Individual Project

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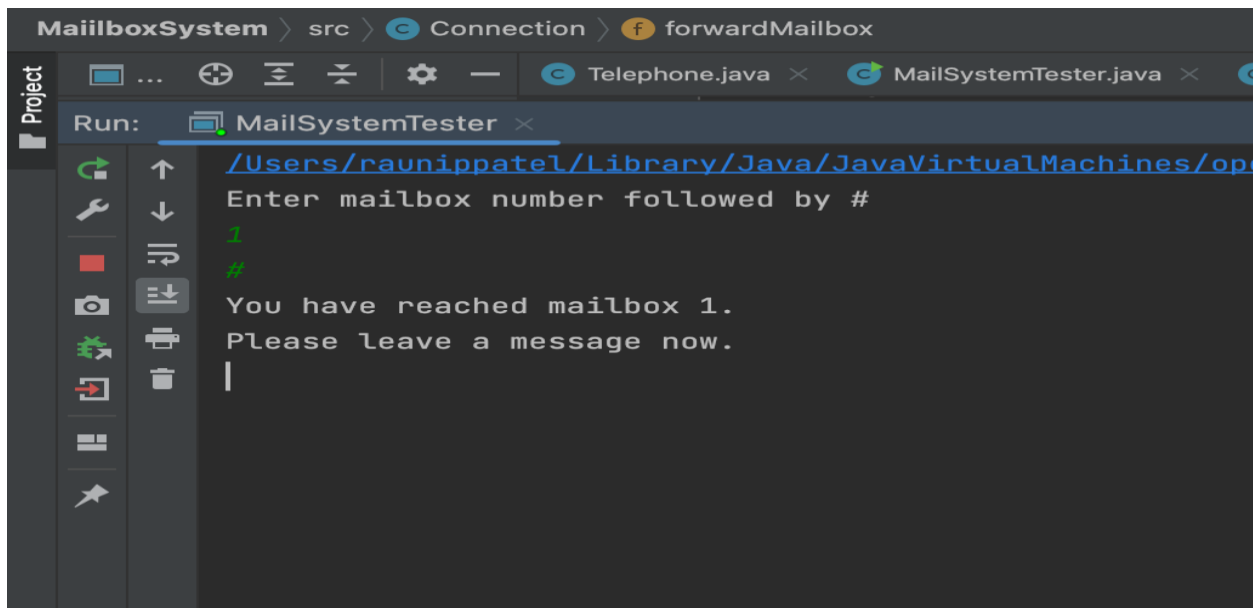
CS 321 Fall 2021

Modification of the Program to add Forwarding feature.

- Added a private attribute in Mailbox.java class of type MessageQueue named forwardMessage . Then I added that to Mailbox class constructor so that when system runs the program, we can save our forwarded messages.
- Then rest of my modifications are in **<u>Connection.java</u>** class.
  - First, added the option to the message menu string for forwarding
  - Then created a private static final String to store the two sub menus options to have user select the 1 to forward or 2 to go back to main menu.
  - Then I have created another private static final String to prompt user to enter the mailbox number to forward the message.
  - Then I created two static int variable to set the state if user selects to forward the message.
  - Then I have added extra two conditions in dial method , to move through the added option in the menu.
  - Then I have added one more condition to messageMenu method to check for the user input for forward message.
  - Then I created new method called messageForwardMenu to display the two options for forwarding . one is to forward the message and one is to go back to main menu.
  - Lastly, I have created another method called messageForwardNum.
    - This method takes the input from the user when asked by previous method messageForwardMenu to enter the mailbox number.
    - Then it will create the MailSystem object and calls findMailbox method to find the mailbox number keyed in by user and store that information to our MailBox object forwardMailbox.

▪ Then it will retrieve the current message from the current mailbox and add it the forwarding mailbox.

How to Run the Program :

→ At the startup it will ask to enter the mailbox number . Enter the mail box number then enter then # sign. For example for mail box one 1 enter # , for mail box 12 , 1 enter 2 enter #. Key in enter after each character for this part.

```
MaiilboxSystem  src   Connection   f  forwardMailbox

                          ⚙  —      Telephone.java  ×       MailSystemTester.java  ×

Run:      MailSystemTester  ×

          /Users/raunippatel/Library/Java/JavaVirtualMachines/op
          Enter mailbox number followed by #
          1
          #
          You have reached mailbox 1.
          Please leave a message now.
          |
```
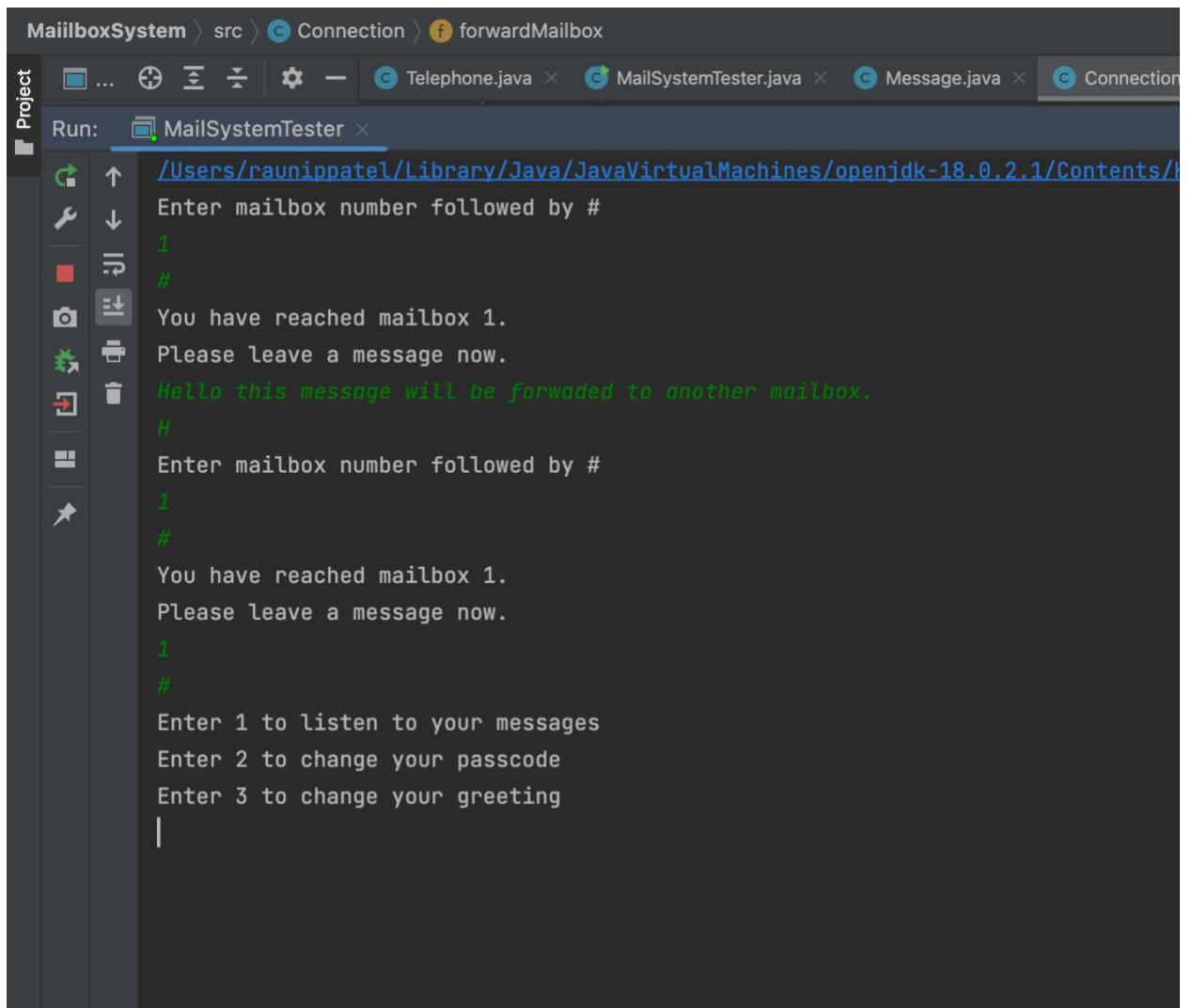
→ Next step is to leave the message (in this case type) and hangup (H is for Hangup and Q is to quit the program.)

→ Now It will again ask to enter mailbox. Now here you can open it as an owner of the particular mailbox or send message to another mailbox. We will choose to login as an owner. So first key in the mailbox number.

MaiilboxSystem ⟩ src ⟩ ⓒ Connection ⟩ ⓕ forwardMailbox

ⓒ Telephone.java ✕   ⓒ MailSystemTester.java ✕   ⓒ Mess

Run: ▣ MailSystemTester ✕

```
/Users/raunippatel/Library/Java/JavaVirtualMachines/openjdk
Enter mailbox number followed by #
1
#
You have reached mailbox 1.
Please leave a message now.
Hello this message will be forwaded to another mailbox.
H
Enter mailbox number followed by #
1
#
You have reached mailbox 1.
Please leave a message now.
|
```

→ Now the immediate second *step as a owner* will be to enter the password even though it does asked for it in the program (it is kind of hidden functionality) . You will enter the password same as you entered the mailbox number ,and default password is mailbox number itself.

```
/Users/raunippatel/Library/Java/JavaVirtualMachines/openjdk-18.0.2.1/Contents/
Enter mailbox number followed by #
1
#
You have reached mailbox 1.
Please leave a message now.
Hello this message will be forwaded to another mailbox.
H
Enter mailbox number followed by #
1
#
You have reached mailbox 1.
Please leave a message now.
1
#
Enter 1 to listen to your messages
Enter 2 to change your passcode
Enter 3 to change your greeting
|
```

→ Now you can have the menu prompt for the owner to choose. We will choose to listen to our messages. So press 1 and enter.
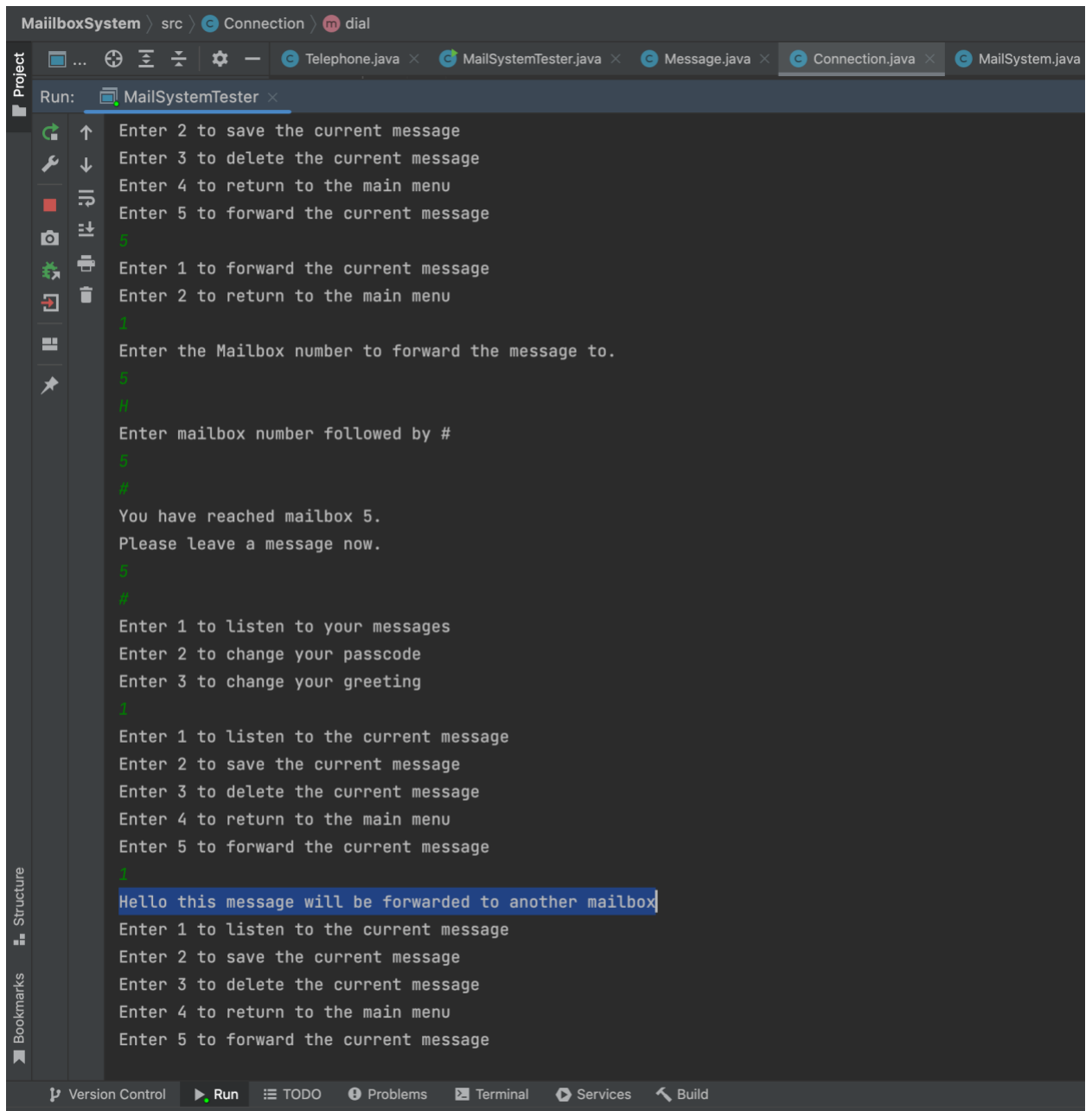
```
#
Enter 1 to listen to your messages
Enter 2 to change your passcode
Enter 3 to change your greeting
1
Enter 1 to listen to the current message
Enter 2 to save the current message
Enter 3 to delete the current message
Enter 4 to return to the main menu
Enter 5 to forward the current message
```

→ Now we can either listen the current message or forward . First listen it so press 1 and enter.

```
Enter 1 to listen to the current message
Enter 2 to save the current message
Enter 3 to delete the current message
Enter 4 to return to the main menu
Enter 5 to forward the current message
1
Hello this message will be forwaded to another mailbox.
Enter 1 to listen to the current message
Enter 2 to save the current message
Enter 3 to delete the current message
Enter 4 to return to the main menu
Enter 5 to forward the current message
```

→ Now we want to forward this message to mailbox 5. So press 5 and enter.

→ Press 1 and enter then it will ask to enter the mail box number. Key in the desire mailbox number which is 5 so 5 and enter and then Hang up (H).

→ Now we want to see if we have the message forwarded or not. So login as a owner of mail box 5. First key in the mail box number.

→ Now key in the default password.

→ Now we want to listen to our forwarded message. So press 1 and enter.

→ Press 1 and enter to listen

Telephone.java ×   MailSystemTester.java ×   Message.java ×   C Connection.java ×   C MailSystem.java

Run: MailSystemTester ×

```
Enter 2 to save the current message
Enter 3 to delete the current message
Enter 4 to return to the main menu
Enter 5 to forward the current message
5

Enter 1 to forward the current message
Enter 2 to return to the main menu
1

Enter the Mailbox number to forward the message to.
5

H

Enter mailbox number followed by #
5

#

You have reached mailbox 5.
Please leave a message now.
5

#

Enter 1 to listen to your messages
Enter 2 to change your passcode
Enter 3 to change your greeting
1

Enter 1 to listen to the current message
Enter 2 to save the current message
Enter 3 to delete the current message
Enter 4 to return to the main menu
Enter 5 to forward the current message
1

Hello this message will be forwarded to another mailbox
Enter 1 to listen to the current message
Enter 2 to save the current message
Enter 3 to delete the current message
Enter 4 to return to the main menu
Enter 5 to forward the current message
```

 Version Control   ▶. Run   ≔ TODO   ❶ Problems   ▣ Terminal   ◉ Services   ⚒ Build

→ Now Hang up (H) and quit (Q) the program.