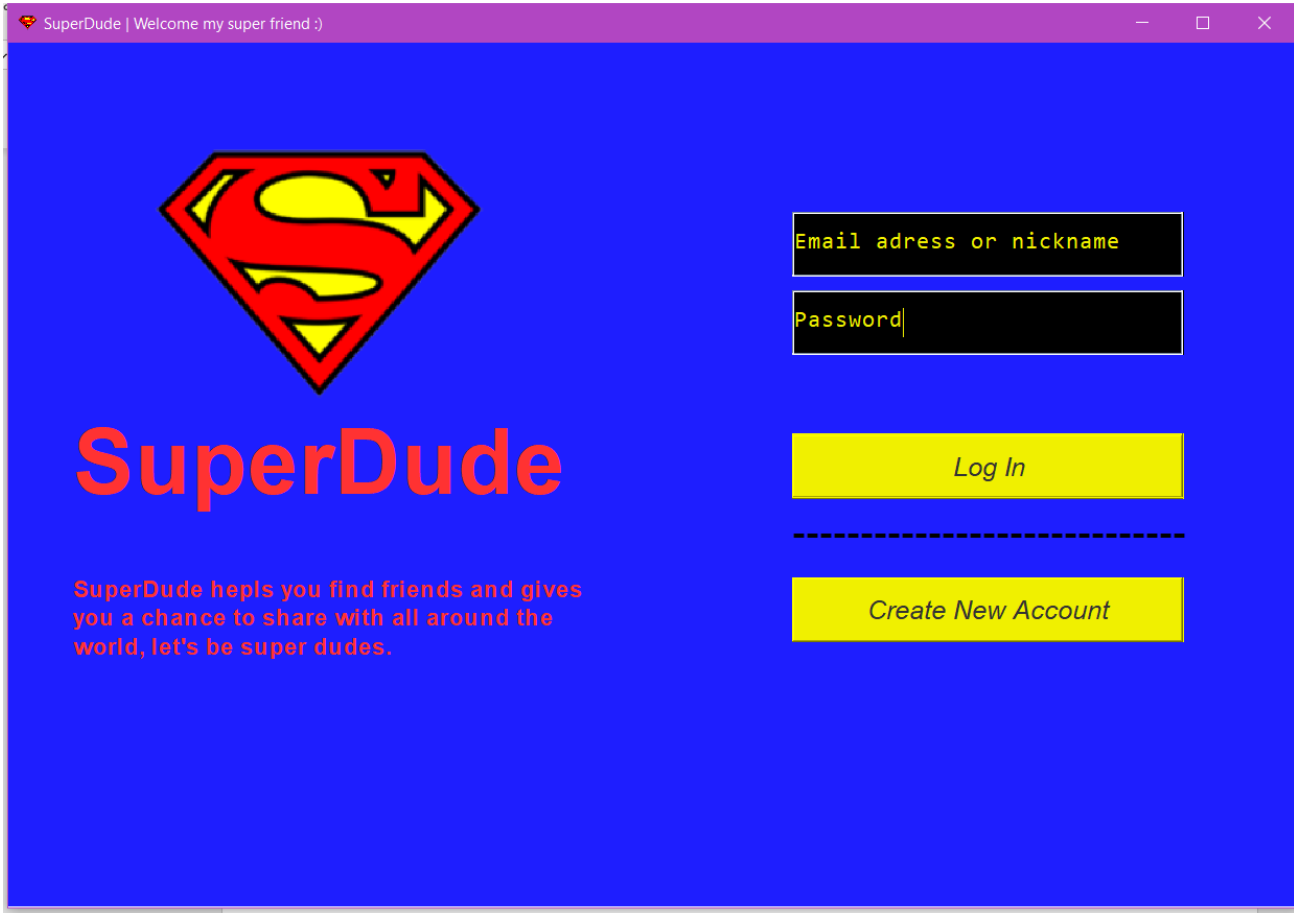


## SuperDude

### 1) Entrance Page



- This is the starting point of the application, when a user enters the program, it is the first page that is seen.
- On the left side of the JFrame, there are 2 JLabels. The first one includes the logo and the name of the application, and the second one includes the usage of the application.
- On the right-hand side, there are 2 JButtons. The Log In button directs the user to the home page if given nickname and password or given email address and password matches. Otherwise, if entered name or nickname is not in the user list, message states that an account with given information is not found and reminds the user to check for misspellings.
- The Sign Up Button directs user to the Create New Account Page without closing the Entrance Page.

- On the righthand side, there are 2 JTextFields. When Log In JButton is clicked, entered information from the user is get and checked via these JTextField. When page is first opened until user presses a key, JTextFields' texts show the user the expected inputs. If user presses a key, then they are deleted, only entered input by the user is shown. If user deletes everything the key from the JTextFields and releases the key, expected input information again appears on both JTextFields until user again presses a key to enter information.
- If the user closes the entrance page, application's execution is ended.

## 2) Create New Account Page

SuperDude | First and last step to be a Kyrptonian :)

# SuperDude

**Frist Name**

**Surname**

**Email address**

**Nickname**

**Age**

**Password**

**Password confirmation**

**Profile photo (optional)**

Select photo

**Gender**

☐ Female ☐ Male ☐ None

**Account type**

☐ Premium ☐ Standard

**Hobbies (optional)**

Example: swimming, walking,  
(seperate with comma!)

**FINISH**

- On top of the Create New Account Page, there is a JLabel which shows the name of the application.

- On the left-hand side of the JFrame, there are 7 JTextAreas which have the same feature as the Sign Up and Log In buttons which are in the Entrance Page. Their informative initial texts are deleted when user presses any key and only user's input is shown. If the user deletes the entered input completely from any of the JTextAreas, when key is released, initial informative texts are all set and shown again.
- On the right-hand side, there is one JButton which is named Select Photo. It is optional for user to click that button. If the user clicks that button a JFileChooser object is opened. User sees file in the desktop and can upload a profile image and in the JFileChooser there is a FileNameExtensionFilter with all possible image format endings. Thus, when JFileChooser is opened, it automatically shows image format documents to user since it has a filter. If user closes JFileChooser without selecting any file or never clicks the button Select Photo, the profile photo of the user is selected automatically.
- On the right-hand side, under the Gender JLabel, there are 3 JRadioButtons which are named Female, Male and None. They are in the same ButtonGroup object so only one of them can be selected at the same time. I use information of this JRadioButtons to select profile photo of the user automatically, if the user did not select a specific profile photo. Also, user does not have to click any of the JRadioButtons, specifying gender is optional. If None is selected or any of the buttons are not selected, profile photo becomes the photo below.



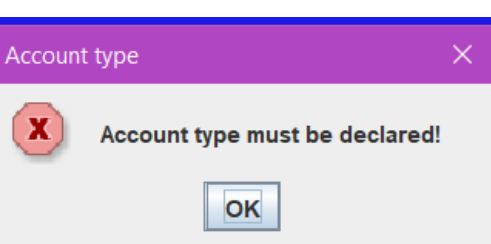
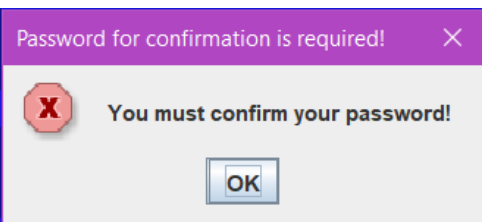
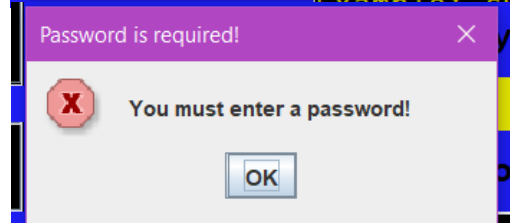
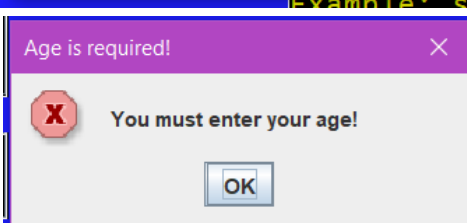
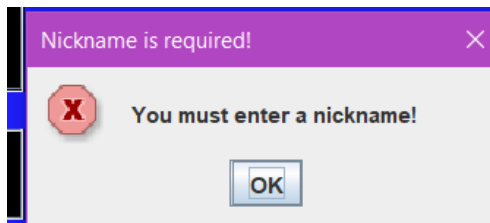
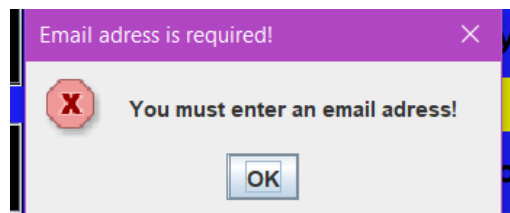
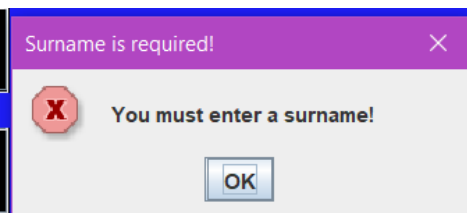
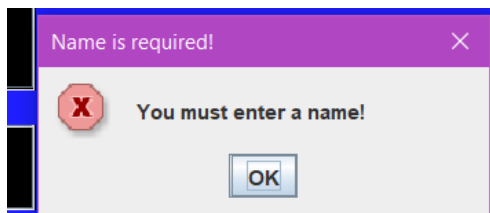
If Female is selected profile photo of the user becomes the photo below.



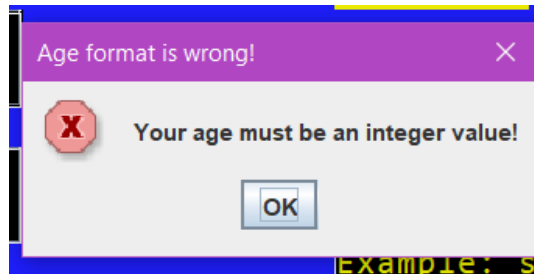
If Male is selected profile photo of the user becomes the photo below.



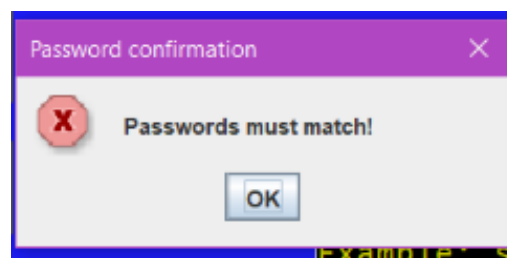
- Under the JLabel named Account type, there are two JRadioButtons named Premium and Standard. They are in the same ButtonGroup object so that only one of them can be selected at the same time. Selecting one of them is compulsory in order to finish signing up.
- Under the JLabel named Hobbies (optional) there is JTextArea. Unlike JTextField, it allows user to enter multiple lines. Since each hobby is stored in an a HashSet in order to separate them comma is used in the code so information message in the JTextArea declares that. Like all JLabels, this JTextArea has an KeyListener in it. Thus, when user types a key, informative message disappears, when user releases a key and JTextArea is empty, informative message is shown again.
- On the bottom of the page, there is a JButton named FINISH. It has an ActionListener in it. If this button is clicked, application tries to sign up the user with checking given inputs. If user does not fill or select the input areas, except the optional ones, according to missing information a message is shown and signing up is not completed.



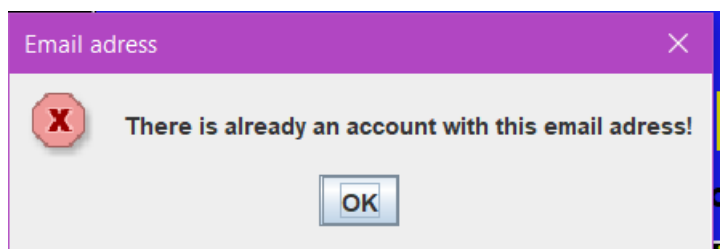
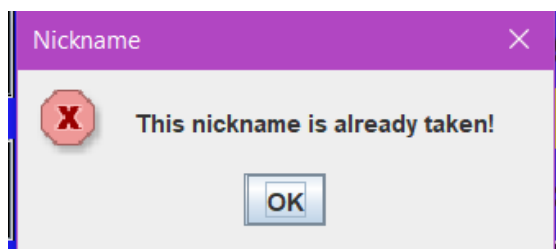
- Also, in the age input if user does not type an integer, a message is shown and signing up is not completed.



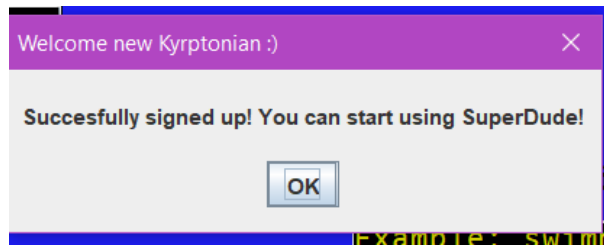
- Also, if the password in the password JTextField does not match with the password in the passwordConfirmation FTextFiel, the message below is shown and signing up is not completed.



- Also, if there exists another user with given nickname or email address, messages below are shown and signing up is not completed.



- If all inputs match with the needs and signing up is completed successfully, after showing message below this page is closed.



### 3) Home Page

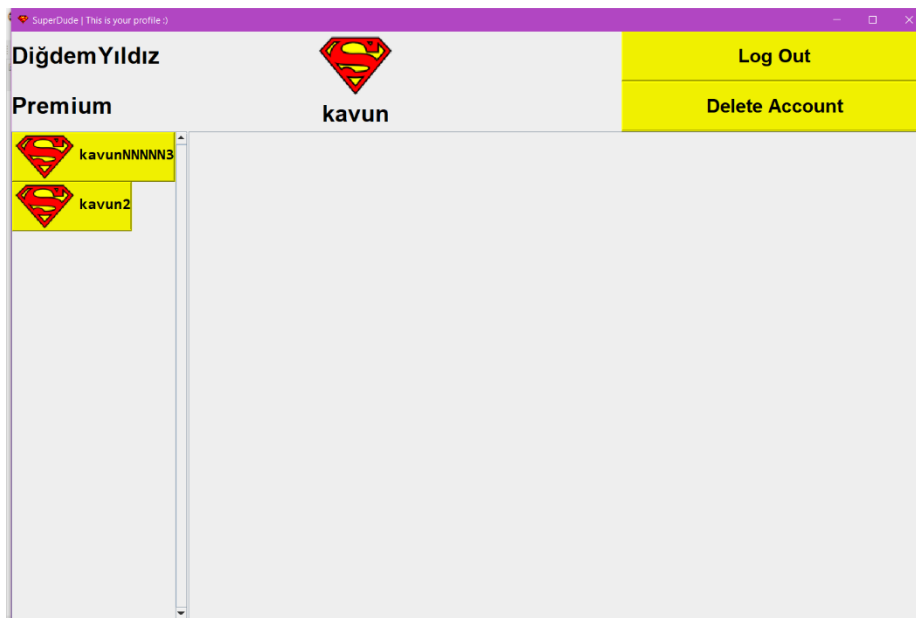


- This JFrame named HomePage uses BorderLayout.
- On the north part of the JFrame there a JPanel which holds, a JButton to click and search, a JTextField in order to enter the input to search for and a JLabel that shows account type. Also, this JPanel uses BorderLayout.
- On the west side of the JPanel, there is a JLabel which shows the account type of the logged in user.
- On the center of the JPanel, there is a JTextField which allows user to give input to search. Like other JTextFields if user presses a key informative message disappears and if the user releases a key and input is empty, informative message is shown again.
- On the east side of the JPanel, there is a JButton to allow user to search given input.
- On the south side of the JFrame, there is a JPanel which holds a JButton to go to profile page of the logged in user, a JButton to create a post and a JLabel to show name of the application.
- On the west side of the JPanel, there is a JButton with text "Profile" and an icon with user's profile photo.
- On the center of the JPanel, there is a JButton with text "New Post Create" allows user to go to a new page to create a content. ( I could not implement that page, that page is not in my code files.)
- On the east side of the JPanel, there is a JPanel that shows the name of the application, "SuperDude".

#### 4) Profile Page

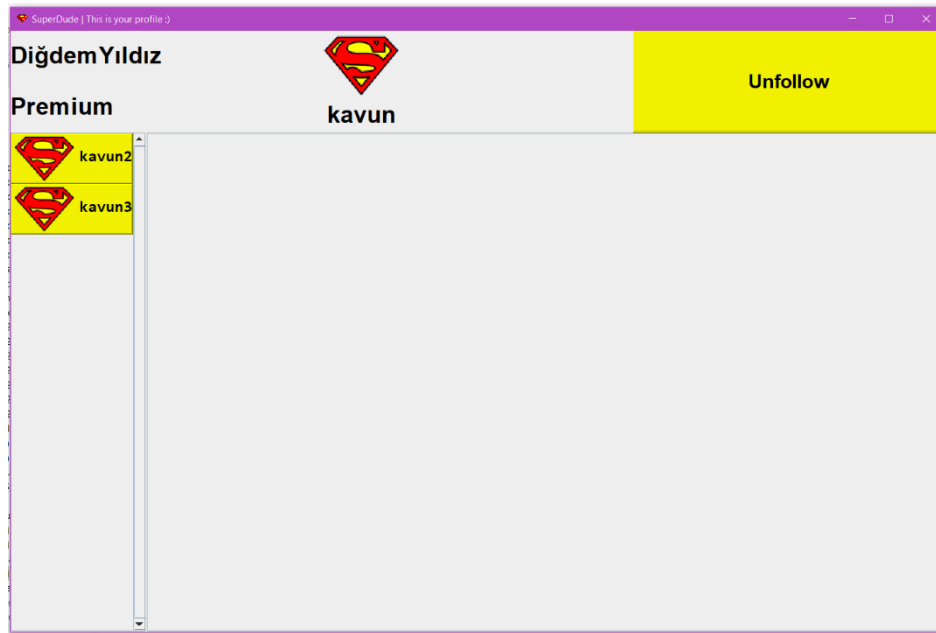
- On the left corner of the Profile Page there is real name , real surname, and account type of the owner of the profile page.
- On top of the center, profile photo and the nickname of the owner of the profile page is shown.
- On the left corner of the Profile Page, if guest of this page and owner of the page is same there are two buttons named Log Out and Delete Account. If user clicks Log Out, profile page and related home page is closed, and user is directed to entrance page.
- If guest of this page follows the owner of the profile page, there is a button named unfollow, which allows guest to remove that user from her friends list.
- If guest of this page does not follow the owner of the profile page, there is a button named unfollow, which allows guest to add that user to her friends list.
- On the left side of the page, there are friends of the owner of the profile page. They are shown if profile page is guest's own profile page or guest follows the owner of the profile page. Guest can click these users and also go their profile pages.

##### A. Own profile page of the user

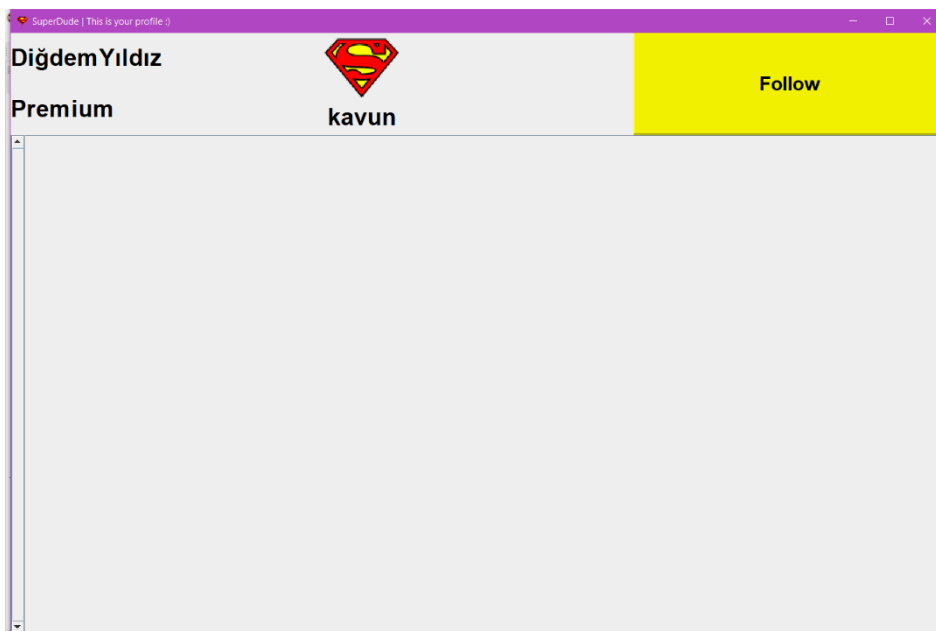




## B. Profile page of a user that guest follows



## C. Profile page of a user that guest does not follow



In my project folder there are three packages,

1. Main
2. Human
3. Pages .

## 1) Main

- Under the main package there is only one class named TestSuperDude and it has the main method.

### a) TestSuperDude Class

- ✓ TestSuperDude has 12 objects of user class and an object of EntrancePage class which allows application to start with the user interface.

## 2) Human

- Under the human package there are two classes named User and Group.

### a) User Class

- ✓ Data of a user and data of all users as static fields are stored in this class.
- ✓ It has 13 non-static fields. They hold all information of one user.

Types of the fields are String, int, ImageIcon, HashSet<String>, HashSet<Group>, HashMap<String,User>, HashMap<String,JPanel>.

- ✓ It has 5 static fields. They hold users with their associated nicknames, users with their associated email addresses, all nicknames with their associated passwords and all email addresses with their associated passwords.

Types of the fields are HashMap<String,User>, HashMap<String,String>.

- ✓ There is one constructor ( in other words it is not overloaded) and there are 2 methods.
- ✓ Methods are **public void** unfollow(User u) and **public void** follow(User u). They both have one parameter whose type is User.
- ✓ Also, there are getter and setter methods because my fields' access modifiers are private. I get the values of the fields and change them with getters and setters.

## **b) Group Class**

### **3) Pages**

- In this package there are GUI related classes which constructs the part of the application that is visible to users.

#### **a) EntrancePage**

- ✓ This page implements ActionListener and KeyListener interface and implements their methods. Thus, it is also an ActionListener and KeyListener and I used it as an ActionListener object in the JButtons of this class. Also, I used it as an KeyListener object in the JTextFields of this class.
- ✓ Types of GUI components are JFrame ( sinice thisclass did not extend JFrame), ImageIcon for the logo of the application, JLabel, JButtons inorder to perform logging in and opening new CreateNewAccount page and JTextField to take input from the user like email, nickname and password.

#### **b) CreateNewAccountPage**

- ✓ This is the JFrame created when users click JButton whose text is Create New Account.
- ✓ This page implements ActionListener and KeyListener interface and implements their methods. Thus, it is also an ActionListener and KeyListener and I used it as an ActionListener object in the JButtons of this class. Also, I used it as an KeyListener object in the JTextFields of this class.
- ✓ This page extends JFrame so it is a JFrame object therefore it does not have JFrame field unlike EntrancePage.
- ✓ Types of GUI components are JTextFields and JTextArea to allow user to type needed input, JRadioButtons to allow user to make selections, JButton to try to finish signing up if inputs are in the needed format. ImageIcon for the profile photo, String to store entered gender

information and `HashSet<String>` to store entered hobbies which are splitted with comma.

- ✓ The exception handling concept is used here in order to check whether `ImgIcon` is null with `NullPointerException` so that application can understand whether the user has chosen a profile photo. Thus, application decides whether there is an uploaded profile photo to use, or it must be chosen from the default ones.
- ✓ Its layout is null, so I placed components manually.

### c) **HomePage**

- ✓ This is the page created when user successfully logs in.
- ✓ This page implements `ActionListener` and `KeyListener` interface and implements their methods. Thus, it is also an `ActionListener` and `KeyListener` and I used it as an `ActionListener` object in the `JButtons` of this class. Also, I used it as an `KeyListener` object in the `JTextFields` of this class.
- ✓ This page extends `JFrame` so it is a `JFrame` object therefore it does not have `JFrame` field unlike `EntrancePage`.
- ✓ There is a field whose type is `User` in order to know that which user is logged in and use its information to build the home page.
- ✓ Types of GUI components are `JPanel` to divide `JFrame` into pieces of more containers since it uses `BorderLayout`, `JButton` to go logged in user's own profile page, create new content or search entered input into the search bar, `TextField` to get input from the user to search for, `JLabel` to show name of the application and account type.
- ✓ Each `JPanel` uses `BorderLayout`.

#### **d) ProfilePage**

- ✓ This page is created when user clicks her own profile page button or clicks other users profile buttons.
- ✓ This page implements ActionListener and KeyListener interface and implements their methods. Thus, it is also an ActionListener and KeyListener and I used it as an ActionListener object in the JButtons of this class.
- ✓ This page extends JFrame so it is a JFrame object therefore it does not have JFrame field unlike EntrancePage.
- ✓ There are two fields whose types are User in order to know which user opened the profile page and the profile belong to which user
- ✓ There is one field whose type is JFrame in order to know the home page the guest . Thus, if profile page is her own profile page and clicks delete account or log out button, profile page is closed and also home page of the user is closed.
- ✓ Types of GUI components are JPanel to divide JFrame into pieces of more containers since it uses BorderLayout, JButton to follow or unfollow a user, to delete or log out from an account and to show friends of the profile owner and to go their profile pages, JLabel to show real name, real surname, profile photo and account type of the profile owner, ImageIcon to add profile photo to JLabel and JScrollPane to fit all friends of the profile page owner to the frame.
- ✓ Each JPanel uses GridLayout except JLabel named friendContainer, it uses BoxLayout to list friend one under the other .
- ✓ Page uses BorderLayout

## The Concepts That I Make Use of

- 1) **Inheritance** ( extends JFrame)
- 2) **Polymorphism** ( implements ActionListener, KeyListener)
- 3) **Collections Framework** ( HashMap, HashSet)
- 4) **Exception Handling** (NullPointerException, NumberFormatException)
- 5) **Java Swing (GUI Programming)** (JFrame, JLabel, JTextField, JTextArea, JButton, JRadioButton, JPanel, JScrollPane, ImageIcon, BorderLayout, BoxLayout)
- 6) **Strings** (Comparison with each other, separating a string with commas)

## References

- 1) **Java GUI** : name of the video, **Bro Code** : name of the YouTube channel (**I watched the whole video**)  
<https://www.youtube.com/watch?v=Kmg00avvEw&t=4705s>
- 2) <https://docs.oracle.com/javase/tutorial/uiswing/components/scrollpane.html>
- 3) <https://stackoverflow.com/questions/18408668/how-to-make-scrollable-to-jpanel>
- 4) <https://stackoverflow.com/questions/685521/multiline-text-in-jlabel>
- 5) <https://stackoverflow.com/questions/6714045/how-to-resize-jlabel-imageicon>
- 6) <https://stackoverflow.com/questions/6994772/how-to-change-default-java-icon-in-jfilechooser>
- 7) <https://stackoverflow.com/questions/49609741/new-line-in-textfield>
- 8) <https://stackoverflow.com/questions/1090098/newline-in-jlabel>
- 9) <https://docs.oracle.com/javase/tutorial/uiswing/layout/box.html>
- 10) <https://docs.oracle.com/javase/tutorial/displayCode.html?code=https://docs.oracle.com/javase/tutorial/uiswing/examples/layout/BoxLayoutDemoProject/src/layout/BoxLayoutDemo.java>



I **never copied** any piece of code from these references or from elsewhere.

