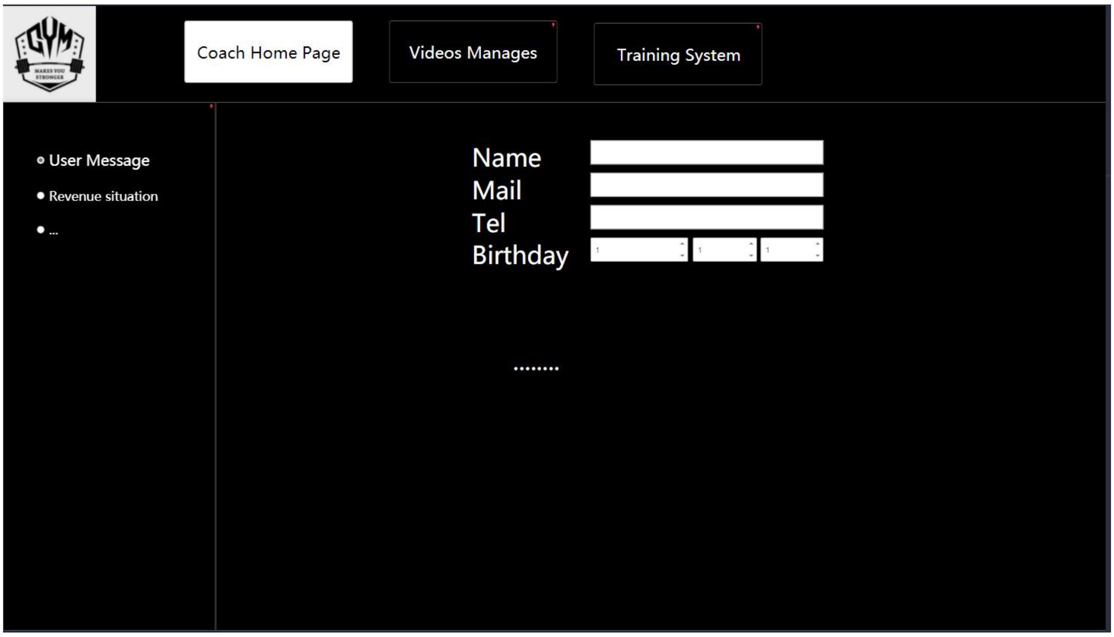
Date of registration: Mar 21st, 2021

Telephone: 111******123

Balance: $5.00

Customer Type: Member

Coach Page



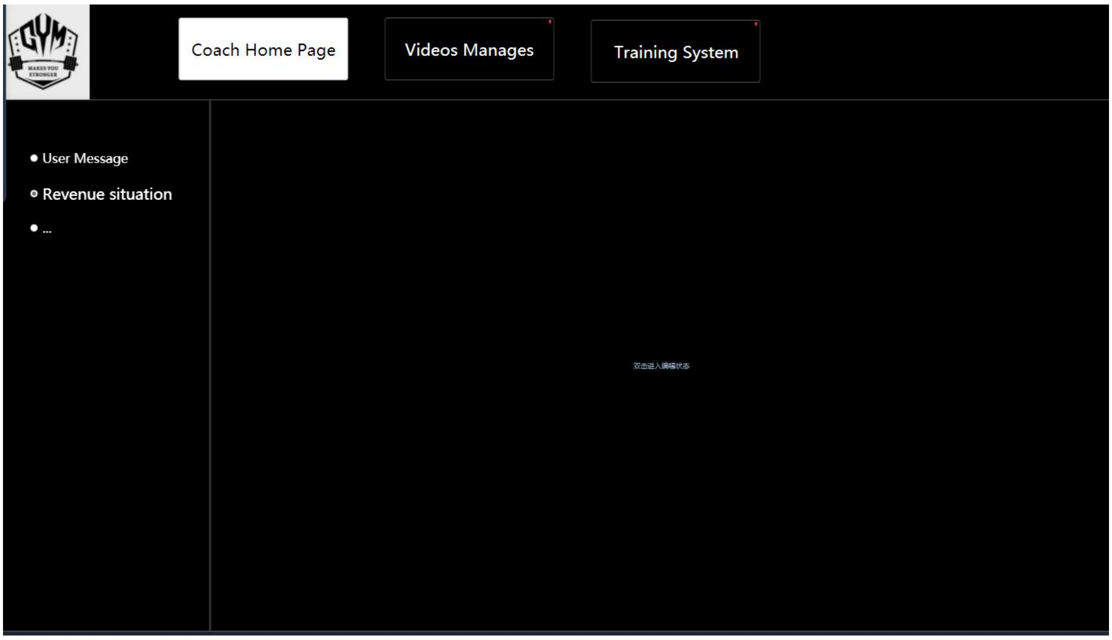
Name

Mail

Tel

Birthday

....


GYM
MAKES YOU STRONGER
Coach Home Page
Videos Manages
Training System
● User Message
○ Revenue situation
● ...
双击进入编辑状态