

# Sprint 2 - Automatic Testing

Team 4: ChatChat

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## Third-party products used:

We used the espresso testing components and Junit 4 testing that android itself provided.

We also used a cloud test lab from firebase to implement robo test using espresso on different physical/virtual devices such as pixel XL, LG G3, etc.

## How it is implemented:

We use android espresso testing and Junit testing for UI interaction and input validation.

## What parts of your system it covers:

It covers user login, creates a chatroom, sends a message, gives feedback, changes username

## How to run them:

Find the tests in **ChatChat/app/src/androidTest/java/com/example/chatchat/Activities** directory. You can run each individual test by clicking the green triangle icon by the function name. Or you can run the entire class of test function by clicking the green triangle icon by the class name. Or you can run all the tests in the **androidTest/java/** directory by right-clicking the folder and "Run all tests".

## What parts of your system still have to be tested manually:

We still need to manually testing parts that require recycler view navigation because it is hard for espresso to navigate recycler view correctly. Also, we manually test activities that require google authentication information because this information is directly provided by google firebase and cannot be accessed by espresso in an independent activity intent.

## Automatic Testing:

Create a chat room test:

- Tests ExploreActivity
- Test if the description input is empty
- Test if the chatroom name input is empty
- Test if the chatroom name input contains invalid characters
- Test if the description input contains invalid characters

- Test if the chatroom category is not chosen

Feedback test:

- Tests FeedbackActivity
- Test if the feedback can proceed if every field are filled
- Test if the feedback stops to proceed if the bug report field is not filled
- Test if the feedback stops to proceed if the feature suggestion field is not filled

Log in test:

- Tests LoginActivity
- Test if the login success if all information are filled
- Test if the login fails if the username is wrong
- Test if the login fails if the username is empty
- Test if the login fails if the password is wrong
- Test if the login fails if the password is empty

ForgetPassword test:

- Tests ResetPasswordActivity
- Test if the email address is of incorrect format
- Test if the email address input is empty
- Test if the user clicks the resend button more than three times
- Test if the email address contains invalid characters

Change username Test:

- Tests ChangeUserNameActivity
- Tests if the error message shows up correctly is username input is empty
- Tests if the error message shows up correctly is username input is too long(more than 14 characters)
- Tests if the error message shows up correctly is username input is invalid(contains characters other than "[A-Za-z0-9\_]+")

Change password Test:

- Tests ChangePasswordActivity

Cloud Test Lab Firebase screenshot:

