Assignment 4

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- **Application description:**

In this application we want to design and implement a email server application which is very popular and have a huge user base; we will generally provide the user with the basic email operations like show inbox, sign in, signup and send messages.

In the sign in/sign up component we used a template from the internet.

In the front end we used font awesome and bootstrap libraries.

- **Steps to run code:**

1-open the website by write ng serve –open in the terminal of the angular

2-run the server by compiling the java spring boot file

3- We run the website at port 4200

4-the GUI should open then, and you can use the program as you can

- **Design patterns:**

1-we have used factory DP to create the objects of the different mail boxes trash, inbox and sent as the mail boxes are considered a common product the factory DP could enable the user to create objects without exposing the creation logic to the client.

2-we have used singleton DP to make user class have only one instance as the application would have only one singed in user and the attributes of the class should not change.

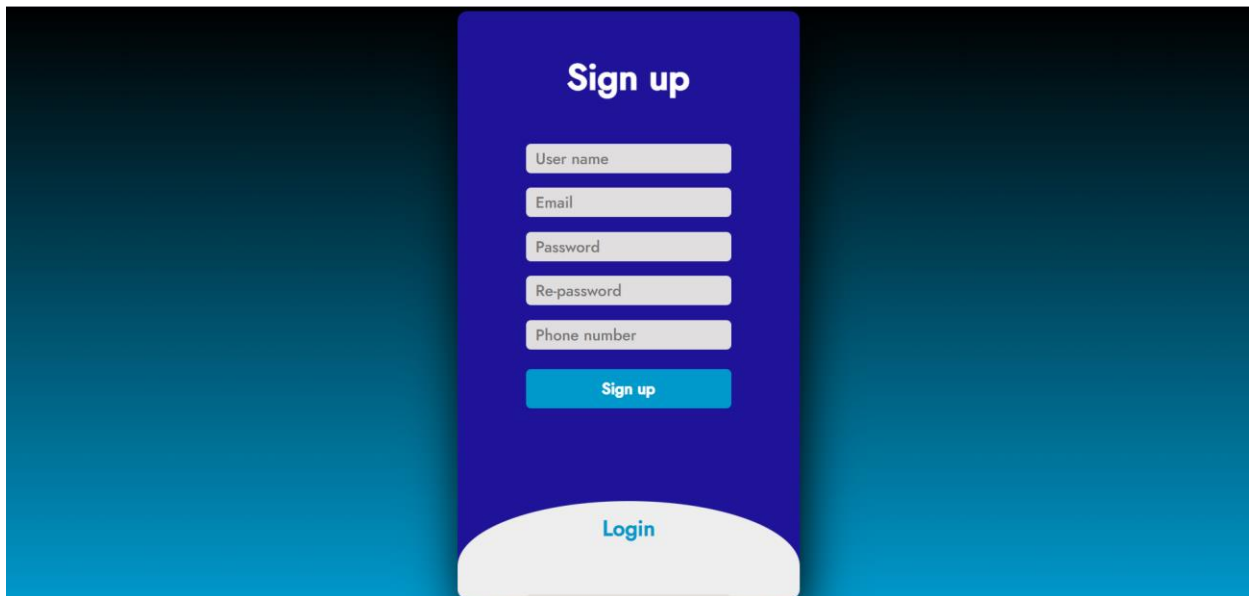3- we have used adapter DP to cast attributes of the functions.

4- we have used filter design pattern to search using different attributes as date, body and sender.

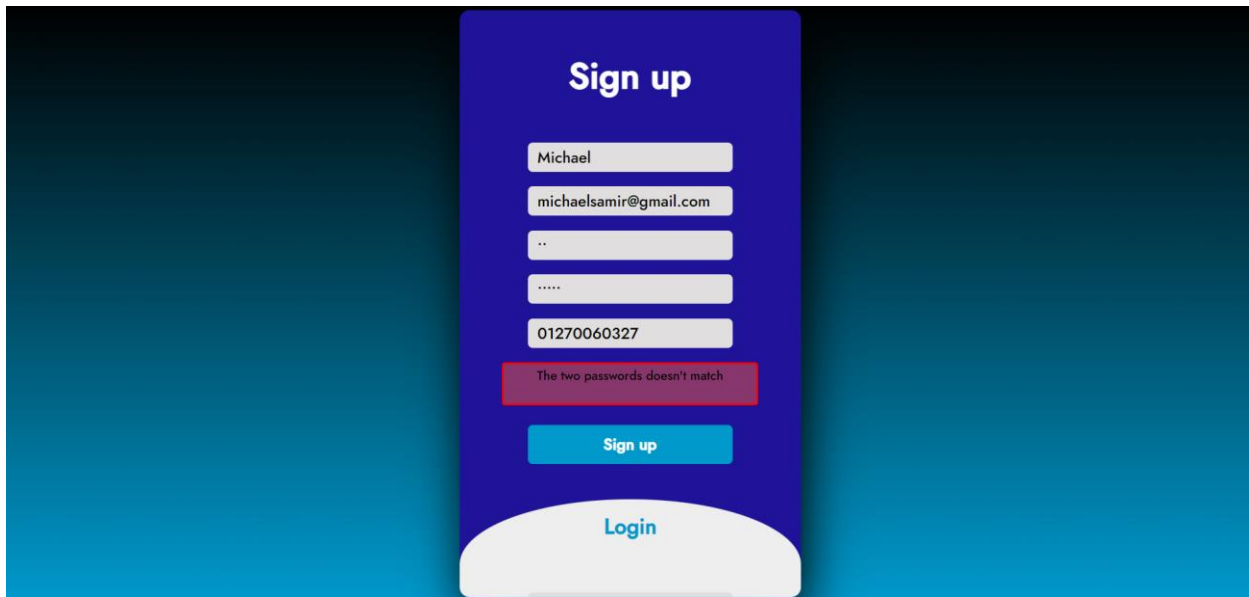5-we have used many interfaces to achieve abstraction and make client deal with interfaces not the direct object.

6-we used polymorphism to make the classes more flexible.

- **User guide**
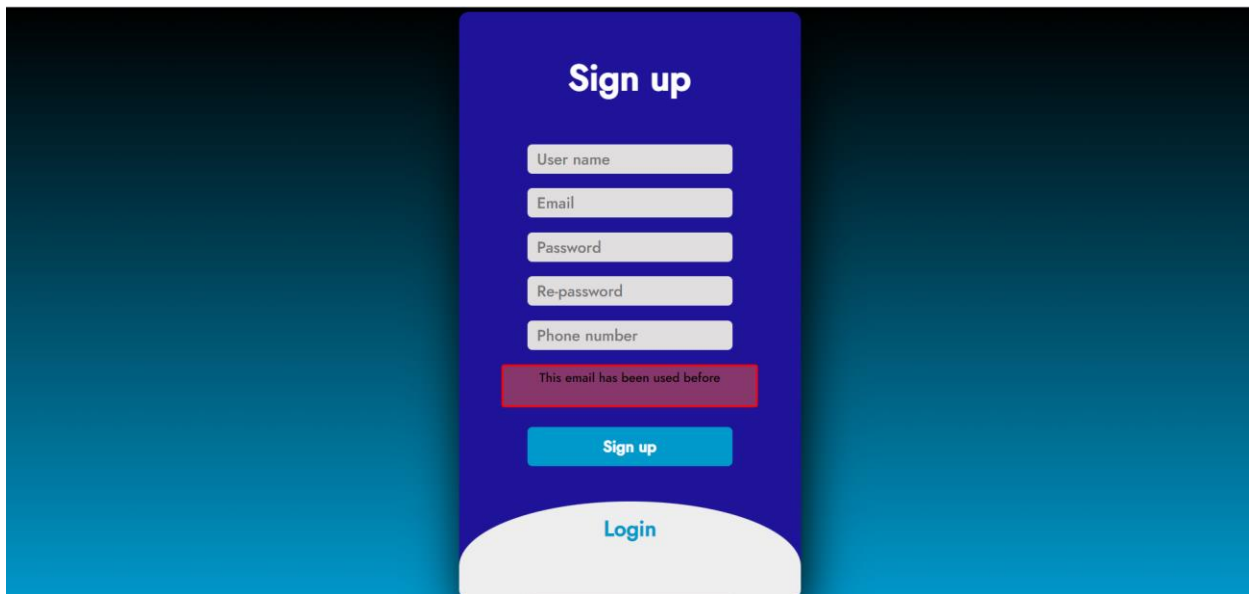
When we run the web page, we will find this page

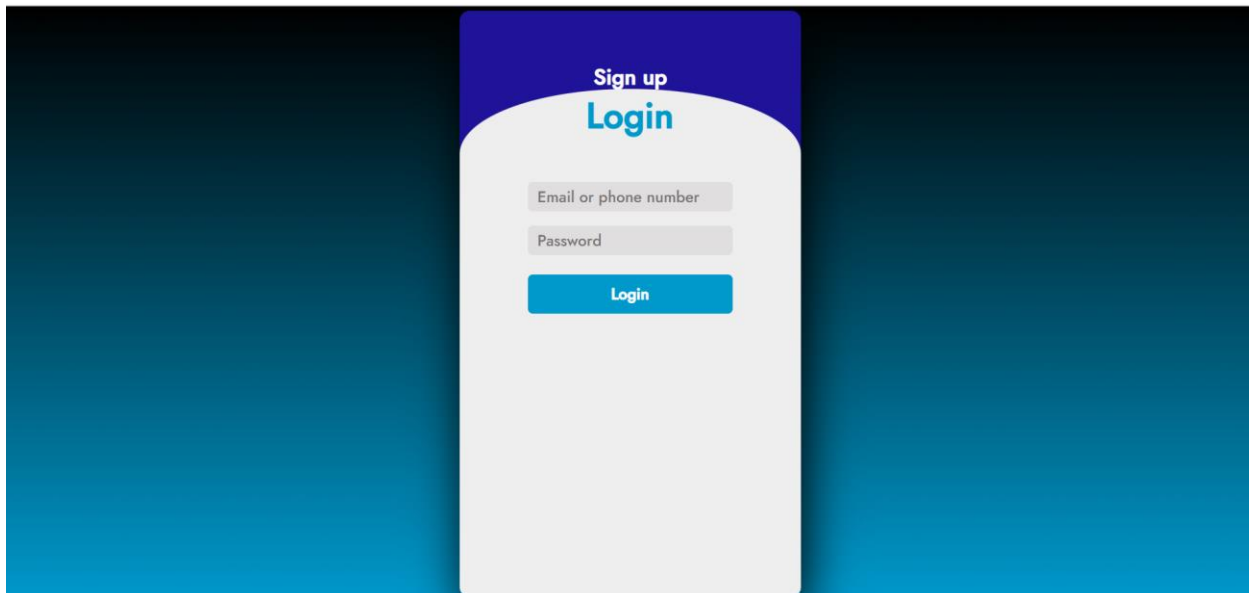And when the password and the re-password is not the same a warning message will be displayed

When you use email that is used before

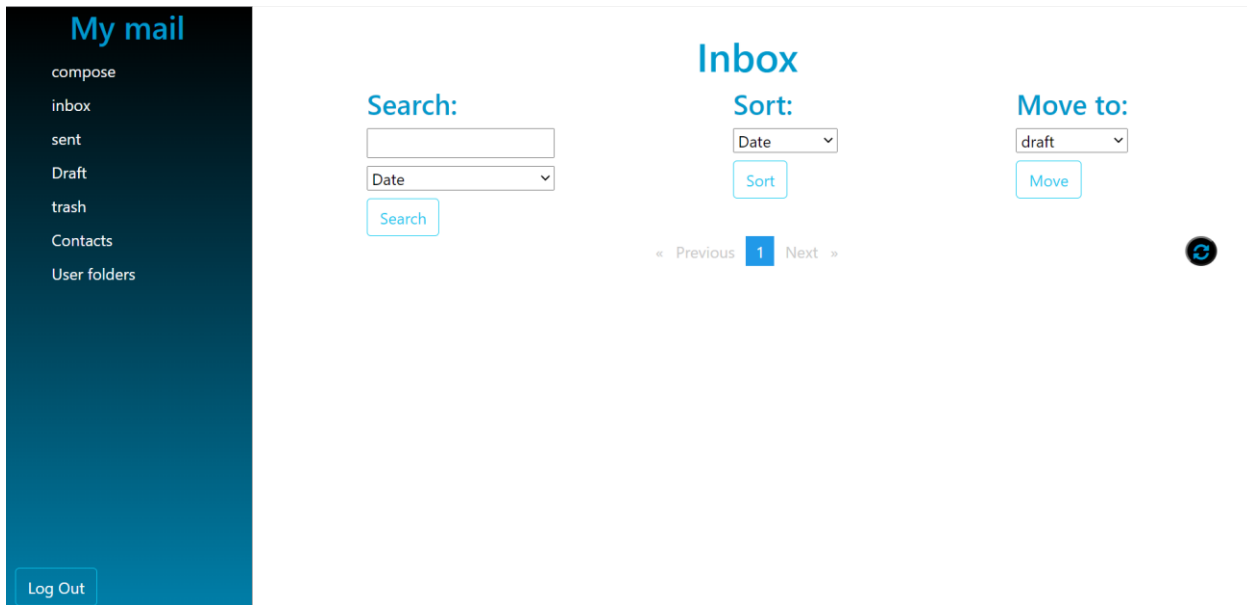

A warning message will be displayed
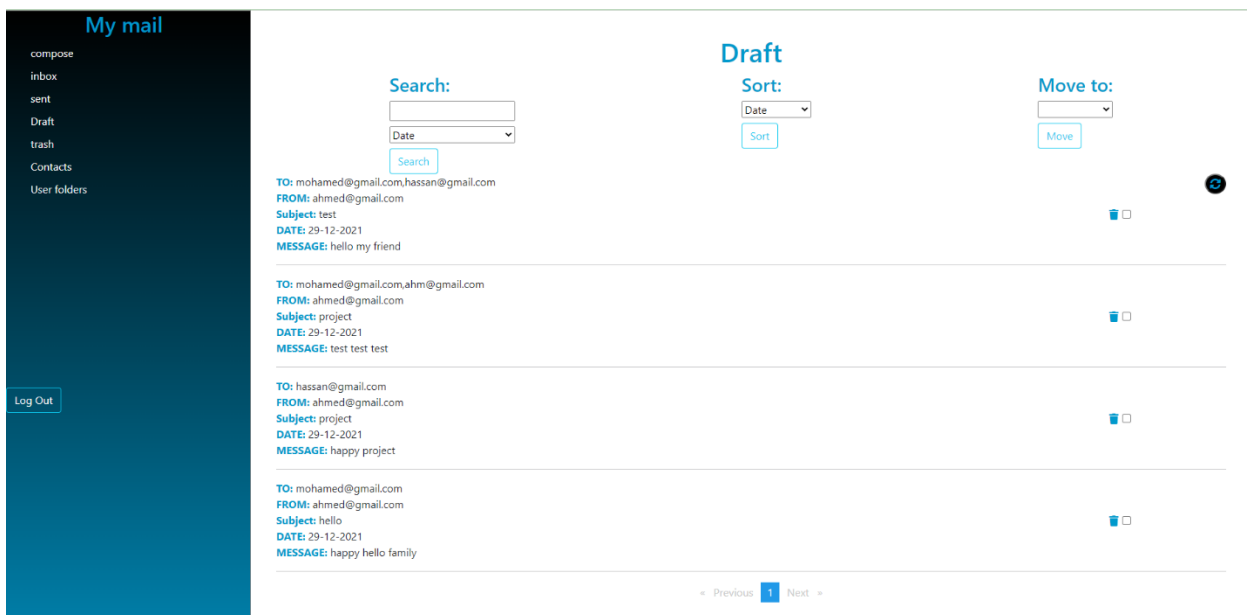
You can log in through this page
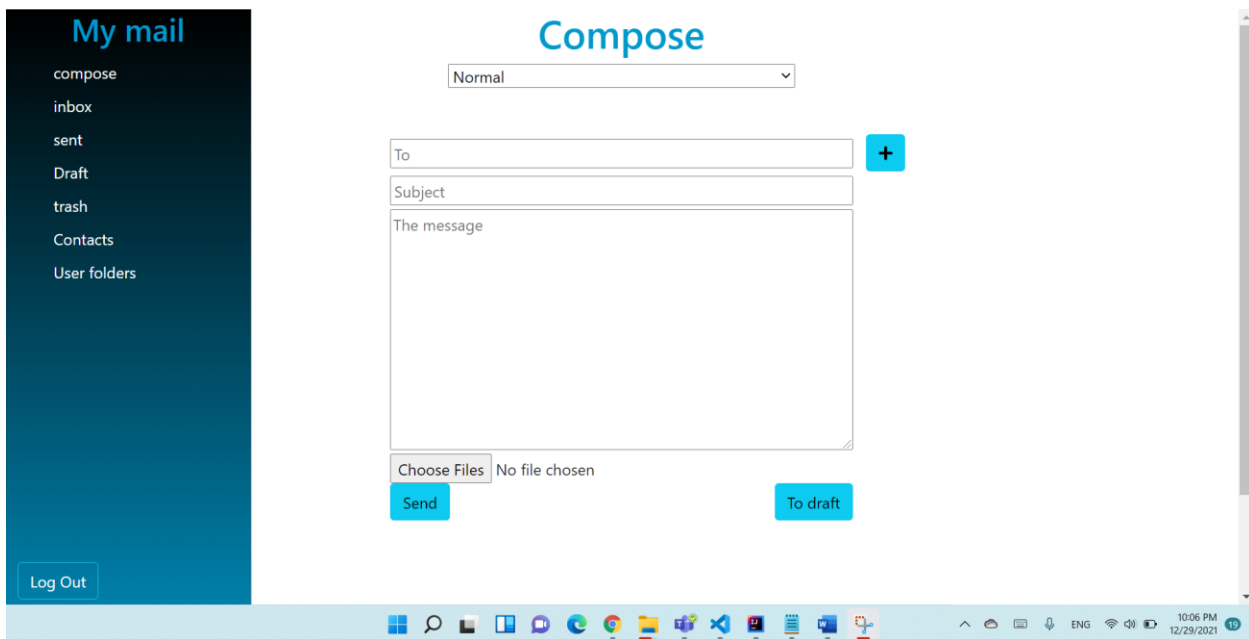
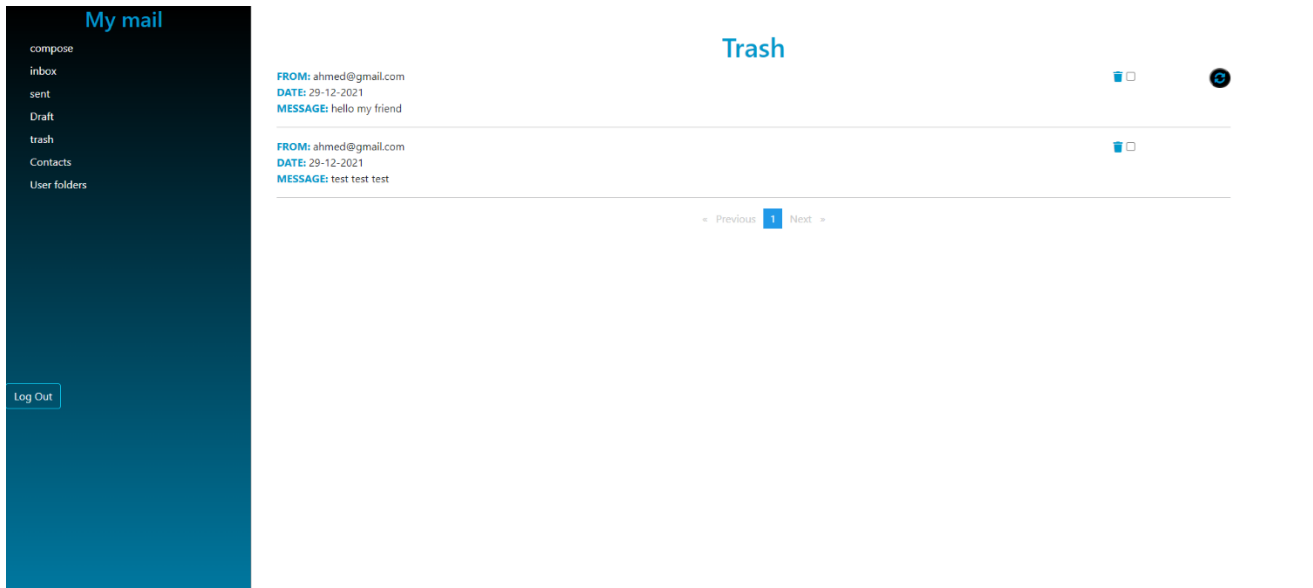When you write a correct email and password the compose component will be displayed.

The plus button increases the "to" input to make to multiple emails and send check that the to email is valid email.

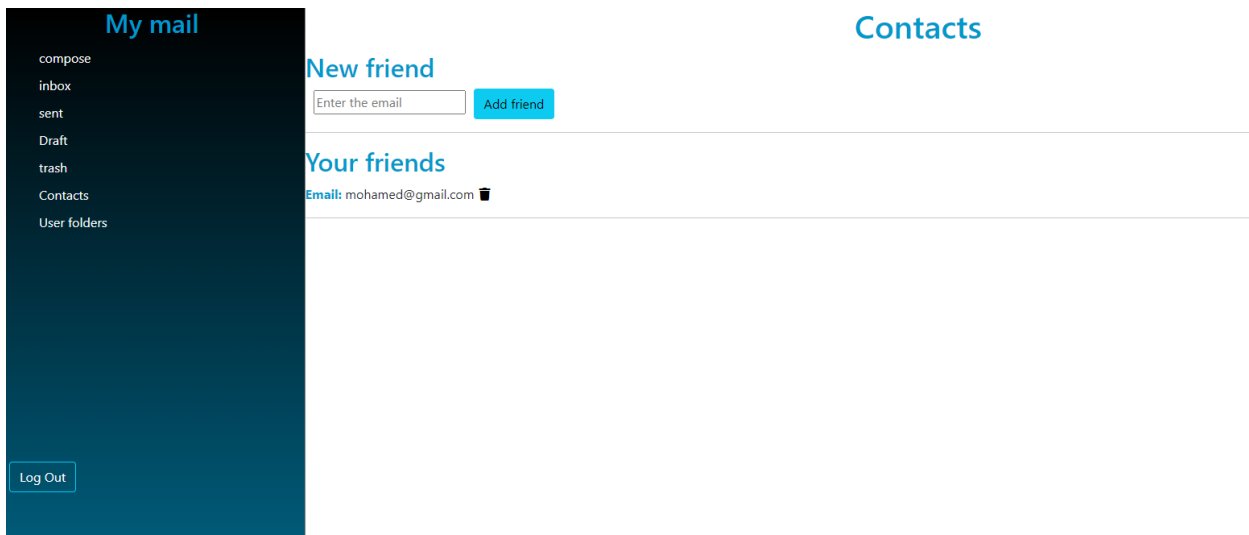The "to" draft button put this message in the draft.

The inbox component We used pagination, there is refresh button, you can search with date, sender, receiver, body, attachment and priority, you can sort with subject, sender, date and priority and you can move any message by selecting it.

Trash

FROM: ahmed@gmail.com
DATE: 29-12-2021
MESSAGE: hello my friend

FROM: ahmed@gmail.com
DATE: 29-12-2021
MESSAGE: test test test

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In the draft component, the sent component and the trash, it is like inbox component

Contacts

New friend

Enter the email | Add friend

Your friends

Email: mohamed@gmail.com

In the contacts component, you can add friends and your friends will be shown.

And in the user folders component, you can create new folder, rename a folder, delete any folder and show any folder.

- **UMl**