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Application Security – project
Mobile Application tests

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1. Tests aspects

The goal was to test the application Chatty-Pie¹ mostly in terms of safety. We tested the following aspects of functionalities:

- sign up:
 - providing empty inputs,
 - inputs validation: email format, password format,
- log in:
 - providing empty inputs,
 - providing invalid email and/or password,
- send messages:
 - sending empty message.

Moreover, we checked the general aspects of application which were:

- using safe protocols,
- encrypting the transmission,
- protected access to database and API.

2. Tests results

Application passed most of the tests. The following problems were detected:

- Sign up and log in functions let user to leave empty inputs which results in unhandled exception. Application goes back to log in view (in the case of failed sign in) or stops responding (in the case of failed log in).
- Password requirements do not follow the specification. It is stated that password should contain at least one letter and one number but in the application the only check is if the password is at least 6 characters long.
- Password and username maximum lengths are neither precised nor verified.
- Error messages are generic. They do not precise why the application exactly failed.

The most important security tests passed. The database and API are hosted on third-party provider Firebase and thanks to it they are protected against unauthorised access. Data are transmitted via TLS protocol so the risk of successful eavesdropping is minimalised.

3. Summary

In general view, the application satisfied security requirements. The transmission is properly encrypted, the access to database is protected.

Most of the problems do not affect security. The only severe one is not following the password policy. It would be the best if they were at least 8 characters long and should contain at least one character of the following: lower case letter, upper case letter, number and special character.

¹ <https://github.com/dawid689/Chatty-Pie>