# **Lab 4: A Simple Web-Based Email Program**

# **Team Members:**

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## 1. How to run the code:

- Run the Back-End program on local host <a href="https://localhost:8080/">https://localhost:8080/</a> via Spring boot application
- Run the Front-End program on local host <a href="https://localhost:4200/">https://localhost:4200/</a> via Angular application

# 2. The Design Patterns used

## • Delegation Pattern

- ✓ Relation between services and controllers
- ✓ Relation between services and models
- ✓ Relation between some services such as userFileService and MessageService

#### • Interface Pattern

- ✓ Relation between MessageCriteria class and MessageService
- ✓ Relation between *UserCriteria* class and *UserService*

## • Prototype Pattern

✓ Both models objects can be cloned

#### Filter Pattern

✓ Applied in searching for messages and contacts

#### • Marker Interface Pattern

✓ in cloning objects , and serialization and deserialization of Json
Objects

## 3. The Design Decisions made

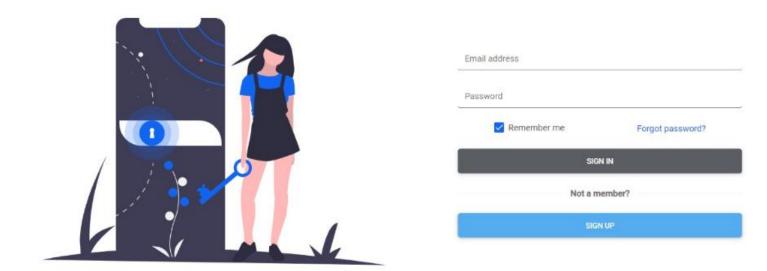
- Sending messages can be from one user to multiple users
- User can use only one custom folder to drag the needed files inside
- In searching for messages by "to" attribute if you put multiple users, you will get messages to either of them (inclusively)

# 4. <u>User Guide And UI Snippets</u>

• Sign-Up & Sign-In

Once you have opened the application, you will encounter the following page

#### Email

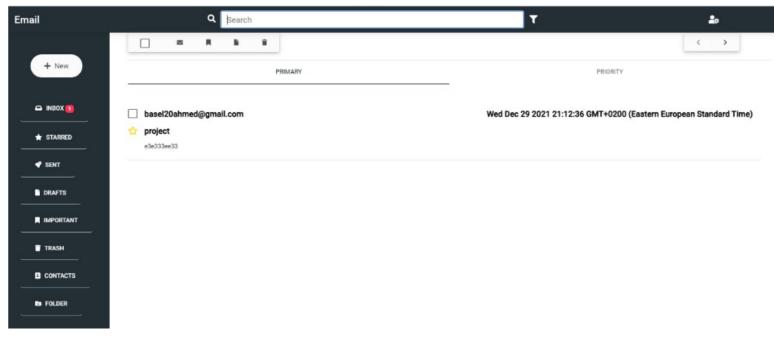


- ✓ **If you are already a user** to our application, **fill the required data** correctly and click on **Sign-In**
- ✓ **If you are a new user** to our application, use the **sign-up button** and you will be redirected to the following page to register and **get your account**, **but** you will still **need to sign-in**



Forgot password?
ISTER

## • The Profile Page



#### • Sending new message

- ✓ if you want to send a message to someone, click on *+New* on the top left corner and message-box will pop-up to fill
- ✓ you can send any type of attachments you want using the attachment icon in the message-box bottom
- after writing the message, you can decide to send it or save it in the drafts folder

## • Searching

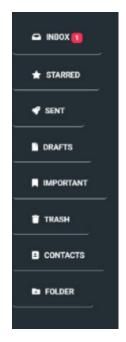
There is two kinds of searching provided:

- ✓ if you type what you are searching for in the search text
  box at the top of screen, default search is applied which
  will bring any message from the the inbox, sent, or even
  the trashed messages that somehow matches what you
  are typing in body, receiver, sender, subject, or even the
  date of sending the message
- ✓ if you apply the filter search using the flask icon on the
  right of the search text box, a message-like form will pop
  up , and you should enter one or more value to filter
  messages through



#### • Navigating Messages

- ✓ You can choose any category from those on the left side of screen, and the required messages will appear but on many
- ✓ You have only one custom folder called *Folder* where you can keep what you want from the messages rather than the other provided categories
- ✓ You have a contacts button where you can keep some other
  user contacts(you can add users, delete them or even edit
  their names)
- ✓ You have to double click the message in this list in order
  to be shown





- ✓ to **star** a message, **check the golden star** next to it
- ✓ you can also select some messages, by checking the square box
  on its top left corner then you can move the selected to a certain
  category

#### Log-Out

✓ on the top right corner click on the icon and a menu will
appear so that you can choose to log-out



## 5. The UML links

https://drive.google.com/drive/folders/12KJYuVdg5ybQKHl5KDrD6\_okn8gn6FNC?usp=sharing