

Exercise 5 – User Guide

This Wiki is structured as a step-by-step user guide, showing all required features, edge cases, and tester notes.

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Environment Setup

In “src” folder:

docker-compose up –build

- Ensure all services are running.
- Health check endpoint returns 200.

```
PS C:\Users\Guse\Documents\Mail\src docker-compose up --build
time="2025-09-16T11:22:09+03:00" level=warning msg="C:\Users\Guse\Documents\Mail\src\docker-compose.yml: the attribute `version` is obsolete, it will be ignored, please remove it to avoid potential confusion"
[+] Building 5.0s (2/24) FINISHED
   => [blacklist-server internal] load build definition from dockerfile          docker:desktop-linux
   => => transferring dockerfile: 569B                                         0.0s
   => [blacklist-server internal] load metadata for docker.io/library/gcc:12      2.2s
   => [blacklist-server internal] load build context                           0.0s
   => [blacklist-server internal] load dockerignore                          0.0s
   => => transferring context: 2B                                           0.0s
   => [blacklist-server 1/5] FROM docker.io/library/gcc:12@sha256:c2e83239a47490078695f36ec1c61ca2be4382351ld01 0.0s
   => => resolve docker.io/library/gcc:12@sha256:c2e83239a47490078695f36ec1c61ca2be4382351ld01@sha259a47490078695f36ec1c61ca2be4382351ld915d41146a5e67d749 0.0s
   => [blacklist-server internal] load build context                           0.0s
   => => transferring context: 1.14kB                                         0.0s
   => CACHED [blacklist-server 2/5] WORKDIR /usr/src/app                      0.0s
   => CACHED [blacklist-server 3/5] COPY ./src .                                0.0s
   => [blacklist-server internal] load build context                           0.0s
   => => transferring context: 1.14kB                                         0.0s
   => CACHED [blacklist-server 4/5] RUN g++ -std=c++17 -pthread -o MailProject src/main.cpp src/TCP_Server.c 0.0s
   => [blacklist-server internal] load dockerignore                          0.0s
   => => exporting layers                                         0.0s
   => => writing image sha256:eaf787143650cd023f545e5e63bfc3d494af602529e1bd1e50c55ce45b6577 0.0s
   => => naming to docker.io/library/src_blacklist_server                  0.0s
   => [blacklist-server internal] resolving provenance for metadata file        0.0s
   => [mail-server internal] load build definition from dockerfile           0.0s
   => => transferring dockerfile: 243B                                         0.0s
   => [mail-server internal] load build context                           0.0s
   => => writing image sha256:ea9f787143650cd023f545e5e63bfc3d494af602529e1bd1e50c55ce45b6577 1.0s
   => => naming to docker.io/library/node:20                               0.0s
   => [mail-server auth] library/dockerpull token for registry-1.docker.io    0.0s
   => [mail-server internal] load dockerignore                          0.0s
   => => transferring context: 2B                                           0.0s
   => [mail-server 1/5] FROM docker.io/library/node:20@sha256:abc9c98af22ea2c5d33435143d9d8a5f6f191e1e1938a7650 0.0s
   => => resolve docker.io/library/node:20@sha256:abc9c98af22ea2c5d33435143d9d8a5f6f191e1e1938a7650@sha256:abc9c98af22ea2c5d33435143d9d8a5f6f191e1e1938a7650 0.0s
   => [mail-server internal] load build context                           0.3s
   => => transferring context: 189.90KB                                         0.2s
   => CACHED [mail-server 2/5] WORKDIR /app                                0.0s
   => CACHED [mail-server 3/5] COPY package.json ./                         0.0s
   => CACHED [mail-server 4/5] RUN npm install                            0.0s
   => CACHED [mail-server 5/5] COPY .                                     0.0s
   => [mail-server internal] resolving provenance for metadata file        0.0s
   => => exporting layers                                         0.0s
   => => writing image sha256:c625fa6ebc797ce74d15c4534771de11184900647/c874d6a6344c756c74221 0.0s
   => => naming to docker.io/library/src-mail-server                   0.0s
   => [mail-server internal] resolving provenance for metadata file        0.0s
[+] Running 4/4
  ✓ Container mail-mail-network   Created
  ✓ Container mail-mongodb       Created
  ✓ Container mail-blacklist-server Created
  ✓ Container mail-node-server   Created
Attaching to mail-blacklist-server, mail-mongodb, mail-node-server
```

```
Guse@Almogpc MINGW64 ~/Documents/Mail (exercise5)
$ curl -i http://localhost:3000/health
HTTP/1.1 200 OK
X-Powered-By: Express
Access-Control-Allow-Origin: *
Content-Type: application/json; charset=utf-8
Content-Length: 21
ETag: W/"15-prcIqirBaF3FxQJ81FdTbZcuQg"
Date: Tue, 16 Sep 2025 08:26:36 GMT
Connection: keep-alive
Keep-Alive: timeout=5

{"ok":true,"db":"up"}
```

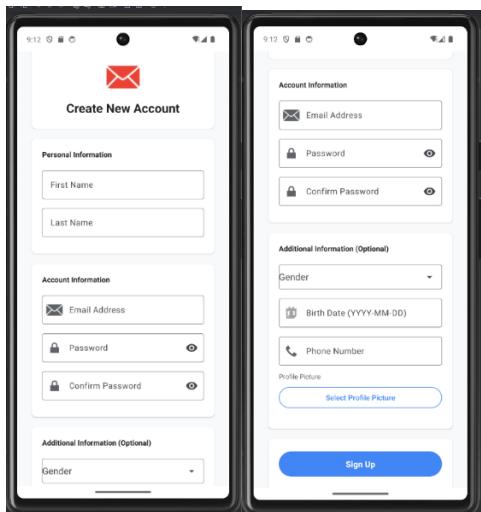
	Name ↑	Created	Size	Scheduled exports <small>BETA</small>	Actions	
✗	28d446359099df322ed9b70f8ad13	13 hours ago	0 Bytes	Inactive		
✗	33ab6992ceb64824a2249e8c1cb84	1 hour ago	0 Bytes	Inactive		
✗	src_mongodb_data	13 hours ago	0 Bytes	Inactive		

Registration & Login

Registration

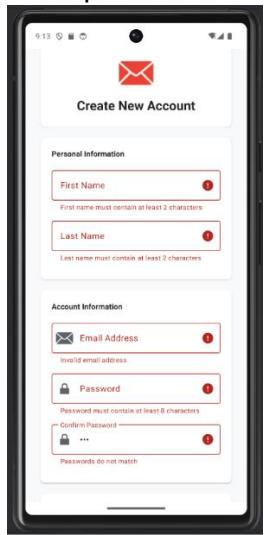
Steps:

1. Fill in all the required fields (first name, last name, email, password, e.g.), and optionally add fields like phone number or profile picture if desired. Then press '**Sing Up**'.
2. On success → redirect to Login.

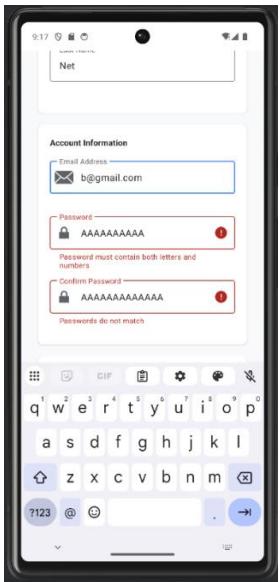


Edge Cases:

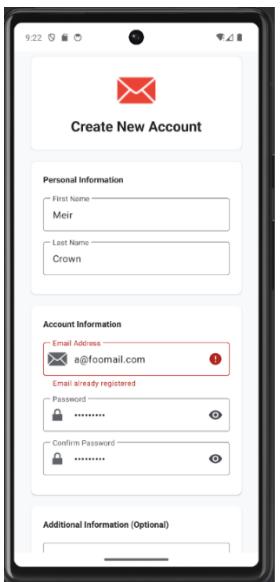
- Examples of invalid email and missing fields.



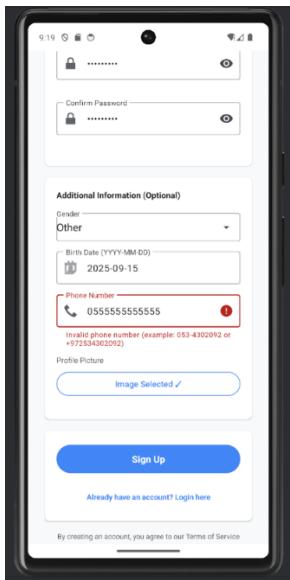
- Examples of validation errors include a weak password, which must be at least eight characters long and contain both letters and numbers, and a case where the password and its confirmation do not match.



- Examples of existing user



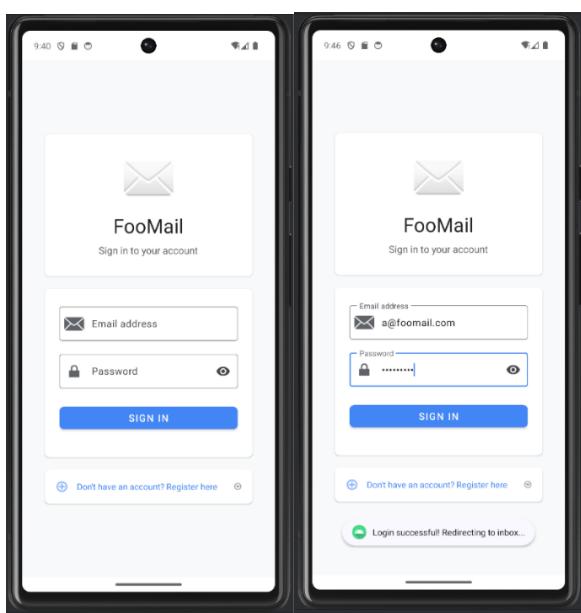
- Examples of invalid phone number.



Login

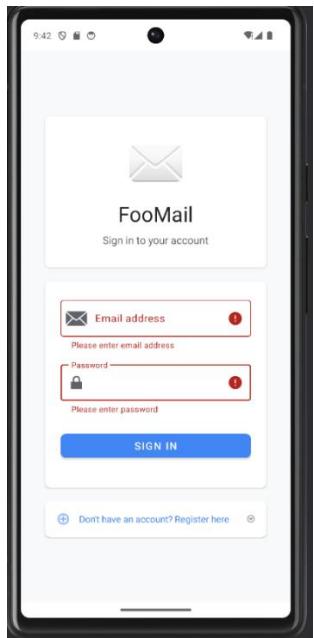
Steps:

1. Enter email + password.
2. On success → redirect to Inbox.

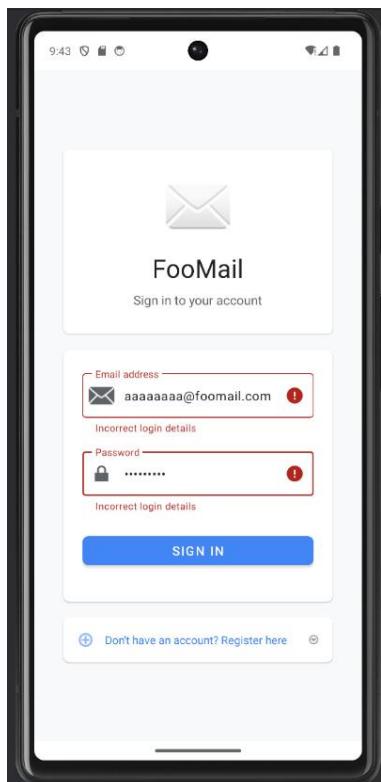


Edge Cases:

- Missing fields.

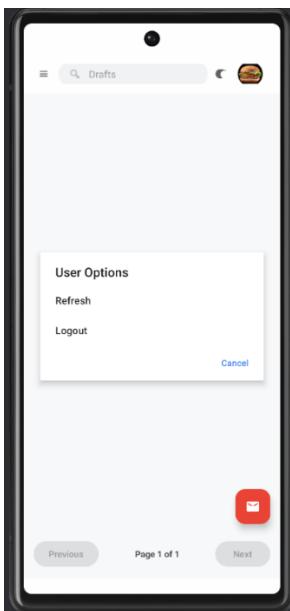


- Wrong password or email.



Logout

- Redirect back to Login screen. To logout you are need to press on the photo in the top-right bar and then press **Logout**.
- Redirect back to Login screen.



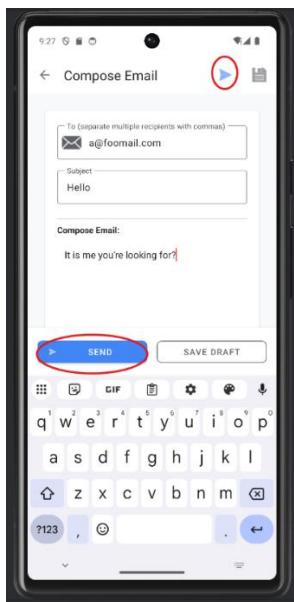
Emails

Main Actions

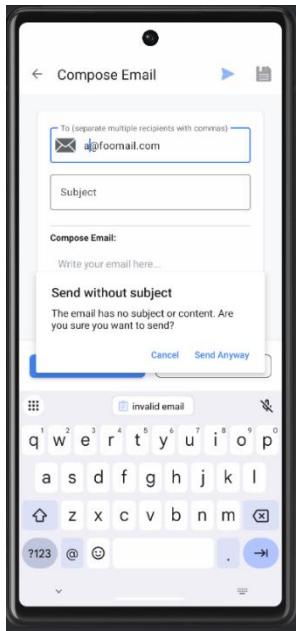
- To create a new email, click on the red envelope icon.



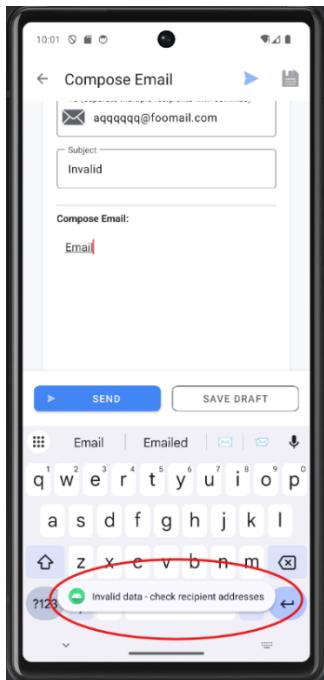
- Send with **Send button or blue arrow**.



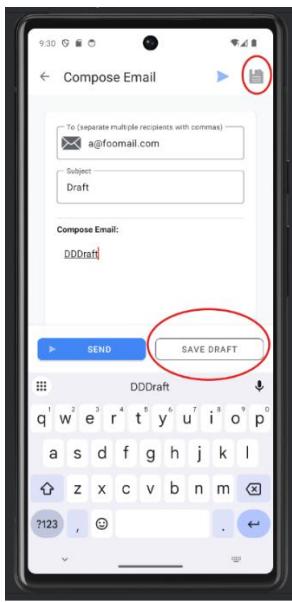
- Sending without subject/body → shows warning.



- Invalid email address → blocked.

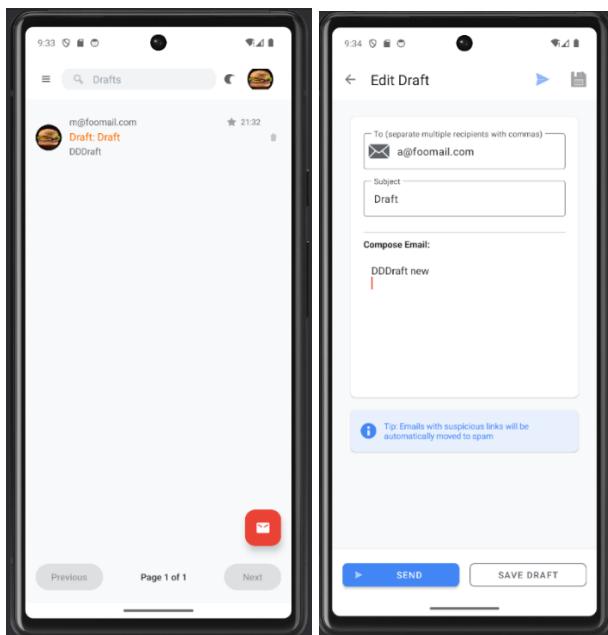


- Save draft with **Draft button** or **disk icon**.



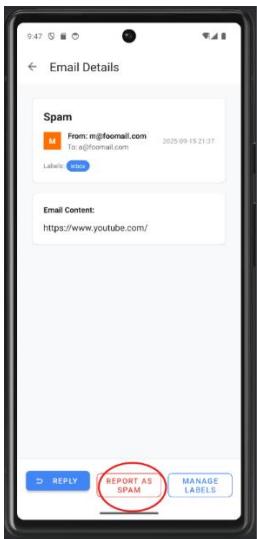
- Edit draft under **Drafts label**.

A draft can be saved only once, like Gmail. After it is saved, the draft can be opened for editing and then sent as an email.



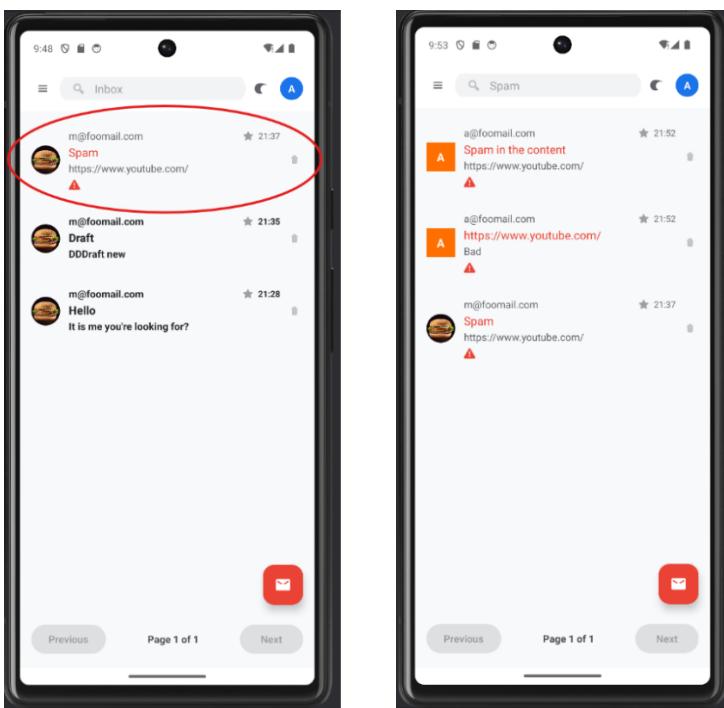
After sending, the draft is removed from Drafts.

- **Mark as Spam:** the message is moved to the Spam folder and its embedded URLs are reported in accordance with the server's spam-handling policy..



The Spam detection logic is based on the server conditions defined in Exercise 3. For example, a message is considered Spam if its URL starts with http. This validation happens on the server side, and the client displays the result accordingly.

- First spam message stays in Inbox with warning; subsequent spam goes directly to Spam.



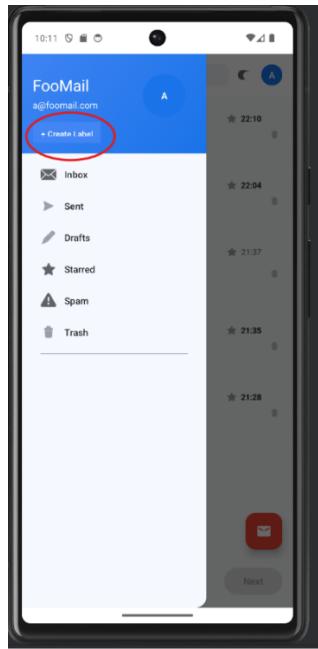
Labels

Main Actions

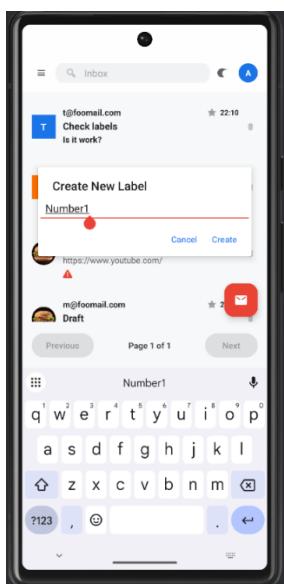
Create, edit, delete labels via sidebar.

Steps:

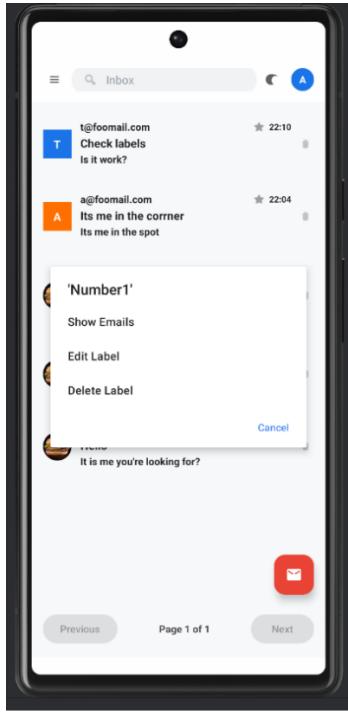
1. Press create label in the side bar



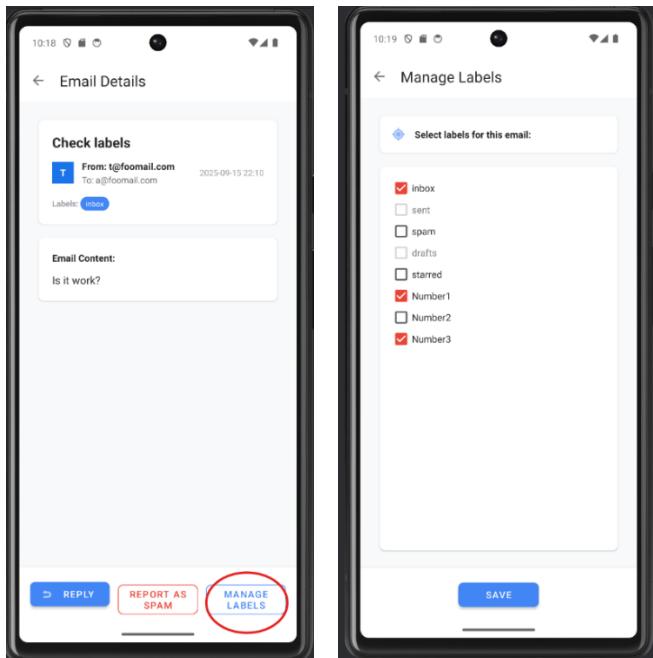
2. Select label name and press create



After you choose label from the side bar you can see the mail, edit the name or delete the label. When you edit the name of an email, the updated name is reflected also in all tagged labels.



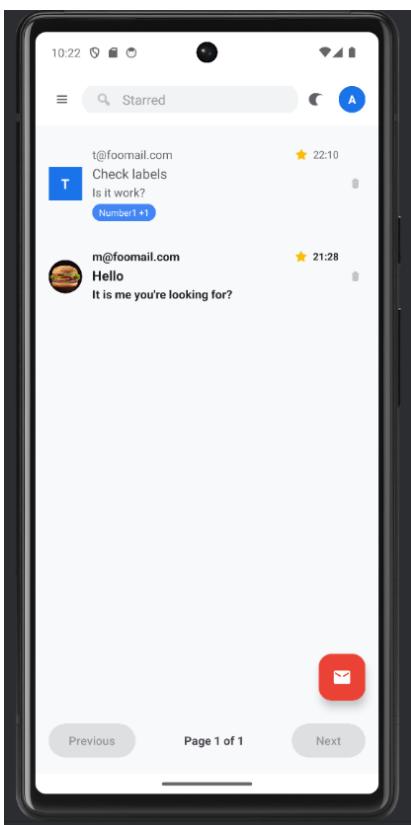
- Tag/untag labels on each mail.



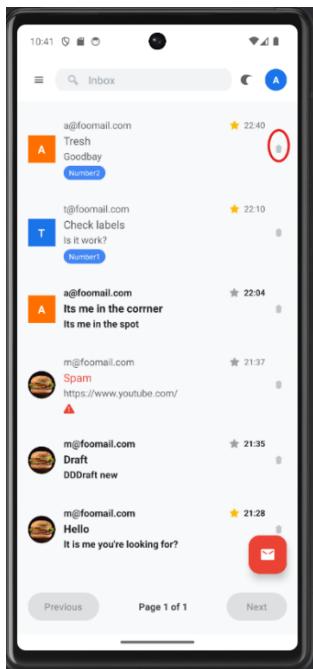
- You can see the mail in the relevant label



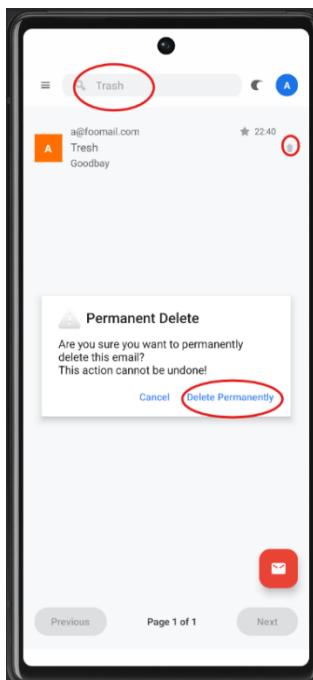
- Star a mail → press **Star icon**.



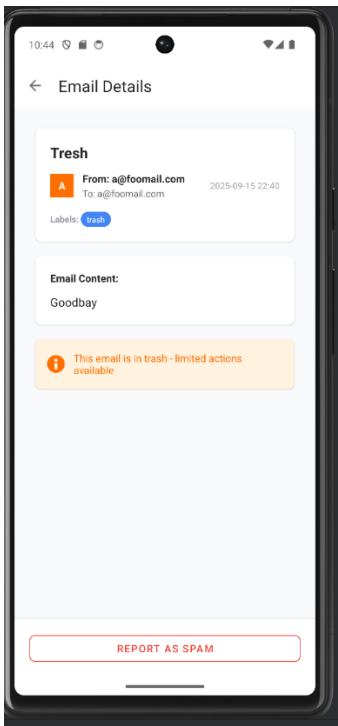
- Delete label, you need only to press on the **Trash icon**.



- And again, in the **Trash** label to delete forever.



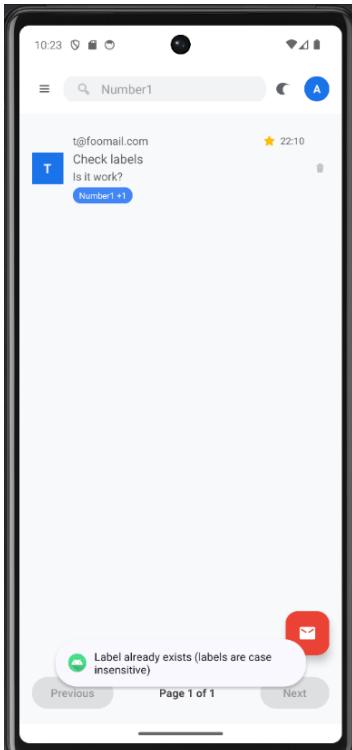
- The action on the mail are limited



Mails deleted are removed from all labels in this account .

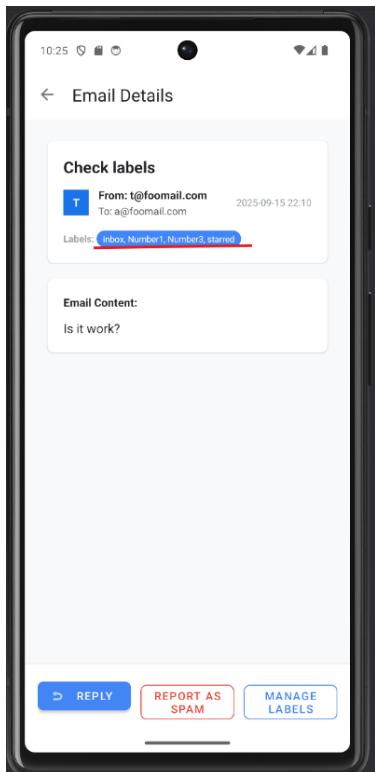
Edge Cases

- Cannot create a label that already exists.

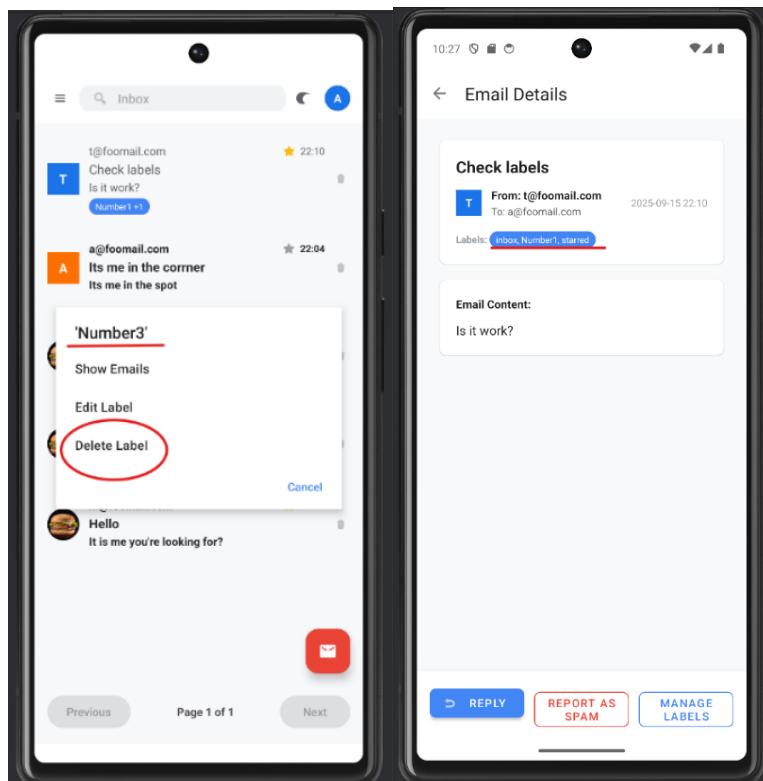


- Delete label with mails attached the mail remain under Inbox and the other labels.

Before:



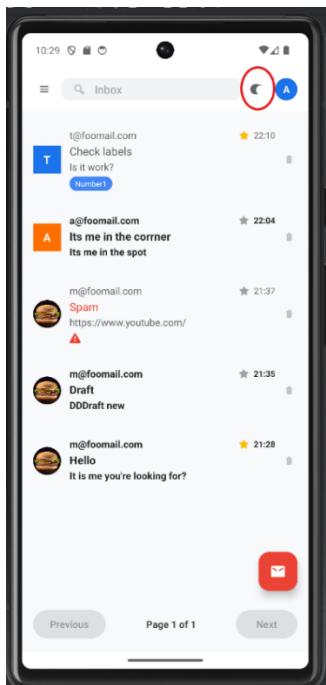
After:



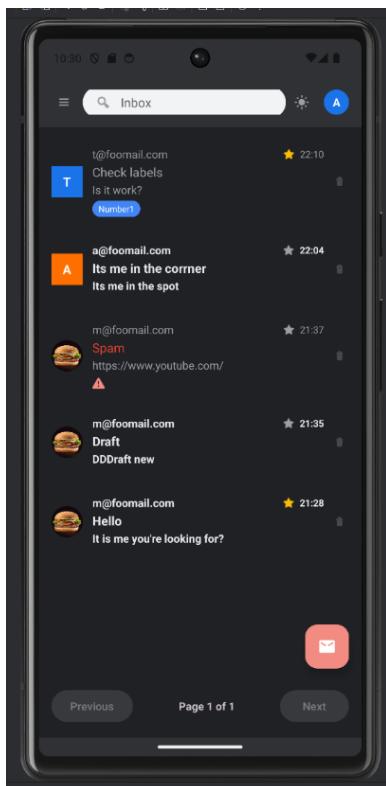
Note: When editing the name of a mail, the updated name is reflected also in all tagged labels.

Dark Mode

- Change mode with top-right button (sun/ toggle):



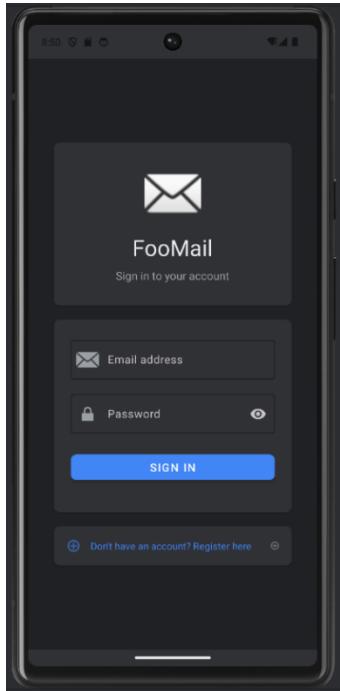
Mail box



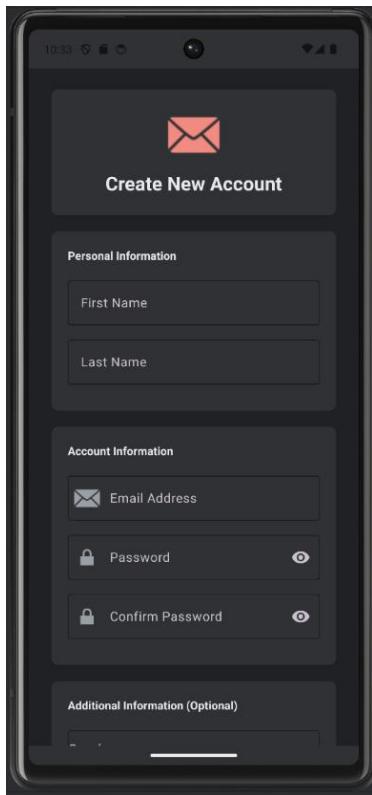
Read emails are displayed in regular font, while unread emails are displayed in bold. This behaviour is consistent in both normal mode and dark mode.

The light or dark mode toggle is available only inside the application, per user. Therefore, if a user logs out while in dark mode, the system will remain in dark mode also on the external screens (registration and login)

Login

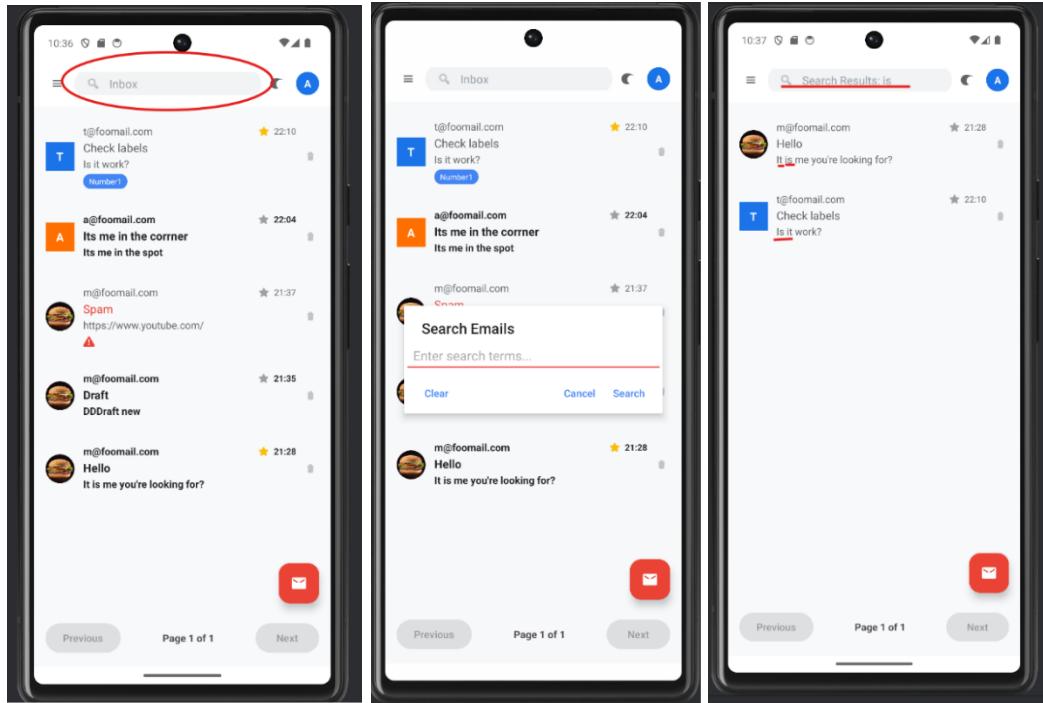


Register



Search

- Use the search bar at the top to find emails by subject, sender, or content.



The search works consistently in both normal and dark mode.