

SUSTech Fitness

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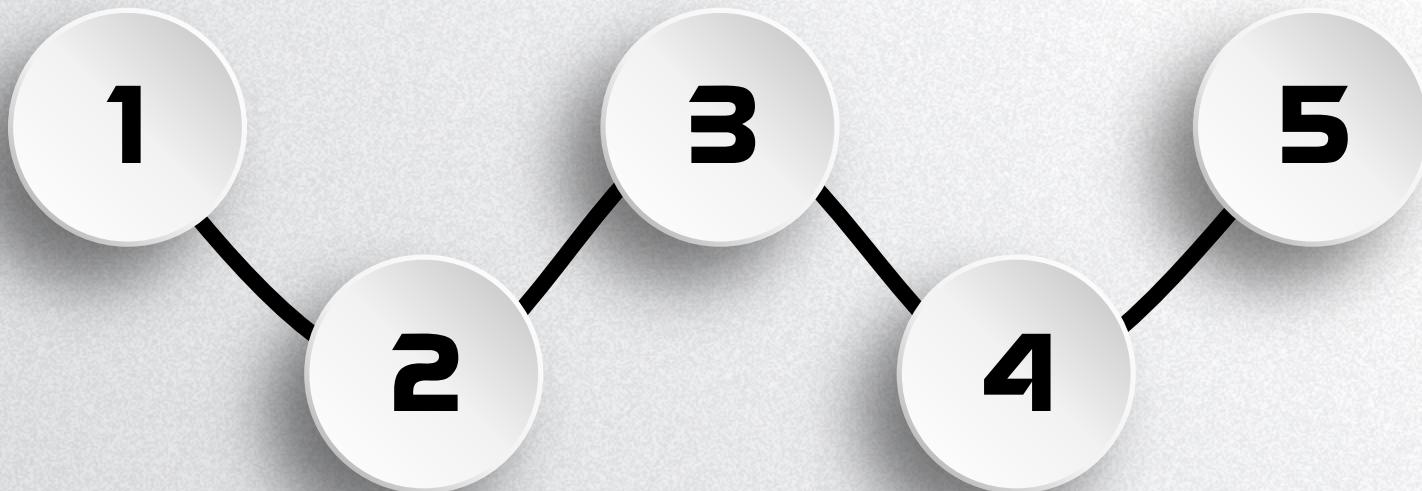


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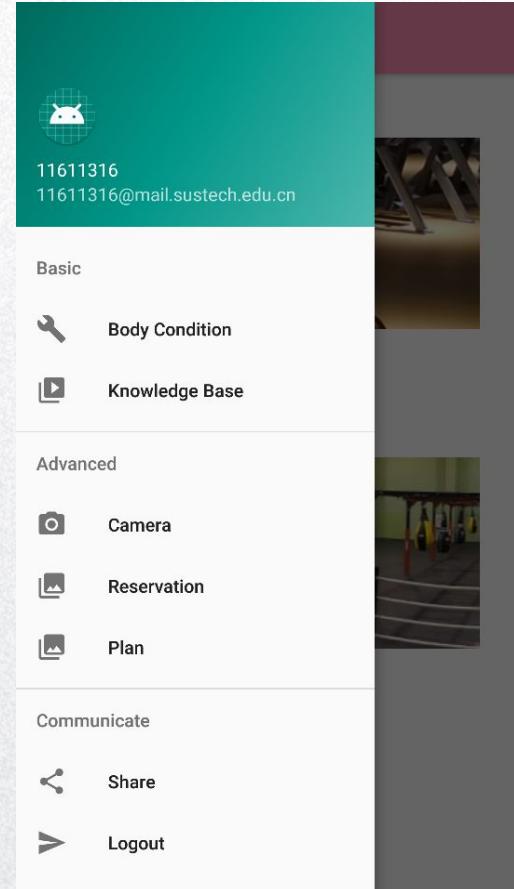
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Introduction

Introduction

A healthy body is the basis for studying and working.

It's important for all the faculty in SUSTech to have some time to relax and build up their bodies. And the reservation system for the new gymnasium is inconvenient. So, we are going to build a fitness application which incorporates the reservation system, workout knowledge, workout plan recommendation and workout posting, etc. The target users are all SUSTech faculty. You can not only reserve the gymnasium but also have fun with this application.



Introduction

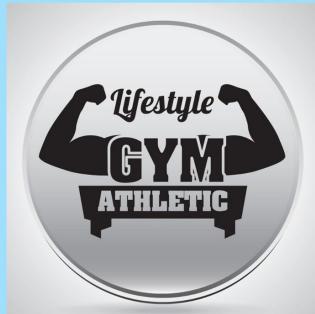
-timeline

Week	Feature
Week 1	Project conception and division of labor
Week 2	User login and register
Week 3	Workout knowledge base.
Week 4	Personal workout plan recommendation.
Week 5	Camera function test
Week 6	Take pictures to record user workout process and progression.
Week 7	User body condition display.
Week 8	User workout sharing includes texts and pictures.
Week 9	Gym reservation system.
Week 10	Gym reservation system.
Week 11	User social activities, including adding friends
Week 12	User social activities, including adding friends
Week 13	Function of select posts to push.
Week 14	Fix bugs and functionality
Week 15	Optimization and testing

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Important features

Important features



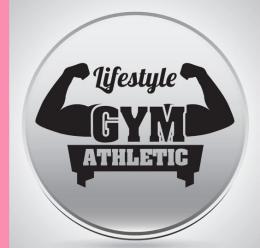
SID (8 digits: 11611316)

Password

LOGIN

[Click here to register](#)

Login page



SID (8 digits: 11611316)

Name

Email

Password

Confirm Password

REGISTER

[Click here to login](#)

register page

Edit Profile

Photo:



>

Username: yao

>

Email: 11611315@mail.si

>

main page

Important features



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Basic

Body Condition

Knowledge Base

Advanced

Camera

Reservation

Plan

Communicate

Logout



main page

Welcome to SUSTech Fitness!

Please input the information!

Female: 0 Male: 1

Height: 175 (130cm, 220cm)

Weight: 65 (30kg, 200kg)

Body fat rate: 15 (3%, 40%)

Muscle gain: 1 Fat loss: 2 Keep he...

SUBMIT

Body Condition

Following is your Body Condition!

Gender: Male

Height: 168cm

Weight: 60kg

Body fat: 12%

Training mode: Muscle gain

EDIT

User helath data page

User helath data page

Important features

Body Condition

Following is your Body Condition!

Gender:
Female: 0 Male: 1

Height:
Height: 175 (130cm, 220cm)

Weight:
Weight: 65 (30kg, 200kg)

Body fat:
Body fat rate: 15 (3%, 40%)

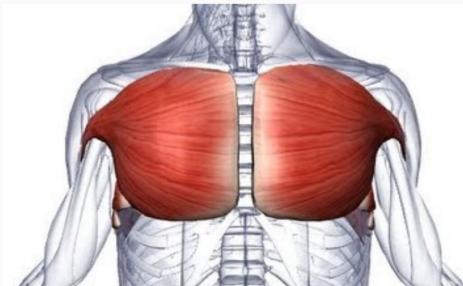
Training mode:
Muscle gain: 1 Fat lo...

CANCEL EDITION

SUBMIT

Knowledge Base

CHEST BACK SHOULDER ARM ABDOMEN



Introduction

The thorax or chest is a part of the anatomy of humans and various other animals located between the neck and the abdomen. The thorax includes the thoracic cavity and the thoracic wall. It contains organs including the heart, lungs, and thymus gland, as well as muscles and various other internal structures.

1. BENCH PRESS

Knowledge Base

CHEST BACK SHOULDER ARM ABDOMEN



Introduction

Back (plural backs) The rear of the body, especially the part between the neck and the end of the spine and opposite the chest and belly.

1. PULL-UP

2. HAMMER-GRIP PULL-UP



Important features

Knowledge Base

CHEST BACK SHOULDER ARM ABDOMEN



Introduction

The human shoulder is made up of three bones: the clavicle (collarbone), the scapula (shoulder blade), and the humerus (upper arm bone) as well as associated muscles, ligaments and tendons.

1. OVERHEAD PRESS

2. PUSH PRESS

3. BARBELL SHRUG



knowledge base

Knowledge Base

BACK SHOULDER ARM ABDOMEN LEG



Introduction

Arm is the part of the upper limb between the glenohumeral joint (shoulder joint) and the elbow joint. In common usage, the arm extends to the hand. It can be divided into the upper arm, which extends from the shoulder to the elbow, the forearm which extends from the elbow to the hand, and the hand. Anatomically the shoulder girdle with bones and corresponding muscles is by definition a part of the arm.

Knowledge Base

BACK SHOULDER ARM ABDOMEN LEG



Introduction

The quadriceps femoris (also called the quadriceps extensor, quadriceps or quads) is a large muscle group that includes the four prevailing muscles on the front of the thigh.

1. DEADLIFT

2. LEG PRESS

knowledge base

Important features

Camera

TAKE A PHOTO

SAVE



camera

Camera

TAKE A PHOTO

SAVE



camera

camera

Important features

Workout Plan

Current Workout Plan

No plan yet!

Please add your plan from the recommended list!

ADD

Workout Plan

Current Workout Plan

No plan yet!

Please add your plan from the recommended list!

CANCEL

Recommended Workout Plan

PLAN1

PLAN2

PLAN3

PLAN4

PLAN5

plan recommendation

Workout Plan

Current Workout Plan

No plan yet!

Please add your plan from the recommended list!

CANCEL

Recommended Workout Plan

Spoto Press - 6 sets x 4 reps
Pause Dumbbell Row - 6 sets x 4reps
Military Press - 1 set x 10Reps
Weighted Pull-up - 1 set x 10reps
Lateral Raises - 3 sets x 8-12reps
Face Pulls - 3 sets x 8-12reps

SET AS CURRENT PLAN

PLAN3

PLAN4

PLAN5

plan recommendation

Important features

Workout Plan

Current Workout Plan

Monday - Heavy Lower Day

Squat - 3 sets x 6 reps
Deadlift - 2 sets x 6reps
Rear Delt Fly - 3 sets x 8-12reps
Tricep Pushdown - 3 sets x 8-12reps

Tuesday - Heavy Upper Day

Bench Press - 3 sets x 6 reps
Dumbbell Row - 3 sets x 6reps
Military Press - 1 set x 6reps

CHANGE

plan recommendation

Reservation



SUSTech Fitness Center



SUSTech Boxing Gym

gym reservation



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Testing techniques

Testing techniques

-52 test in total

Account register

Test id	test scenario	sid	email	account	password	Confirm password	Expect result
0	Register success	New sid	NA	NA	NA	The same as password	Register success
1	Email exist	NA	Email had register before	NA	NA	NA	Hint this email had registered before
2	Wrong confirm password	NA	NA	NA	NA	Different with password	Hint different confirm password
3	Exist sid	Exist sid	NA	NA	NA	The same as password	Hint this sid had registered before
4	Test jump	NA	NA	NA	NA	NA	Jump to login page

Testing techniques

-52 test in total

Login

Test id	test scenario	sid	password	Expect result
0	Open login	NA	NA	Open login page
1	Wrong sid	Sid never register	NA	This sid never register
2	Wrong password	Sid had register before	Wrong password	Wrong password
3	Login success	siddhad register before	Correct password	Login success
4	jump	NA	NA	Jump to register page

Take photo

Test id	test scenario	action	Expect result
0	Take photo	Click enter	Jump to Take photo mode

Testing techniques

-52 test in total

knowledge

Test id	test scenario	action	Expect result
0	Change to knowledge 1	Click knowledge 1	Change to knowledge 1
1	Change to knowledge 2	Click knowledge 2	Change to knowledge 2
2	Change to knowledge 3	Click knowledge 3	Change to knowledge 3
3	Change to knowledge 4	Click knowledge 4	Change to knowledge 4
4	Change to knowledge 5	Click knowledge 5	Change to knowledge 5
5	Change to knowledge 6	Click knowledge 6	Change to knowledge 6

Testing techniques

-52 test in total

Plan			
Test id	test scenario	action	Expect result
0	Open plan page	Open plan page	Open plan page
1	Add plan 1	Click add, plan1, add plan1	See the plan 1 in plan page
2	Add plan 2	Click add, plan2, add plan2	See the plan 2 in plan page
3	Add plan 3	Click add, plan3, add plan3	See the plan 3 in plan page
4	Add plan 4	Click add, plan4, add plan4	See the plan 4 in plan page
5	Add plan 5	Click add, plan5, add plan5	See the plan 5 in plan page
6	Start add plan	Click add	See the plan
7	Give up add plan	Click add and click cancel	Go back to plan page

Testing techniques

-52 test in total

Input Information

Test id	test scenario	gender	Height	Weight	Fat	mode	Expect result
0	No gender	NA	NA	NA	NA	NA	Hint need input gender
1	Invalid gender	Invalid	NA	NA	NA	NA	Hint need valid gender
2	No height	valid	NA	NA	NA	NA	Hint need input Height
3	Invalid gender	Valid	Invalid	NA	NA	NA	Hint need valid height
4	Invalid gender	Valid	Invalid	NA	NA	NA	Hint need valid height
5	No weight	Valid	Valid	NA	NA	NA	Hint need input weight
6	Invalid weight	Valid	Valid	Invalid	NA	NA	Hint need valid weight
7	Invalid weight	Valid	Valid	Invalid	NA	NA	Hint need valid weight
8	No Fat	Valid	Valid	Valid	NA	NA	Hint need input fat
9	Invalid Fat	Valid	Valid	Valid	Invalid	NA	Hint need valid fat
10	Invalid Fat	Valid	Valid	Valid	Invalid	NA	Hint need valid fat
11	No mode	Valid	Valid	Valid	Valid	NA	Hint need input mode
12	Invalid mode	Valid	Valid	Valid	Valid	Invalid	Hint need valid mode

Testing techniques

-52 test in total

Body information

Test id	test scenario	gender	Height	Weight	Fat	mode	Expect result
0	Test page	NA	NA	NA	NA	NA	Open body page
1	No gender	NA	NA	NA	NA	NA	Hint need input gender
2	Invalid gender	Invalid	NA	NA	NA	NA	Hint need valid gender
3	No height	valid	NA	NA	NA	NA	Hint need input Height
4	Invalid gender	Valid	Invalid	NA	NA	NA	Hint need valid height
5	Invalid gender	Valid	Invalid	NA	NA	NA	Hint need valid height
6	No weight	Valid	Valid	NA	NA	NA	Hint need input weight
7	Invalid weight	Valid	Valid	Invalid	NA	NA	Hint need valid weight
8	Invalid weight	Valid	Valid	Invalid	NA	NA	Hint need valid weight
9	No Fat	Valid	Valid	Valid	NA	NA	Hint need input fat
10	Invalid Fat	Valid	Valid	Valid	Invalid	NA	Hint need valid fat
11	Invalid Fat	Valid	Valid	Valid	Invalid	NA	Hint need valid fat
12	No mode	Valid	Valid	Valid	Valid	NA	Hint need input mode
13	Invalid mode	Valid	Valid	Valid	Valid	Invalid	Hint need valid mode

Testing techniques

-checkstyle 测试

The screenshot shows a web browser window with three tabs: "checkstyle.html", "FindBugs Report", and "PMD". The main content area displays a "CheckStyle Audit" report for an Android project named "SUSTechFitness".

Summary

Files	Errors
22	0

Files

Name	Errors
C:\Users\dell\AndroidStudioProjects\SUSTechFitness\app\src\main\java\com\example\sustechfitness\BodyActivity.java	0
C:\Users\dell\AndroidStudioProjects\SUSTechFitness\app\src\main\java\com\example\sustechfitness\CameraActivity.java	0
C:\Users\dell\AndroidStudioProjects\SUSTechFitness\app\src\main\java\com\example\sustechfitness>EditInfoActivity.java	0
C:\Users\dell\AndroidStudioProjects\SUSTechFitness\app\src\main\java\com\example\sustechfitness\InputInfoActivity.java	0
C:\Users\dell\AndroidStudioProjects\SUSTechFitness\app\src\main\java\com\example\sustechfitness\KnowledgeActivity.java	0
C:\Users\dell\AndroidStudioProjects\SUSTechFitness\app\src\main\java\com\example\sustechfitness>LoginActivity.java	0
C:\Users\dell\AndroidStudioProjects\SUSTechFitness\app\src\main\java\com\example\sustechfitness>MainActivity.java	0
C:\Users\dell\AndroidStudioProjects\SUSTechFitness\app\src\main\java\com\example\sustechfitness\PlanActivity.java	0
C:\Users\dell\AndroidStudioProjects\SUSTechFitness\app\src\main\java\com\example\sustechfitness\RegisterActivity.java	0
C:\Users\dell\AndroidStudioProjects\SUSTechFitness\app\src\main\java\com\example\sustechfitness\ReservationActivity.java	0
C:\Users\dell\AndroidStudioProjects\SUSTechFitness\app\src\main\java\com\example\sustechfitness\ReservationMain.java	0
C:\Users\dell\AndroidStudioProjects\SUSTechFitness\app\src\main\java\com\example\sustechfitness\TabAbdomen.java	0
C:\Users\dell\AndroidStudioProjects\SUSTechFitness\app\src\main\java\com\example\sustechfitness\TabAdapter.java	0
C:\Users\dell\AndroidStudioProjects\SUSTechFitness\app\src\main\java\com\example\sustechfitness\TabArm.java	0
C:\Users\dell\AndroidStudioProjects\SUSTechFitness\app\src\main\java\com\example\sustechfitness\TabBack.java	0
C:\Users\dell\AndroidStudioProjects\SUSTechFitness\app\src\main\java\com\example\sustechfitness\TabChest.java	0
C:\Users\dell\AndroidStudioProjects\SUSTechFitness\app\src\main\java\com\example\sustechfitness\TabLeg.java	0
C:\Users\dell\AndroidStudioProjects\SUSTechFitness\app\src\main\java\com\example\sustechfitness\TabShoulder.java	0
C:\Users\dell\AndroidStudioProjects\SUSTechFitness\app\src\test\java\com\example\sustechfitness\InputInfoActivityTest.java	0
C:\Users\dell\AndroidStudioProjects\SUSTechFitness\app\src\test\java\com\example\sustechfitness>LoginActivityTest.java	0
C:\Users\dell\AndroidStudioProjects\SUSTechFitness\app\src\test\java\com\example\sustechfitness\RegisterActivityTest.java	0

Testing techniques

-pmd 测试

Testing techniques

-findbugs测试

The screenshot shows a web browser window with three tabs open: "checkstyle.html", "FindBugs Report", and "PMD". The "FindBugs Report" tab is active, displaying a report for a project named "SUSTechFitness".

Project Information

Project: SUSTechFitness

FindBugs version: 3.0.1

Code analyzed:

- C:\Users\dell\AndroidStudioProjects\SUSTechFitness\app\build\intermediates\javac

Metrics

14044 lines of code analyzed, in 401 classes, in 34 packages.

Metric	Total	Density*
High Priority Warnings	0	0.00
Medium Priority Warnings	0	0.00
Total Warnings	0	0.00

(* Defects per Thousand lines of non-commenting source statements)

Contents

- [Details](#)

Testing techniques

-JUnit 测试

The screenshot shows the Android Studio interface with the project 'SUSTechFitness' open. The code editor displays `CameraActivity.java` with some test-related code. The 'Run' tool window shows the test results for `sustechfitness in app`. The results indicate 33 tests passed out of 33, with a total execution time of 93 ms. The tests are categorized under `<default package>`, `ReservationActivityTest`, `InputInfoActivityTest`, `RegisterActivityTest`, and `LoginActivityTest`. The event log on the right side of the screen provides a detailed timeline of the build process, starting with Gradle sync and ending with test execution.

File Edit View Navigate Code Analyze Refactor Build Run Tools VCS Window Help

SUSTechFitness [C:\Users\dell\AndroidStudioProjects\SUSTechFitness] - ...app\src\main\java\com\example\sustechfitness\CameraActivity.java [app] - Android Studio

Project quality.gradle app src test java com example sustechfitness CameraActivity.java

private static String toastInfo = " ";
private static final int IMAGE_CAPTURE_CODE = 1;

@Override
protected void onCreate(Bundle savedInstanceState)
{...}
@Override
protected void onActivityResult(int requestCode, int resultCode, Intent data)
{...}

Run: sustechfitness in app

Tests passed: 33 of 33 tests – 93 ms

<default package> 93 ms

ReservationActivityTest 66 ms

getInfoToastGenerateTest 66 ms

getInfoToastGenerateTest2 0 ms

getInfoToastGenerateTest3 0 ms

getInfoToastGenerateTest4 0 ms

reserveToastGenerateTest1 0 ms

reserveToastGenerateTest2 0 ms

reserveToastGenerateTest3 0 ms

reserveToastGenerateTest4 0 ms

InputInfoActivityTest 11 ms

jumpToRegisterPageTest1 11 ms

jumpToRegisterPageTest2 0 ms

RegisterActivityTest 10 ms

setToastInfoTest1 1 ms

setToastInfoTest2 0 ms

getToastInfoTest1 0 ms

getToastInfoTest2 0 ms

jumpToLoginPageTest1 9 ms

jumpToLoginPageTest2 0 ms

registerToastGenerateTest1 0 ms

registerToastGenerateTest2 0 ms

registerToastGenerateTest3 0 ms

registerToastGenerateTest4 0 ms

LoginActivityTest 6 ms

Event Log

21:01 Gradle sync started
21:01 Project setup started
21:01 Gradle sync finished in 1 s 5 ms
21:01 Syncing only active variant
You can disable this experimental feature from
File → Settings → Experimental → Gradle → Only sync the active variant
21:01 Executing tasks: [findbugs]
21:01 Gradle build finished in 1 s 181 ms
21:10 Executing tasks: [pmd]
21:11 Gradle build finished in 3 s 26 ms
21:11 Executing tasks: [pmd]
21:11 Gradle build finished in 3 s 55 ms
21:12 Executing tasks: [:app:generateDebugSources, :app:compileDebugSou
21:12 Gradle build finished in 851 ms
21:12 Tests passed: 33

4: Run 6: Logcat 5: TODO 7: Debug Terminal Build

Tests passed: 33 (today 21:12)

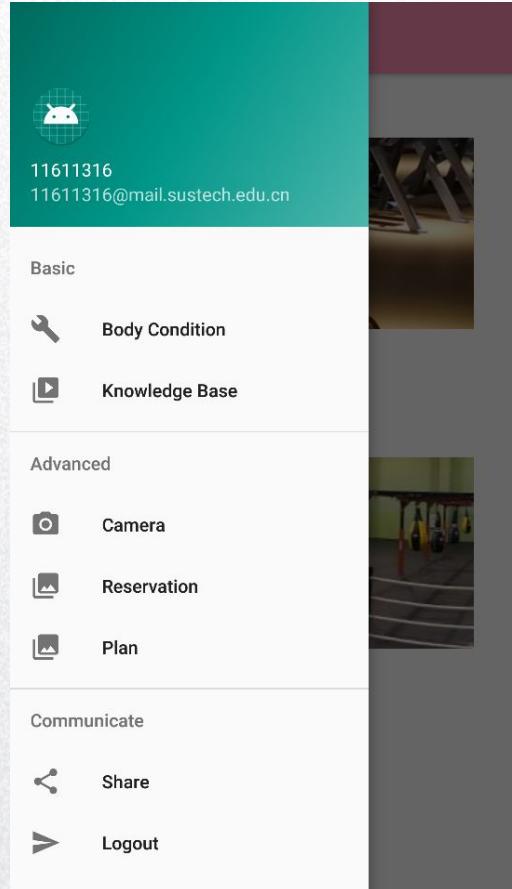
24:48 CRLF : UTF-8 : Git: master

4

Results and Conclusions

User experience of app

The new stadium reservation system is simpler and easier to operate. At the same time, many additional functions are added, such as consulting fitness knowledge base and making fitness plans according to their own physical conditions, which are very suitable for the life and fitness needs of teachers and students and make fitness less boring.





5

Future Work

Scenarios could use our app

In school, whether teachers and students who want to get in good shape through regular exercise, people who want to know about fitness, people who want to book a gym, or people who want to share their fitness records can be solved in our app.

Reservation



SUSTech Fitness Center



SUSTech Boxing Gym

What do we learn?

In this project, we first learned the process of programming and writing app, knowledge and experience, including some testing skills, which is a complete learning process. Of course, we learned not only code, but also how to cooperate with other teams to solve problems and optimize solutions.

What to do next?

-A complete sports-social platform

Our app still not a complete social platform to communicate the fitness experience and the interaction between friends.,such as friend recommendation,friends fitness time list.etc.

Thank you!

Q & A