ICamera

海军陆战队第一师

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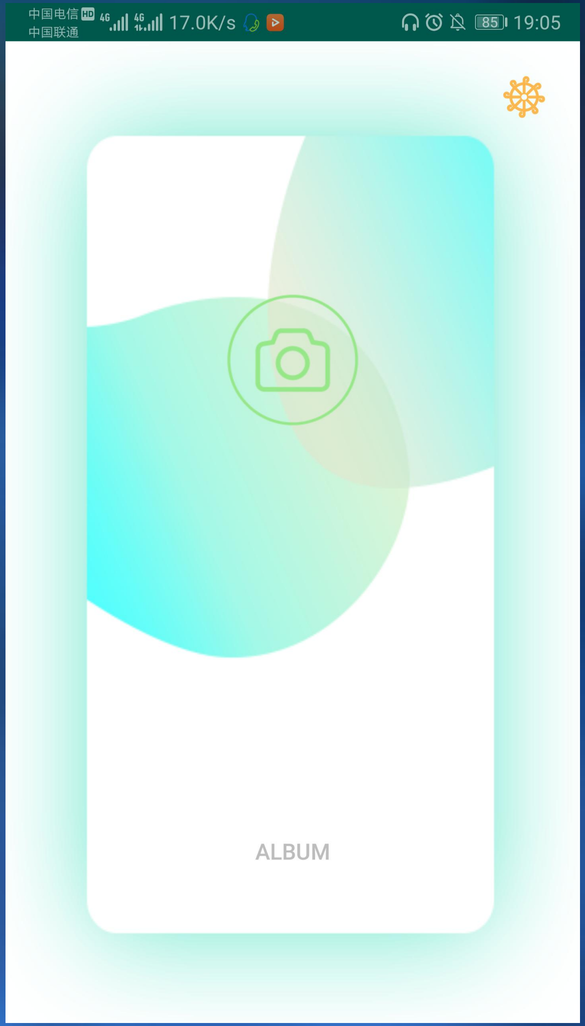
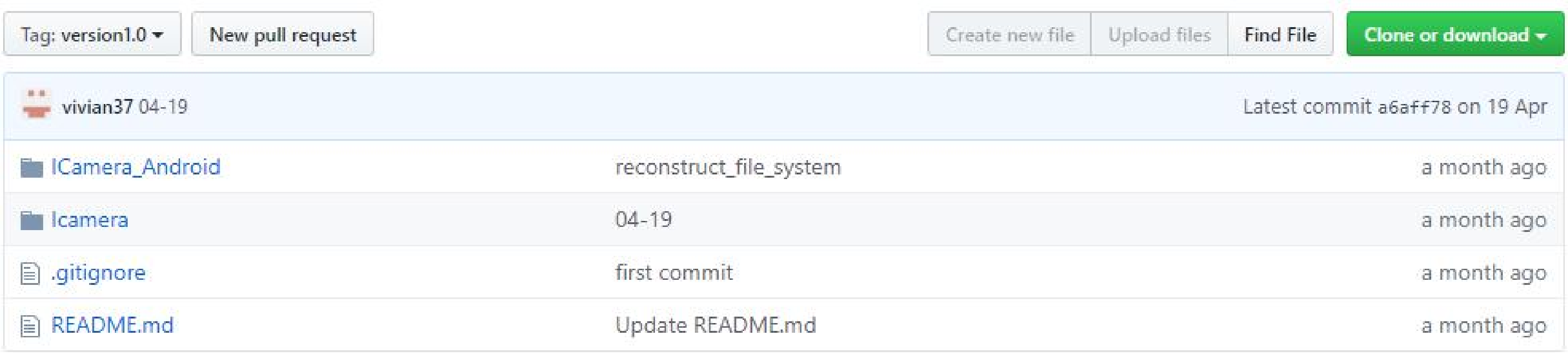
Introduction of main screen



Timeline

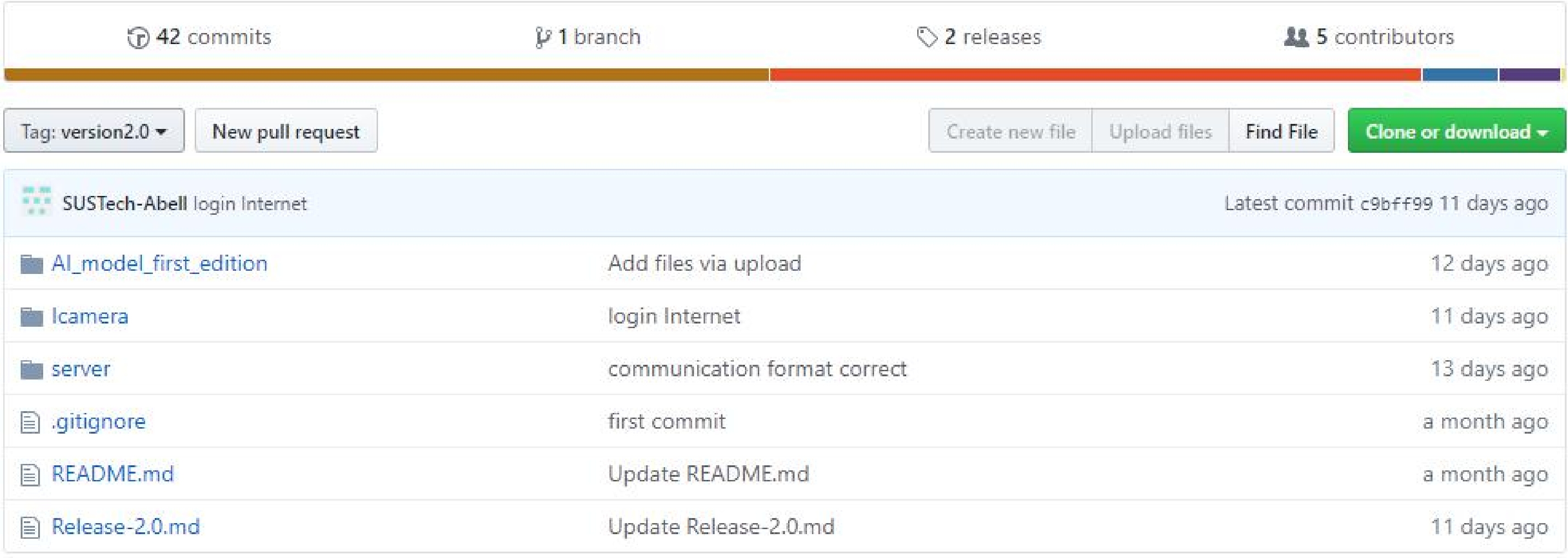
Week	Features
Week 10	Taking photo, getting into album, sharing to QQ function
Week 11	Machine learning theory study, and initial implementaion
Week 12	Basic UI for Machine learning functions and other paramout functions
Week 13	Change ML functions from computer platform to tflite
Week 14	Test and write down final report
Week 15	Prepare for presentation of project

Version histories in GitHub



vivian37 04-19 Latest commit a6aff78 on 19 Apr

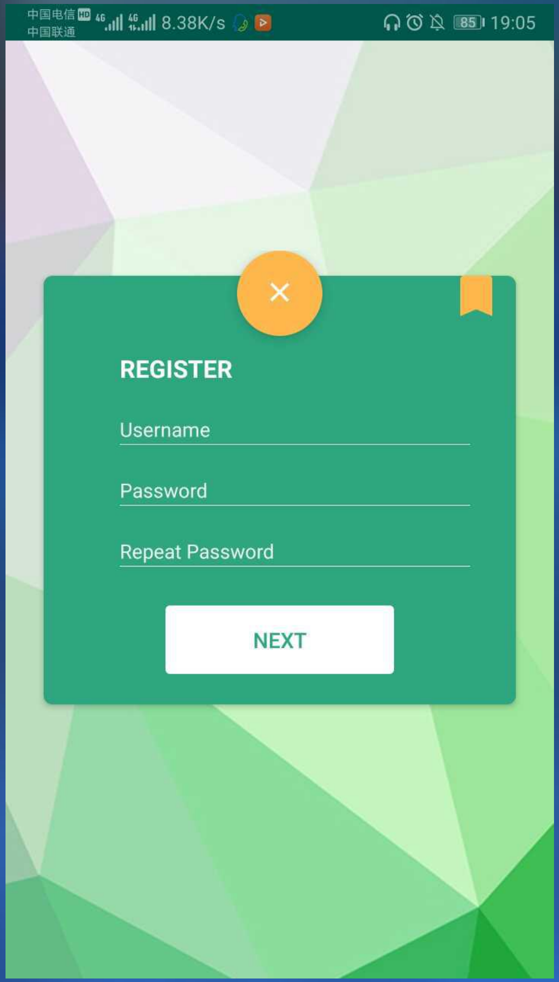
ICamera_Android	reconstruct_file_system	a month ago
Icamera	04-19	a month ago
.gitignore	first commit	a month ago
README.md	Update README.md	a month ago

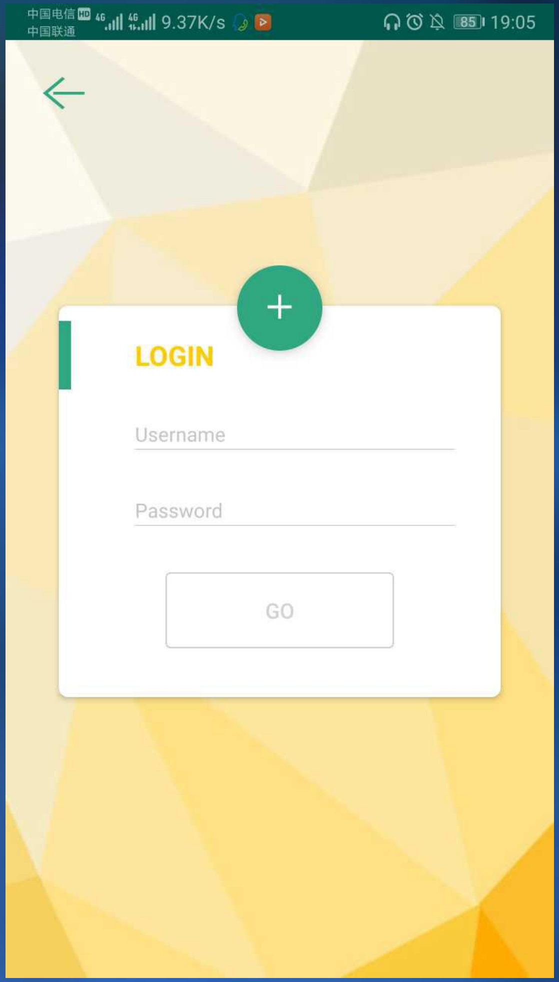


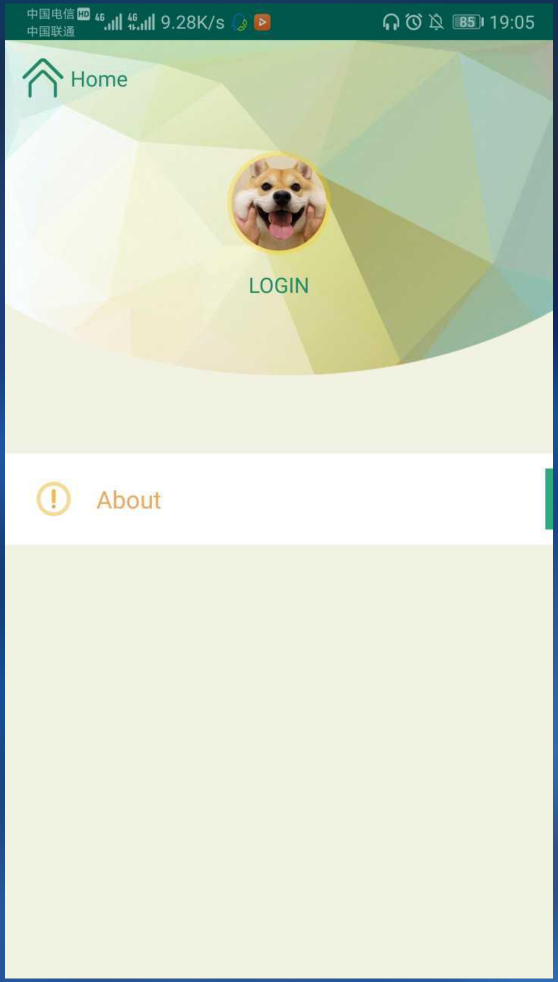
SUSTech-Abell login Internet Latest commit c9bff99 11 days ago

AI_model_first_edition	Add files via upload	12 days ago
Icamera	login Internet	11 days ago
server	communication format correct	13 days ago
.gitignore	first commit	a month ago
README.md	Update README.md	a month ago
Release-2.0.md	Update Release-2.0.md	11 days ago

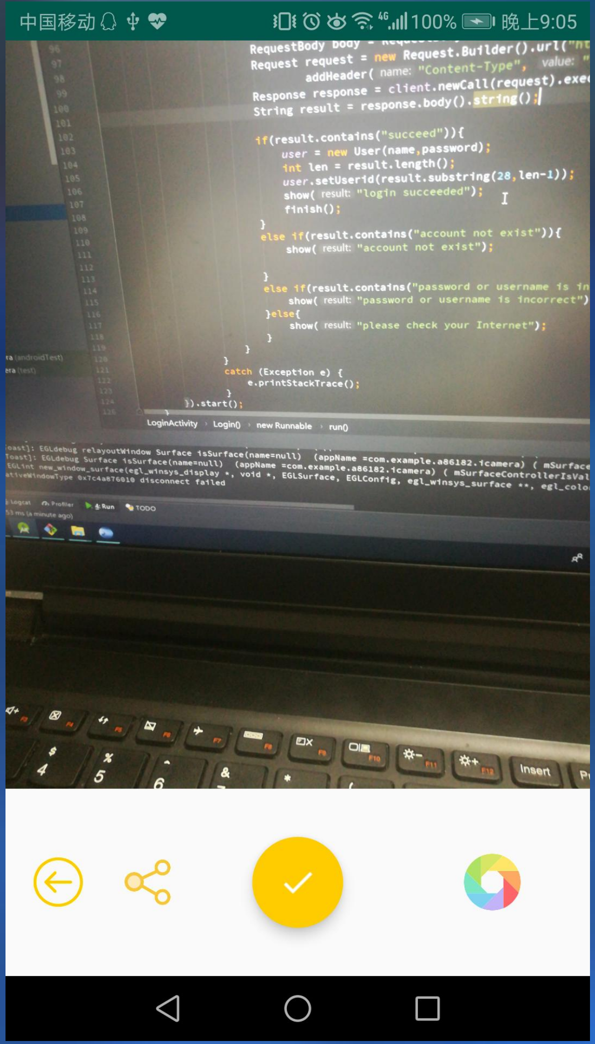
Important features







Important features

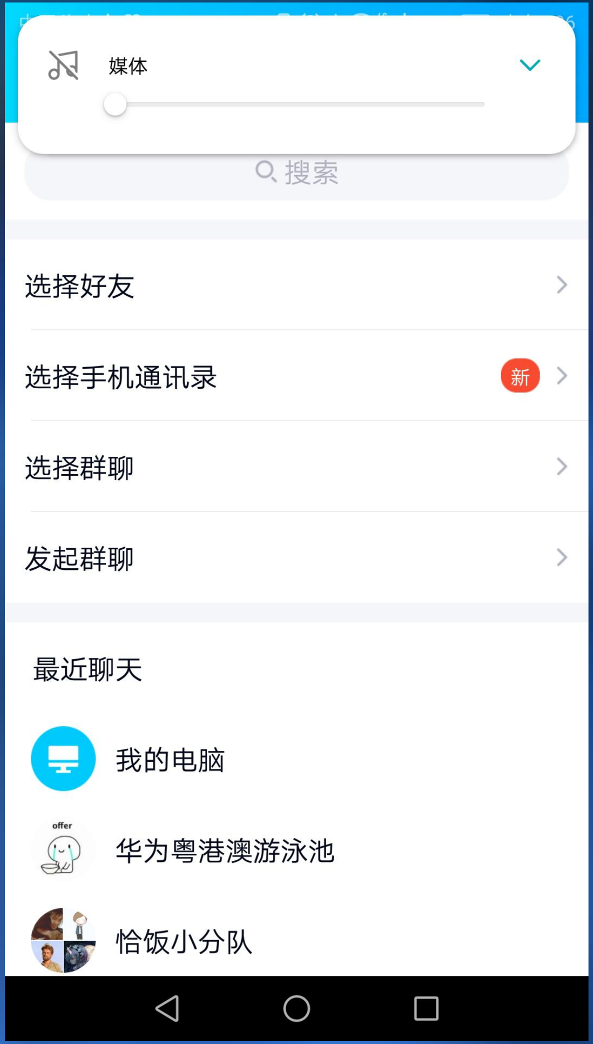


中国移动 晚上9:05 100%

```
RequestBody body = Reques...
Request request = new Request.Builder().url("ht
        addHeader( name: "Content-Type",  value: "
Response response = client.newCall(request).exe
String result = response.body().string();

if(result.contains("succeed")){
    user = new User(name,password);
    int len = result.length();
    user.setUserid(result.substring(28,len-1));
    show( result: "login succeeded");
    finish();
}
else if(result.contains("account not exist")){
    show( result: "account not exist");


}
else if(result.contains("password or username is in
    show( result: "password or username is incorrect")
}else{
    show( result: "please check your Internet");
}
        }
    }
    catch (Exception e) {
        e.printStackTrace();
    }
}).start();
```

LoginActivity › Login() › new Runnable › run()

```
Surface isSurface(name=null)  (appName =com.example.a86182.icamera) ( mSurface
ace(name=null)  (appName =com.example.a86182.icamera) ( mSurfaceControllerIsVal
insys_display *, void *, EGLSurface, EGLConfig, egl_winsys_surface **, egl_colo
sconnect failed
```



媒体

搜索

选择好友

选择手机通讯录 新

选择群聊

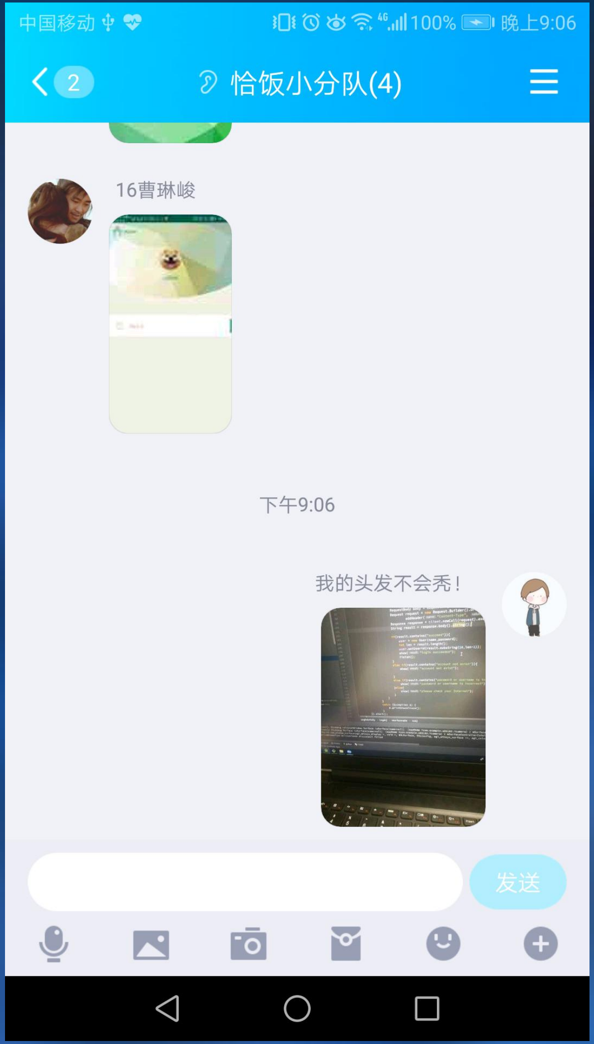
发起群聊

最近聊天

我的电脑

华为粤港澳游泳池

恰饭小分队



中国移动 100% 晚上9:06

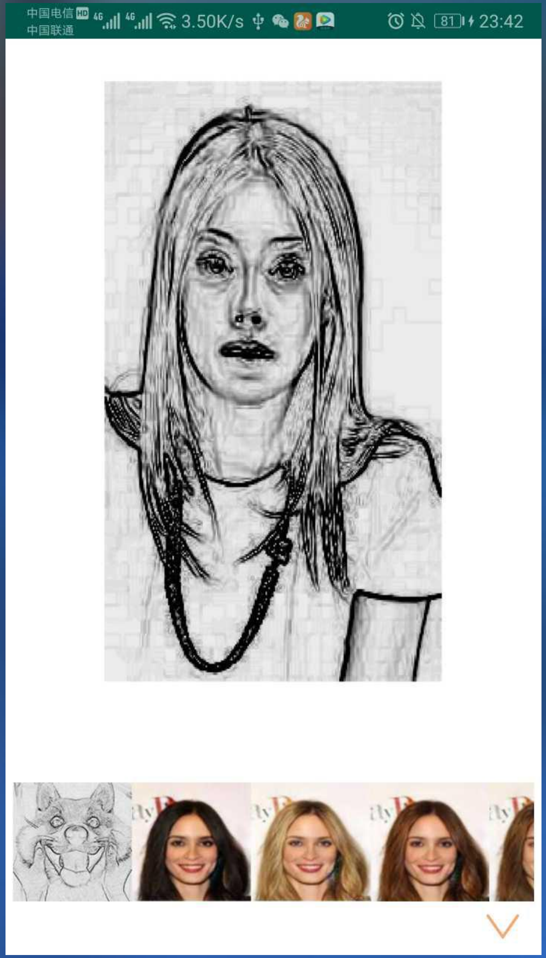
恰饭小分队(4)

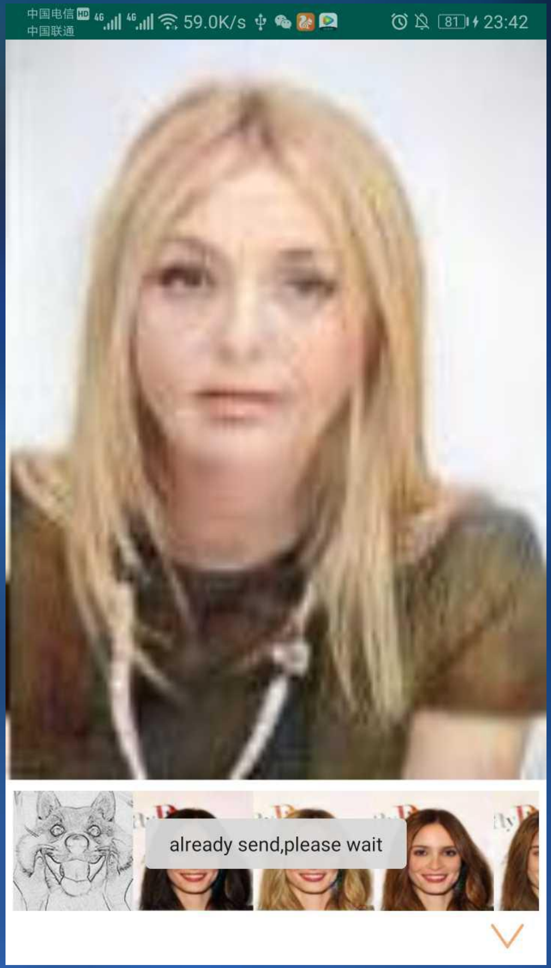
16曹琳峻

下午9:06

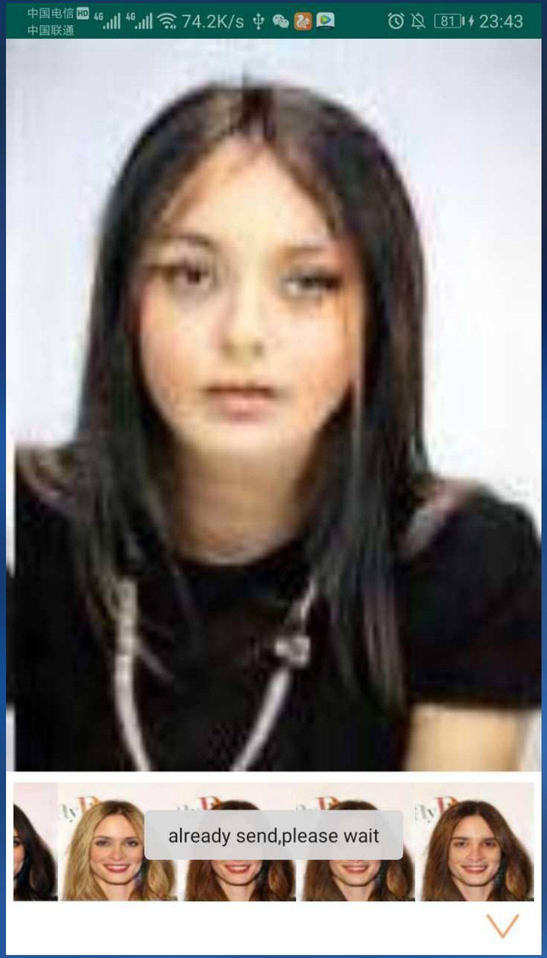
我的头发不会秀！

Important features





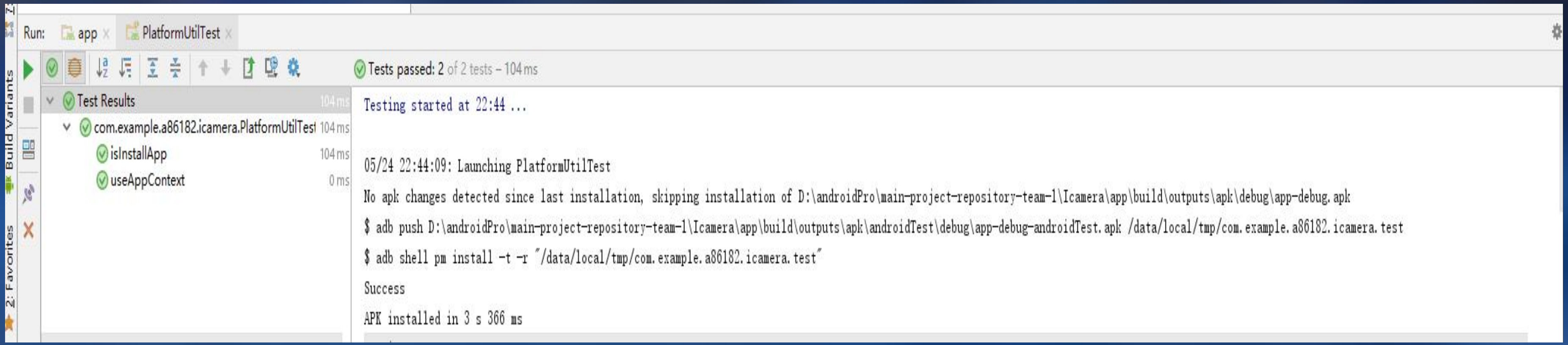
already send,please wait



already send,please wait

Test

Andriod part

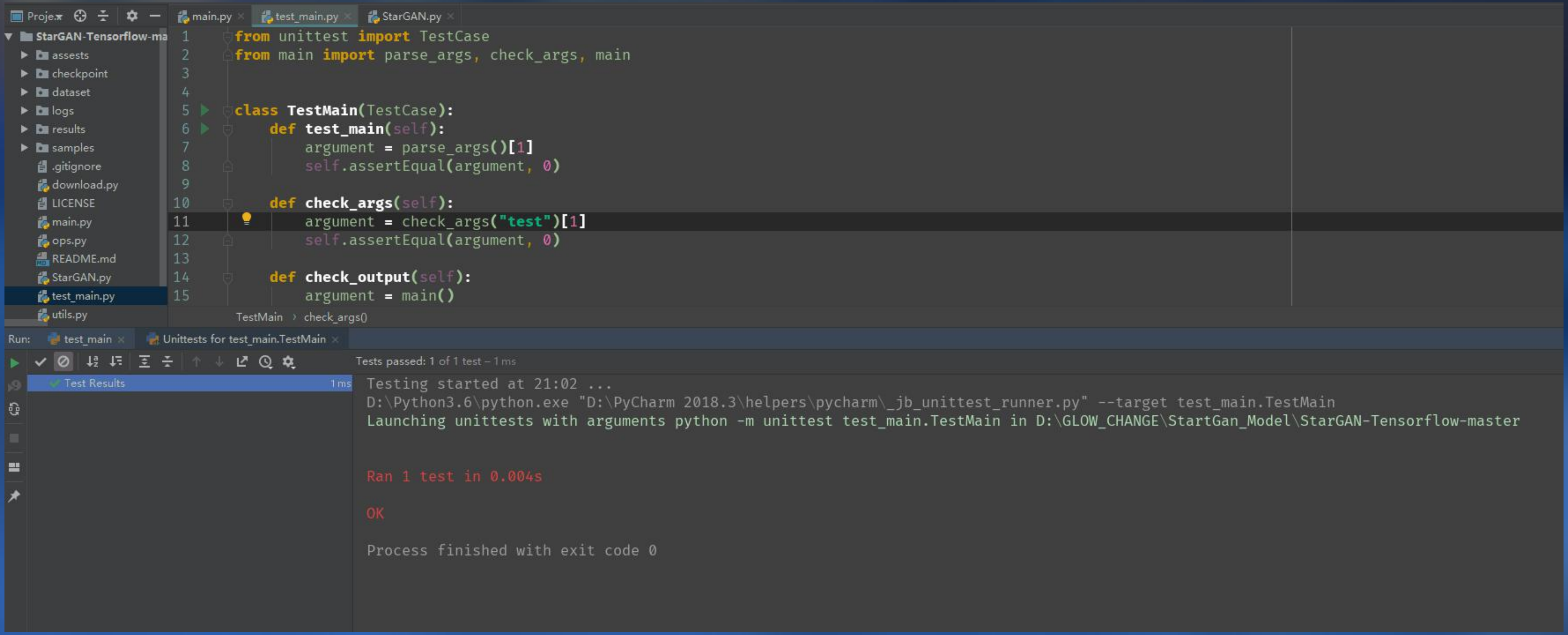


```
Tests passed: 2 of 2 tests – 104 ms

Test Results                                  104 ms
  com.example.a86182.icamera.PlatformUtilTest 104 ms
    isInstallApp                              104 ms
    useAppContext                               0 ms
```

```
Testing started at 22:44 ...


05/24 22:44:09: Launching PlatformUtilTest
No apk changes detected since last installation, skipping installation of D:\androidPro\main-project-repository-team-1\Icamera\app\build\outputs\apk\debug\app-debug.apk
$ adb push D:\androidPro\main-project-repository-team-1\Icamera\app\build\outputs\apk\androidTest\debug\app-debug-androidTest.apk /data/local/tmp/com.example.a86182.icamera.test
$ adb shell pm install -t -r "/data/local/tmp/com.example.a86182.icamera.test"
Success
APK installed in 3 s 366 ms
```

Test

AI model part



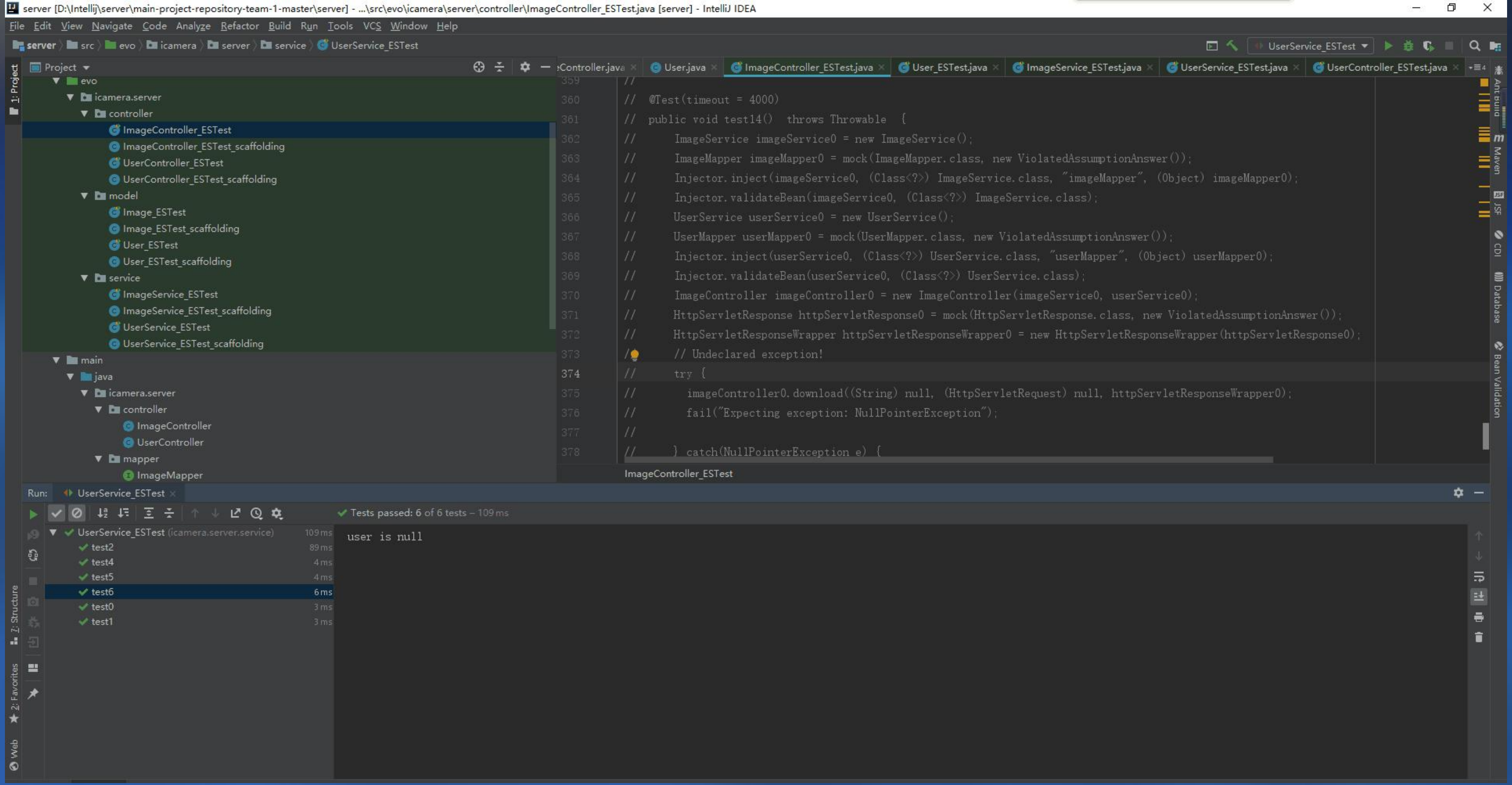
```python
from unittest import TestCase
from main import parse_args, check_args, main


class TestMain(TestCase):
    def test_main(self):
        argument = parse_args()[1]
        self.assertEqual(argument, 0)

    def check_args(self):
        argument = check_args("test")[1]
        self.assertEqual(argument, 0)

    def check_output(self):
        argument = main()
```

Tests passed: 1 of 1 test – 1 ms

```
Testing started at 21:02 ...
D:\Python3.6\python.exe "D:\PyCharm 2018.3\helpers\pycharm\_jb_unittest_runner.py" --target test_main.TestMain
Launching unittests with arguments python -m unittest test_main.TestMain in D:\GLOW_CHANGE\StartGan_Model\StarGAN-Tensorflow-master


Ran 1 test in 0.004s

OK

Process finished with exit code 0
```

Test

Server test


server [D:\Intellij\server\main-project-repository-team-1-master\server] - ...\src\evo\icamera\server\controller\ImageController_ESTest.java [server] - IntelliJ IDEA
File Edit View Navigate Code Analyze Refactor Build Run Tools VCS Window Help
server 〉 src 〉 evo 〉 icamera 〉 server 〉 service 〉 UserService_ESTest
Project
evo
icamera.server
controller
ImageController_ESTest
ImageController_ESTest_scaffolding
UserController_ESTest
UserController_ESTest_scaffolding
model
Image_ESTest
Image_ESTest_scaffolding
User_ESTest
User_ESTest_scaffolding
service
ImageService_ESTest
ImageService_ESTest_scaffolding
UserService_ESTest
UserService_ESTest_scaffolding
main
java
icamera.server
controller
ImageController
UserController
mapper
ImageMapper
:Controller.java
User.java
ImageController_ESTest.java
User_ESTest.java
ImageService_ESTest.java
UserService_ESTest.java
UserController_ESTest.java
UserService_ESTest
ImageController_ESTest
Run:
UserService_ESTest
1: Project
7: Structure
2: Favorites
Web

```
//
//  @Test(timeout = 4000)
//  public void test14()  throws Throwable  {
//      ImageService imageService0 = new ImageService();
//      ImageMapper imageMapper0 = mock(ImageMapper.class, new ViolatedAssumptionAnswer());
//      Injector.inject(imageService0, (Class<?>) ImageService.class, "imageMapper", (Object) imageMapper0);
//      Injector.validateBean(imageService0, (Class<?>) ImageService.class);
//      UserService userService0 = new UserService();
//      UserMapper userMapper0 = mock(UserMapper.class, new ViolatedAssumptionAnswer());
//      Injector.inject(userService0, (Class<?>) UserService.class, "userMapper", (Object) userMapper0);
//      Injector.validateBean(userService0, (Class<?>) UserService.class);
//      ImageController imageController0 = new ImageController(imageService0, userService0);
//      HttpServletResponse httpServletResponse0 = mock(HttpServletResponse.class, new ViolatedAssumptionAnswer());
//      HttpServletResponseWrapper httpServletResponseWrapper0 = new HttpServletResponseWrapper(httpServletResponse0);
//      // Undeclared exception!
//      try {
//        imageController0.download((String) null, (HttpServletRequest) null, httpServletResponseWrapper0);
//        fail("Expecting exception: NullPointerException");
//
//      } catch(NullPointerException e) {
```

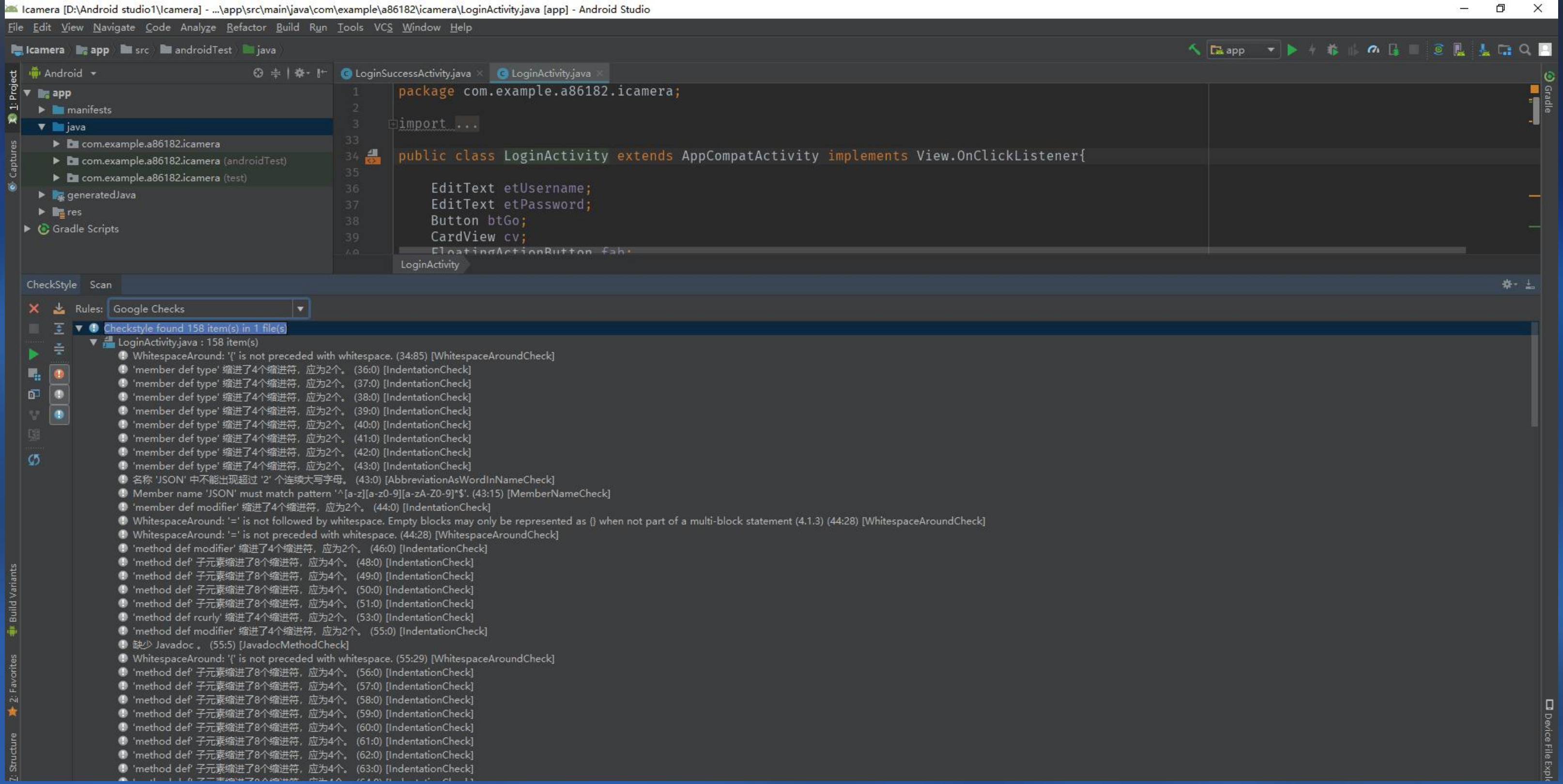
✓ Tests passed: 6 of 6 tests – 109 ms

```
✓ UserService_ESTest (icamera.server.service)   109 ms
    ✓ test2                                      89 ms
    ✓ test4                                       4 ms
    ✓ test5                                       4 ms
    ✓ test6                                       6 ms
    ✓ test0                                       3 ms
    ✓ test1                                       3 ms
```

```
user is null
```

Static analysis tools

Checkstyle



File Edit View Navigate Code Analyze Refactor Build Run Tools VCS Window Help
Icamera app src androidTest java
Android
app
manifests
java
com.example.a86182.icamera
com.example.a86182.icamera (androidTest)
com.example.a86182.icamera (test)
generatedJava
res
Gradle Scripts
LoginSuccessActivity.java
LoginActivity.java
LoginActivity
CheckStyle
Scan
1: Project
Captures
Build Variants
2: Favorites
Structure
Gradle
Device File Explorer

Icamera [D:\Android studio1\Icamera] - ...\app\src\main\java\com\example\a86182\icamera\LoginActivity.java [app] - Android Studio

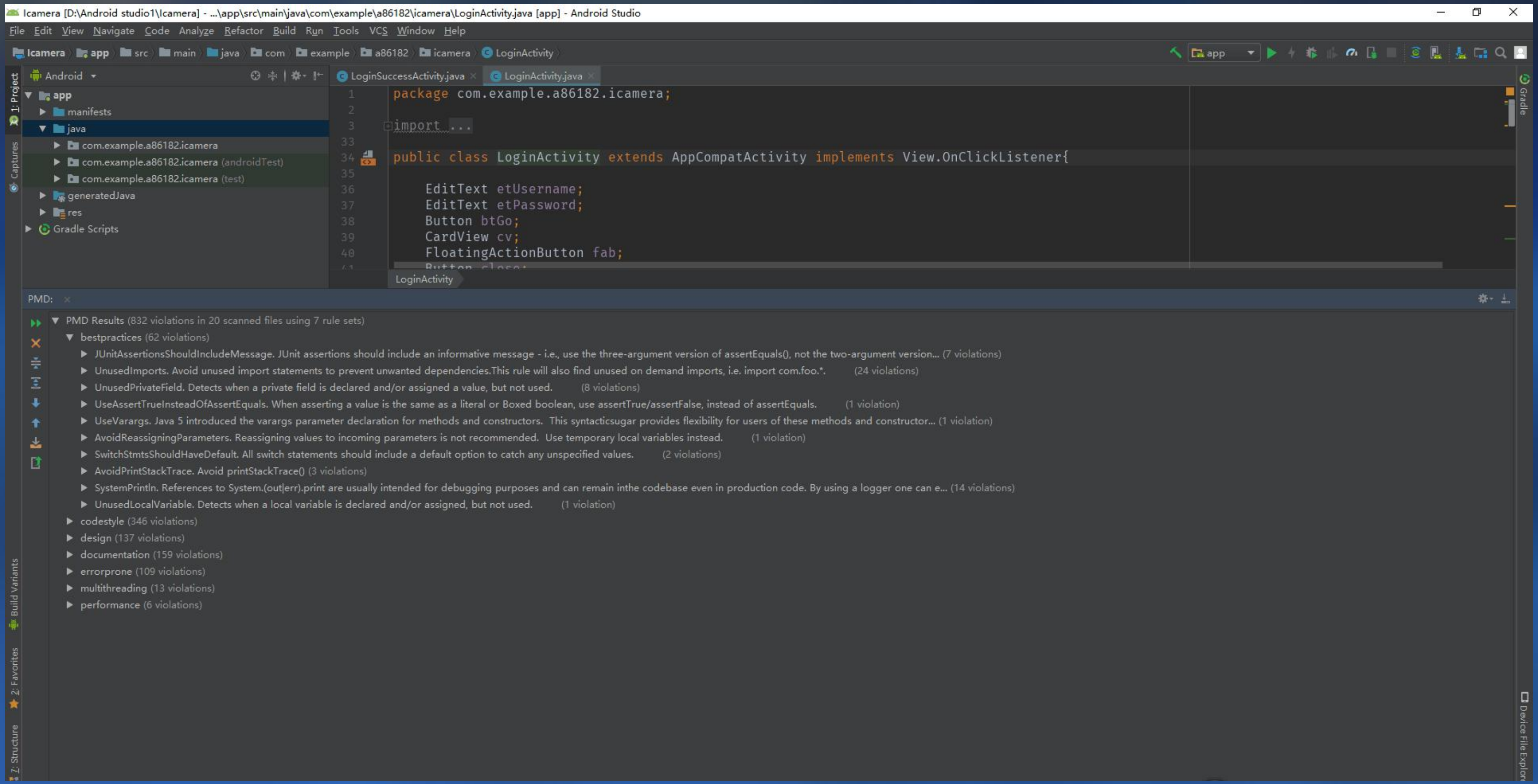
```java
package com.example.a86182.icamera;

import ...

public class LoginActivity extends AppCompatActivity implements View.OnClickListener{

    EditText etUsername;
    EditText etPassword;
    Button btGo;
    CardView cv;
    FloatingActionButton fab;
```

Rules: Google Checks

```
Checkstyle found 158 item(s) in 1 file(s)
  LoginActivity.java : 158 item(s)
    WhitespaceAround: '{' is not preceded with whitespace. (34:85) [WhitespaceAroundCheck]
    'member def type' 缩进了4个缩进符，应为2个。 (36:0) [IndentationCheck]
    'member def type' 缩进了4个缩进符，应为2个。 (37:0) [IndentationCheck]
    'member def type' 缩进了4个缩进符，应为2个。 (38:0) [IndentationCheck]
    'member def type' 缩进了4个缩进符，应为2个。 (39:0) [IndentationCheck]
    'member def type' 缩进了4个缩进符，应为2个。 (40:0) [IndentationCheck]
    'member def type' 缩进了4个缩进符，应为2个。 (41:0) [IndentationCheck]
    'member def type' 缩进了4个缩进符，应为2个。 (42:0) [IndentationCheck]
    'member def type' 缩进了4个缩进符，应为2个。 (43:0) [IndentationCheck]
    名称 'JSON' 中不能出现超过 '2' 个连续大写字母。 (43:0) [AbbreviationAsWordInNameCheck]
    Member name 'JSON' must match pattern '^[a-z][a-z0-9][a-zA-Z0-9]*$'. (43:15) [MemberNameCheck]
    'member def modifier' 缩进了4个缩进符，应为2个。 (44:0) [IndentationCheck]
    WhitespaceAround: '=' is not followed by whitespace. Empty blocks may only be represented as {} when not part of a multi-block statement (4.1.3) (44:28) [WhitespaceAroundCheck]
    WhitespaceAround: '=' is not preceded with whitespace. (44:28) [WhitespaceAroundCheck]
    'method def modifier' 缩进了4个缩进符，应为2个。 (46:0) [IndentationCheck]
    'method def' 子元素缩进了8个缩进符，应为4个。 (48:0) [IndentationCheck]
    'method def' 子元素缩进了8个缩进符，应为4个。 (49:0) [IndentationCheck]
    'method def' 子元素缩进了8个缩进符，应为4个。 (50:0) [IndentationCheck]
    'method def' 子元素缩进了8个缩进符，应为4个。 (51:0) [IndentationCheck]
    'method def rcurly' 缩进了4个缩进符，应为2个。 (53:0) [IndentationCheck]
    'method def modifier' 缩进了4个缩进符，应为2个。 (55:0) [IndentationCheck]
    缺少 Javadoc 。 (55:5) [JavadocMethodCheck]
    WhitespaceAround: '{' is not preceded with whitespace. (55:29) [WhitespaceAroundCheck]
    'method def' 子元素缩进了8个缩进符，应为4个。 (56:0) [IndentationCheck]
    'method def' 子元素缩进了8个缩进符，应为4个。 (57:0) [IndentationCheck]
    'method def' 子元素缩进了8个缩进符，应为4个。 (58:0) [IndentationCheck]
    'method def' 子元素缩进了8个缩进符，应为4个。 (59:0) [IndentationCheck]
    'method def' 子元素缩进了8个缩进符，应为4个。 (60:0) [IndentationCheck]
    'method def' 子元素缩进了8个缩进符，应为4个。 (61:0) [IndentationCheck]
    'method def' 子元素缩进了8个缩进符，应为4个。 (62:0) [IndentationCheck]
    'method def' 子元素缩进了8个缩进符，应为4个。 (63:0) [IndentationCheck]
```

Static analysis tools

PMD

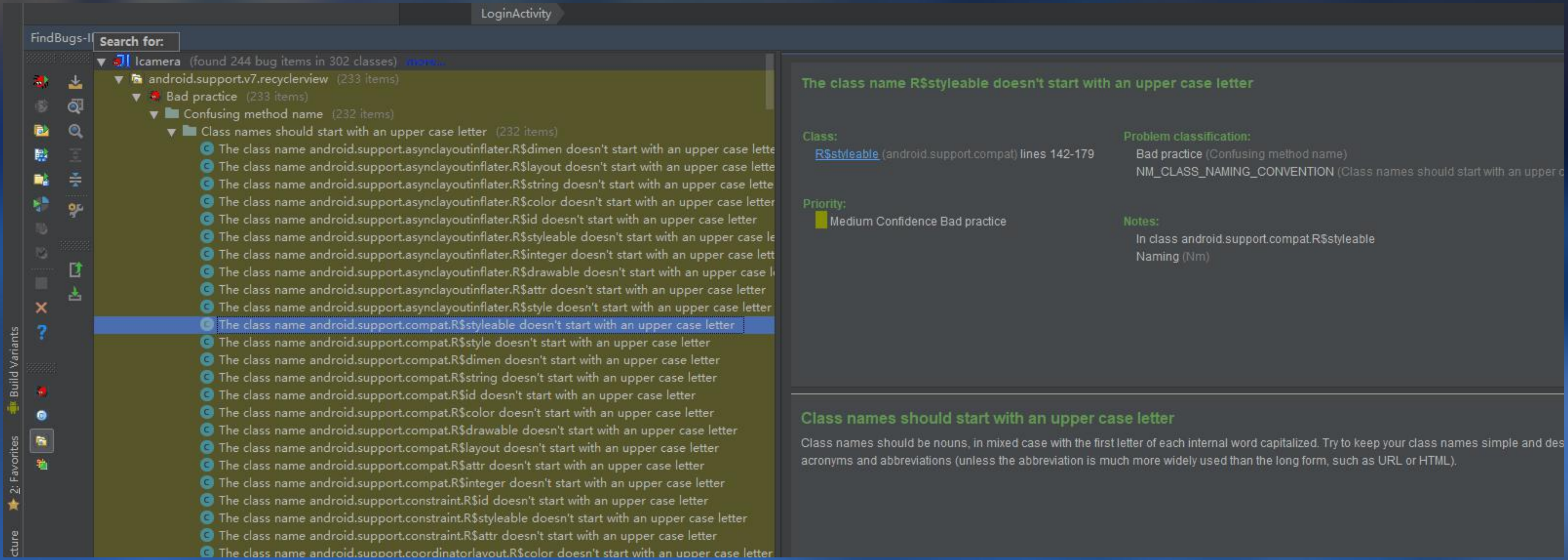

Icamera [D:\Android studio1\Icamera] - ...\app\src\main\java\com\example\a86182\icamera\LoginActivity.java [app] - Android Studio
File Edit View Navigate Code Analyze Refactor Build Run Tools VCS Window Help
Icamera app src main java com example a86182 icamera LoginActivity
app
1: Project
Captures
Android
app
manifests
java
com.example.a86182.icamera
com.example.a86182.icamera (androidTest)
com.example.a86182.icamera (test)
generatedJava
res
Gradle Scripts
LoginSuccessActivity.java
LoginActivity.java
LoginActivity
Gradle
PMD:
Build Variants
2: Favorites
Z: Structure
Device File Explorer

```
package com.example.a86182.icamera;

import ...

public class LoginActivity extends AppCompatActivity implements View.OnClickListener{

    EditText etUsername;
    EditText etPassword;
    Button btGo;
    CardView cv;
    FloatingActionButton fab;
    Button close;
```

```
▼ PMD Results (832 violations in 20 scanned files using 7 rule sets)
  ▼ bestpractices (62 violations)
    ▶ JUnitAssertionsShouldIncludeMessage. JUnit assertions should include an informative message - i.e., use the three-argument version of assertEquals(), not the two-argument version... (7 violations)
    ▶ UnusedImports. Avoid unused import statements to prevent unwanted dependencies.This rule will also find unused on demand imports, i.e. import com.foo.*.      (24 violations)
    ▶ UnusedPrivateField. Detects when a private field is declared and/or assigned a value, but not used.      (8 violations)
    ▶ UseAssertTrueInsteadOfAssertEquals. When asserting a value is the same as a literal or Boxed boolean, use assertTrue/assertFalse, instead of assertEquals.      (1 violation)
    ▶ UseVarargs. Java 5 introduced the varargs parameter declaration for methods and constructors.  This syntacticsugar provides flexibility for users of these methods and constructor... (1 violation)
    ▶ AvoidReassigningParameters. Reassigning values to incoming parameters is not recommended.  Use temporary local variables instead.      (1 violation)
    ▶ SwitchStmtsShouldHaveDefault. All switch statements should include a default option to catch any unspecified values.      (2 violations)
    ▶ AvoidPrintStackTrace. Avoid printStackTrace() (3 violations)
    ▶ SystemPrintln. References to System.(out|err).print are usually intended for debugging purposes and can remain inthe codebase even in production code. By using a logger one can e... (14 violations)
    ▶ UnusedLocalVariable. Detects when a local variable is declared and/or assigned, but not used.      (1 violation)
  ▶ codestyle (346 violations)
  ▶ design (137 violations)
  ▶ documentation (159 violations)
  ▶ errorprone (109 violations)
  ▶ multithreading (13 violations)
  ▶ performance (6 violations)
```

Static analysis tools

FindBugs



```
▼ Icamera (found 244 bug items in 302 classes) more...
  ▼ android.support.v7.recyclerview (233 items)
    ▼ Bad practice (233 items)
      ▼ Confusing method name (232 items)
        ▼ Class names should start with an upper case letter (232 items)
            The class name android.support.asynclayoutinflater.R$dimen doesn't start with an upper case lette
            The class name android.support.asynclayoutinflater.R$layout doesn't start with an upper case lette
            The class name android.support.asynclayoutinflater.R$string doesn't start with an upper case lette
            The class name android.support.asynclayoutinflater.R$color doesn't start with an upper case letter
            The class name android.support.asynclayoutinflater.R$id doesn't start with an upper case letter
            The class name android.support.asynclayoutinflater.R$styleable doesn't start with an upper case le
            The class name android.support.asynclayoutinflater.R$integer doesn't start with an upper case lett
            The class name android.support.asynclayoutinflater.R$drawable doesn't start with an upper case l
            The class name android.support.asynclayoutinflater.R$attr doesn't start with an upper case letter
            The class name android.support.asynclayoutinflater.R$style doesn't start with an upper case letter
            The class name android.support.compat.R$styleable doesn't start with an upper case letter
            The class name android.support.compat.R$style doesn't start with an upper case letter
            The class name android.support.compat.R$dimen doesn't start with an upper case letter
            The class name android.support.compat.R$string doesn't start with an upper case letter
            The class name android.support.compat.R$id doesn't start with an upper case letter
            The class name android.support.compat.R$color doesn't start with an upper case letter
            The class name android.support.compat.R$drawable doesn't start with an upper case letter
            The class name android.support.compat.R$layout doesn't start with an upper case letter
            The class name android.support.compat.R$attr doesn't start with an upper case letter
            The class name android.support.compat.R$integer doesn't start with an upper case letter
            The class name android.support.constraint.R$id doesn't start with an upper case letter
            The class name android.support.constraint.R$styleable doesn't start with an upper case letter
            The class name android.support.constraint.R$attr doesn't start with an upper case letter
            The class name android.support.coordinatorlayout.R$color doesn't start with an upper case letter
```

The class name R$styleable doesn't start with an upper case letter

Class:
R$styleable (android.support.compat) lines 142-179

Problem classification:
Bad practice (Confusing method name)
NM_CLASS_NAMING_CONVENTION (Class names should start with an upper c

Priority:
🟨 Medium Confidence Bad practice

Notes:
In class android.support.compat.R$styleable
Naming (Nm)

Class names should start with an upper case letter

Class names should be nouns, in mixed case with the first letter of each internal word capitalized. Try to keep your class names simple and des
acronyms and abbreviations (unless the abbreviation is much more widely used than the long form, such as URL or HTML).

Use case

First a user need register an account with specific username and password. The username should not be identical to another exist username. Then the user can login his account with his username and password.

After login, user can take a picture or choose a picture from albm, and choose one to change :hair color, age, gender and sketch. After user confirm, the origin picture will be send to server, and the process result will be return to client. User can immediately see the result.

Future work

What lessons did you learn from your project?

1

We learned how to use github to control the version of our project code

2

We cooperated with each other in this Software Engineering Android project. We learned how to work in a team

3

We learned the whole process in APP development, including Analysis, Design, Testing and so on

Future work

What was difficult?

1

We are not familiar with the operation of HTTP, and this lead to difficulty in sending and receiving message

2

Our Algorithm was limited with our performance of our computer, and we had to quit some features because of this

3

The test of our Andriod project is not easy to complete, and it consumes much time of ours

Future work

What do you wish you could have done?

1

We wish that we could have used JWT for message transmission instead of passing it directly

2

We wish that we could have written our method implementation and method invocation in different files

3

We wish that we could have completed better code encapsulation

Future work

How could your project be extended?

1

We hope a better AI model to improve the user experience

2

We hope a better way of message transmission to improve effectiveness and efficiency

3

We hope a better server that can support our AI model and AI algorithm

THANKS