LeanCode Chat mobile application bug / issue report.

Reporter: Łukasz Lebioda;

Tested application: LeanCode Chat (referred to as 'the App' in this report);

Mobile devices / RAM / Android version:

- Xiaomi Redmi Note 8T / 4 GB RAM / Android v. 11;

- Samsung Galaxy A21s / 3 GB RAM / Android v. 12;

Preconditions:

- mobile device with Android (min. version 5.0);
- access to the Internet;
- LeanCode Chat app downloaded and installed on the operating system;

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I. Login screen - Accordance with the specification.

1. Login is possible without providing any username.



Steps to reproduce:

- run the App to navigate to the login screen;
- press LOGIN button without providing any username.

Expected result: login without providing any username is <u>not</u> possible; adequate error message is displayed; the user can't proceed to the chat room selection screen.

Actual result: login without providing any username is possible; no adequate error message is displayed; the user can proceed to the chat room selection screen.

Additional note: the subsequent result is that there is no username displayed in the chat room (see the screenshot above).

Priority: low, medium, high.

Severity: trivial, minor, normal, <u>major</u>, critical, blocker.

2. Login is possible with a special character '@' both as a standalone character or when placed anywhere within the username string.

Steps to reproduce:

- run the App to navigate to the login screen;
- type a username including '@' special character, e.g. 'Admin@', '@Admin', 'Adm@in' or just '@' alone:
- press LOGIN button.

Expected result: login using a '@' character is <u>not</u> possible; adequate error message is displayed; the user can't proceed to the chat room selection screen.

Actual result: login using a '@' character is possible; no adequate error message is displayed; the user can proceed to the chat room selection screen.

Priority: low, medium, high.

Severity: trivial, minor, <u>normal</u>, major, critical, blocker.

3. No avatar image is displayed when the App is run.



Steps to reproduce:

- run the App to navigate to the login screen;
- see the login form and the blue circle for the avatar image above it.

Expected result: user's avatar is assigned randomly to the user every time the App is run; avatar image is visible above the login input field.

Actual result: user's avatar is <u>not</u> assigned and it's <u>not</u> visible above the login input field; only the blue circle for the avatar is displayed.

Additional note: the subsequent result is that there is no avatar images displayed in the chat room either (blue circles only).

Priority: low, medium, high.

Severity: trivial, minor, normal, major, critical, blocker.

II. Login screen - Other issues.

4. There is no specific username length limit.



Steps to reproduce:

- run the App to navigate to the login screen;
- type a random text, e.g. that is more than 30 characters long, into the login input field (e.g. 'ThisIsAVeryLongUsernameThisIsAVeryLongUsernameThisIsAVeryLongUsername');
- press LOGIN button.

Expected result: a login length validation is applied and prevent the user from typing a long string that is contrary to the commonly accepted way of creating usernames.

Actual result: login with a username of 16164 characters is possible.

Additional note: I used some dummy texts from https://randomtextgenerator.com/ for this test; the longest one I used consisted of 16164 characters (spaces included) at still it was possible to login.

Priority: low, medium, high.

Severity: trivial, minor, <u>normal</u>, major, critical, blocker.

5. Login is possible with a space character(s) / punctuation mark(s) / emoji(s), either as a standalone character or combined with other characters.

Steps to reproduce:

- run the App to navigate to the login screen;
- log in with an emoji(s), punctuation mark(s), space character(s), either solo or combined with other characters;
- press LOGIN button.

Expected result: login is impossible; a validation mechanism prevents the user from creating a login that consists of emojis, punctuation marks, space characters, either solo or combined with each other or with other characters, in the way that makes usernames unreadable and is contrary to the commonly accepted way of creating usernames.

Actual result: login with an emoji, punctuation mark, space character is possible; no validation mechanism is applied.

Additional note: This bug report doesn't apply to the special characters! #\$ % ^ & * mentioned in the specification (the use of these characters is not allowed by default and is validated).

Priority: low, medium, high.

Severity: trivial, minor, normal, major, critical, blocker.

6. Two users can be logged in with identical username during the same session.

Steps to reproduce:

- run the App on mobile device no. 1;
- type in any username, e.g. 'Admin', to log in;
- press LOGIN button;
- run the App on mobile device no. 2;
- type in the same username as before ('Admin');
- press LOGIN button.

Expected result: login on two different mobile devices with identical username during the same session is possible.

Actual result: login on two different mobile devices with identical username during the same session is not possible.

Priority: low, medium, high.

Severity: trivial, minor, normal, <u>major</u>, critical, blocker.

7. There is no logout functionality implemented.

Steps to reproduce:

- run the App to navigate to the login screen;
- type in any username, e.g. 'Admin', to log in;
- press LOGIN button;
- see that there is no possibility to logout.

Expected result: logout is possible at any time.

Actual result: logout is not possible at all.

Priority: low, medium, high.

8. There is a typo in the login error message.



Steps to reproduce:

- run the App to navigate to the login screen;
- type in one of the special characters! #\$% ^ & * to log in and invoke the error message;
- press LOGIN button;
- error message, written in Polish, has no diacritic mark in the word 'zawierac' (English: 'to contain').

Expected result: 'To contain' is translated into Polish and written as: 'zawierać'.

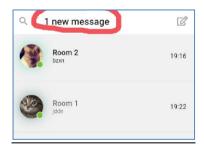
Actual result: 'To contain' is translated into Polish and written as: 'zawierac'.

Priority: low, medium, high.

Severity: trivial, minor, normal, major, critical, blocker

III. Chat room selection screen - Accordance with the specification.

9. Message counter displays '1 new message' continuously.



Steps to reproduce:

- run the App to navigate to the login screen;
- type in any username, e.g. 'Admin', to log in;
- press LOGIN button to proceed to the chat room selection screen;
- see the text: '1 new message' in the upper status bar.

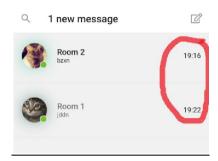
Expected result: message counter provides the actual number of new messages.

Actual result: message counter displays '1 new message' continuously, no matter how many new messages there are.

Priority: low, medium, high.

Severity: trivial, minor, <u>normal</u>, major, critical, blocker.

10. The time of the last message displayed on the chat room selection screen is actually 60 minutes prior to the real one.



Steps to reproduce:

- run the App to navigate to the login screen;
- type in any user name, e.g. 'Admin', to log in;
- press LOGIN button to move to the chat room selection screen;
- select any chat room;
- type any message;
- go back to the chat room selection screen;
- see the last message time displayed on the right.

Expected result: the time of the last message is displayed correctly.

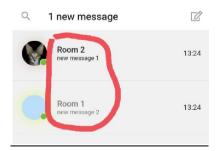
Actual result: the time of the last message is actually 60 minutes prior to the real one; in the example above the actual time of the messages sent is 20:16 and 20:22 respectively.

Priority: low, medium, high.

Severity: trivial, <u>minor</u>, normal, major, critical, blocker.

IV. Chat room selection screen – Other issues.

11. Chat rooms are arranged in the oposite order.



Steps to reproduce:

- run the App to navigate to the login screen;

- type in any user name, e.g. 'Admin', to log in;
- press LOGIN button to move to the chat room selection screen.

Expected result: chat rooms are arranged in a commonly accepted order, e.g. according to their ordinal numbers: Room1, Room2...

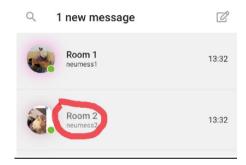
Actual result: chat rooms are arranged in non-intuitive, unnatural, counter-ordinal order: Room 2, Room 1...

Additional note: Yet from time to time the chat rooms are actually arranged properly, according to their ordinal number. This seems to happen by random, without any obvious pattern.

Priority: low, medium, high.

Severity: trivial, minor, normal, major, critical, blocker.

12. Second (lower) chat room name is greyed out.



Steps to reproduce:

- run the App to navigate to the login screen;
- type in any user name, e.g. 'Admin', to log in;
- press LOGIN button to move to the chat room selection screen;
- compare the font of the chat room names.

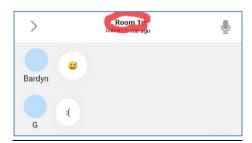
Expected result: both chat room names are written using the same font weigh.

Actual result: second (lower) chat room name is greyed out which suggests it's inactive (and it's not).

Priority: low, medium, high.

Severity: trivial, minor, normal, major, critical, blocker.

13. Chat rooms are linked the other way around ('Room 2' link leads to Room 1 and 'Room 1' link leads to Room 2).



Steps to reproduce:

- run the App to navigate to the login screen;
- type in any user name, e.g. 'Admin', to log in;
- press LOGIN button to move to the chat room selection screen;
- tap chat Room 2;
- when in Room 2, see the upper status bar that says Room 1 is actually loaded;
- go back and tap chat Room 1;
- when in Room 1, see the upper status bar that says Room 2 is actually loaded;

Expected result: chat rooms in the chat room selection screen are linked accordingly and lead to proper chat rooms as their names indicate.

Actual result: chat rooms are linked the other way around ('Room 2' link leads to Room 1 and 'Room 1' link leads to Room 2).

Priority: low, medium, high.

Severity: trivial, minor, normal, major, critical, blocker.

14. App crashes to the mobile home screen when one of the chat rooms is selected three times in a row.

Steps to reproduce:

- run the App;
- type in any user name, e.g. 'Admin', to log in;
- press LOGIN button to move to the chat room selection screen;
- tap the first (upper) chat room;
- when in that chat room, go back to the chat room selection screen;
- tap the first (upper) chat room again;
- go back;
- tap the first (upper) chat room for the third and final time.

Expected result: it is possible to enter and leave any chat room as many times as the user wants.

Actual result: when the first (upper) chat room is selected for the third time in a row, app crashes to the mobile home screen.

Additional note: there is another combination that makes the App crash - upper chat room, go back, lower chat room, go back, upper chat room, go back, lower chat room, go back, upper chat room, crash. There can be more combinations with the same unwanted result.

Priority: low, medium, high.

V. Chat room screen - Accordance with the specification.

15. Last activity info in the chat room displays '1 min ago' continuously.



Steps to reproduce:

- run the App to navigate to the login screen;
- type in any user name, e.g. 'Admin', to log in;
- press LOGIN button to move to the chat room selection screen;
- select any chat room;
- write any message and send it;
- see the '1 min ago' text in the top bar.

Expected result: correct information about actual last activity time is displayed.

Actual result: the information about the last activity doesn't change; it displays continuously the same information '1 min ago' no matter when the last activity really took place.

Priority: low, medium, high.

Severity: trivial, minor, normal, major, critical, blocker.

16. Internet connection status says 'online' continuously.



Steps to reproduce:

- run the App to navigate to the login screen;
- type in any user name, e.g. 'Admin', to log in;
- press LOGIN button to move to the chat room selection screen;
- select any chat room;
- see the Internet connection status text in the top bar;
- switch on / off the Internet connection;
- notice that the 'online' text doesn't change.

Expected result: correct information about the Internet connection status is displayed.

Actual result: the information about the Internet connection status doesn't change; it displays continuously the same information 'online' no matter if the mobile device is actually online or offline.

Priority: low, medium, high.

Severity: trivial, minor, <u>normal</u>, major, critical, blocker.

17. Strings ':) ' and ':(' are not converted into emojis.



Steps to reproduce:

- run the App to navigate to the login screen;

- type in any user name, e.g. 'Admin', to log in;

- press LOGIN button to move to the chat room selection screen;

- select any chat room;

- type ':) 'and ':('as a new message;

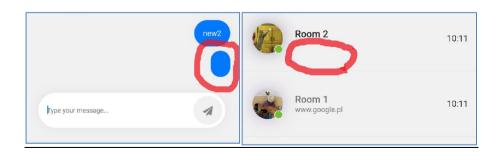
Expected result: strings ':) 'and ':('are converted into emojis; **Actual result**: strings ':) 'and ':('are not converted into emojis.

Priority: low, medium, high.

Severity: trivial, <u>minor</u>, normal, major, critical, blocker.

VI. Chat room screen - Other issues.

18. It is possible to send a message with space character only.



Steps to reproduce:

- run the App to navigate to the login screen;
- type in any user name, e.g. 'Admin', to log in;
- press LOGIN button to move to the chat room selection screen;
- select any chat room;
- in the new message input field press space and send message;
- see the blue oval representing the last sent message.

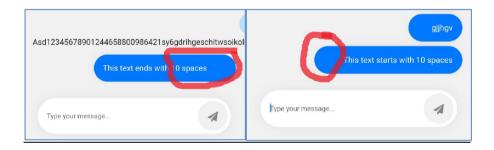
Expected result: it is <u>not</u> possible to send a message without any actual text and with space character only.

Actual result: it is possible to sent a message without any actual text and with space character only. **Additional note**: other subsequent result of this issue is that there is no last message content displayed in the chat room selection screen.

Priority: <u>low</u>, medium, high.

Severity: trivial, minor, normal, major, critical, blocker.

19. Space characters are not cut off.



Steps to reproduce:

- run the App to navigate to the login screen;
- type in any user name, e.g. 'Admin', to log in;
- press LOGIN button to move to the chat room selection screen;
- select any chat room;
- in the new message input field type any message and end it (or start it) with e.g. 10 space characters:
- see the blue oval with the last message sent; there is an empty space at the end of the message (or at the beginning of the message) where space characters had been typed in.

Expected result: the space characters at the end (or at the beginning) of the message are cut off.

Actual result: the space characters at the end (or at the beginning) of the message are <u>not</u> cut off.

Priority: low, medium, high.

20. Avatar and username are not aligned properly – avatar is placed automatically above and in the middle of the username, thus it is often pushed away from the left edge of the screen, when the username is long enough. This makes the chat message (or the avatar) either cut off or not visible at all.



Steps to reproduce:

- run the App;
- log in with a random username of e.g. 30 or more characters;
- select any chat room;
- write any message and send it;
- see that the avatar is placed automatically above and in the middle of the user login, thus it is pushed away from the left edge of the screen if the username is long enough; as the result the message is pushed to the right.

Expected result: both avatar circle and username are aligned in an order that <u>doesn't</u> affect the possibility to read the message or view the avatar image.

Actual result: both avatar circle and username are aligned in an order that affects the possibility to read the message or view the avatar image (when the username is long enough).

Priority: low, medium, high.

Severity: trivial, minor, normal, <u>major</u>, critical, blocker.

21. Microphone icon is not active.



Steps to reproduce:

- run the App to navigate to the login screen;
- log in with a random username, e.g. 'Admin', to log in;
- select any chat room;
- tap the microphone icon in the upper right corner of the screen.

Expected result: microphone icon is active, voice message recording is possible.

Actual result: microphone icon is not active, voice message recording is not possible.

Priority: low, medium, high.

Severity: trivial, minor, normal, major, critical, blocker.

22. Text of the chat message is not being wrapped, either while typing or after having been sent.



Steps to reproduce:

- run the App to navigate to the login screen;
- log in with a random username, e.g. 'Admin', to log in;
- select any chat room;
- write any message that is longer than the width of the message input field and send it.

Expected result: the message is being wrapped and the message input field expands vertically to accommodate the whole text.

Actual result: the message is <u>not</u> being wrapped and the message input field <u>doesn't</u> expand accordingly; the user can't see the whole message while typing or after having it sent, because the part of the message that doesn't fit the screen width is being cut off; there is no horizontal scrollbar either to fix this.

Additional note: the user can press and hold the text that is being typed in, and then slide to the right to see the beginning of the message; after sending the message this is no longer possible.

Priority: low, medium, high.

Severity: trivial, minor, normal, major, critical, blocker.

23. When a new message is sent, the chat doesn't automatically scroll down to its location.

Steps to reproduce:

- run the App to navigate to the login screen;
- log in with a random username, e.g. 'Admin', to log in;
- select any chat room;
- scroll up, not to see the last messages at the bottom of the chat;
- write any message and send it.

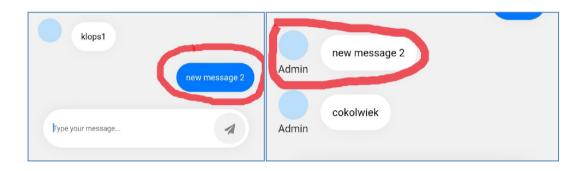
Expected result: the chat automatically scrolls down to the last chat message.

Actual result: the chat <u>doesn't</u> automatically scroll down to the last chat message; the user needs to scroll down manually to see the last message.

Priority: low, medium, high.

Severity: trivial, minor, <u>normal</u>, major, critical, blocker.

24. Every new message typed by the user is displayed on the right side of the screen and has a dark-blue background. After a few minutes <u>some</u> of the messages move to the left side of the screen and the background color becomes light-blue.



Steps to reproduce:

- run the App;
- log in with a random username, e.g. 'Admin', to log in;
- select any chat room;
- write any message and send it;
- see that the new message is sticked to the right side of the screen;
- reload the chat or go backwards and return to the chat.

Expected result: there is an obvious and consistent mechanism o marking messages written by the user.

Actual result: there is <u>no</u> obvious and consistent mechanism o marking new messages written by the user; some of the messages remain sticked to the right side of the screen and have dark-blue background; some of the messages move to the left side of the screen and their background color turn light-blue.

Additional note: some messages, either typed by the user or by other users, remain without avatar nor username, in the dark blue oval and aligned to the right side of the screen. There is no way to differentiate which user wrote which message.

Priority: low, medium, high.

25. There is no information on the maximum length of the message. Sending a very long message is not possible.

Steps to reproduce:

- run the App;
- log in with a random username, e.g. 'Admin', to log in;
- select any chat room;
- type a random text, between 3634 16164 characters long, into the new message input field;
- send the message.

Expected result: the message is either displayed totally or information about maximum length of the message is provided and prevents the user from sending it.

Actual result: message is displayed for a few seconds and then disappears.

Additional note: I used two dummy texts from https://randomtextgenerator.com/ for this test; the first one consisted of 3634 characters (spaces included), the second one - of 16164 characters (spaces included).

Priority: low, medium, high.

Severity: trivial, minor, normal, major, critical, blocker.

26. The reverse button points the wrong direction.



Steps to reproduce:

- run the App to navigate to the login screen;
- login with a random username, e.g. 'Admin', to log in;
- select any chat room;
- see the reverse button in the upper-left corner of the screen.

Expected result: the button points to the left, because it leads backwards.

Actual result: the button points to the right and thus suggests in leads forwards.

Priority: low, medium, high.

27. When mobile device is turned horizontally the whole chat disappears and doesn't reload. The user needs to reload it manually sliding upwards with a finger (reload icon appears and the chat is reloaded).

Steps to reproduce:

- run the App;
- log in with a random username, e.g. 'Admin', to log in;
- select any chat room;
- turn the mobile device horizontally;
- slide upwards with a finger to reload the chat.

Expected result: the chat is visible continuously no matter the position of the mobile device.

Actual result: the chat disappears when the mobile device is turned horizontally.

Additional note: when the mobile device is turned horizontally and then vertically, the chat remains invisible.

Priority: low, medium, high.

Severity: trivial, minor, normal, <u>major</u>, critical, blocker.

28. The arrow icon in the new message input field is greyed out and thus suggests it's inactive. It isn't animated nor it changes in any way when pressed.



Steps to reproduce:

- run the App;
- log in with a random username, e.g. 'Admin', to log in;
- select any chat room;
- write any message;
- press the arrow icon on the right in order to send a message.

Expected result: the arrow icon .

Actual result: the arrow icon is <u>not</u> greyed out, <u>nor</u> it's animated or changes in any way to assure the user the message has been sent.

Additional note: the arrow icon is greyed out and it's <u>not</u> animated or <u>doesn't</u> change in any way to assure the user the message has been sent.

Priority: low, medium, high.

VII. UX / Standard notes.

- 29. There are some issues related to the App behaviour that are not bugs in my opinion but still negatively affect user's experience and don't follow the modern mobile app standards, especially when it comes to sending messages:
- 29.1. There is no possibility to attach any file (a document, a photo etc.) to the chat message.
- 29.2. When an empty message is about to be sent, there is no relevant information provided to the user.
- 29.3. Email addresses, URL's or phone numbers are not turned into links when typed into the new message input field and sent; there is no possibility to associate them with any app installed on the phone.
- 29.4. There is no possibility to enlarge the chat message font-size manually with fingers.
- 29.5. The App is not fully manageable it the one-handed mode; sometimes cradled mode or two-handed mode is needed, especially in the chat room selection screen (chat rooms to be selected are fixed to the upper side of the screen).
- 29.6. There is no possibility to use ENTER keyboard and break the line while typing a new message.

VIII. Performance notes.

- 30. There are some performance issues I would like to point out and suggest they should be tested more profoundly with a professional tool:
- 30.1. Chat rooms in the chat room selection screen take ca. 1000 milliseconds to load;
- 30.2. Sometimes the chat room avatars doesn't load at all.
- 30.3. Sometimes the chat room avatars are actually gifs (that can unnecessarily lower the performance).
- 30.4. Chat rooms take ca. 1000-2000 milliseconds to fully load and display all the messages.
- 30.5. New message take ca. 500-1000 milliseconds to be displayed after having being sent.
- 30.6. New message take ca. 10000 milliseconds to be displayed in the chat room selection screen (as the last message).

30.7. Scrolling the chat history upwards or downwards is smooth most of the times, however the chat freezes for a 1000-2000 milliseconds every now and then.

IX. Specification notes.

31. The specification document is incomplete and only vaguely describes the functionalities of the App that's being tested. The testing process was hindered because the tester needed to predict, on many occasions, how the App should behave.