

MySocialBook

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CENG 1004: Introduction to Object Oriented Programming Spring 2021

MIDTERM ASSIGNMENT

Subject : Classes, objects, encapsulation, inheritance, and polymorphism.
Instructor: Dr. Selim Yılmaz (selimyilmaz@mu.edu.tr) & Dr. Özgür Kılıç (ozgurkili@mu.edu.tr)
Out Date: 05/03/2021 23:59:59
Due Date: 05/17/2021 23:59:59

DECLARATION OF HONOR CODE¹

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In the course of Introduction to Object Oriented Programming (CENG 1004), I take academic integrity very seriously and ask you to do as well. That's why, this page is dedicated to some clear statements that defines the policies of this assignment, and hence, will be in force. Before reading this assignment booklet, please first read the following rules to avoid any possible violation on academic integrity.

- This assignment must be done individually unless stated otherwise.
- You are encouraged to discuss with your classmates about the given assignments, but these discussions should be carried out in an abstract way. That is, you cannot copy code (in whole or in part) of someone else, cannot share your code (in whole or in part) with someone else either.
- The previous rule also holds for the material found on the web as everything on the web has been written by someone else.
- You must not look at solution sets or program code from other years.
- You cannot share or leave your code (in whole or in part) in publicly accessible areas.
- You have to be prepared to explain the idea behind the solution of this assignment you submit.
- Finally, you must make a copy of your solution of this assignment and keep it until the end of this semester.

I have carefully read every of the statements regarding this assignment and also the related part of the official disciplinary regulations of Muğla Sıtkı Koçman University and the Council of Higher Education. By signing this document, I hereby declare that I shall abide by the rules of this assignment to prevent any violation on academic integrity.

Signature A. Gokmen

¹This page should be filled and signed by your handwriting. Make it a cover page of your report.

Figure 1: HERBY

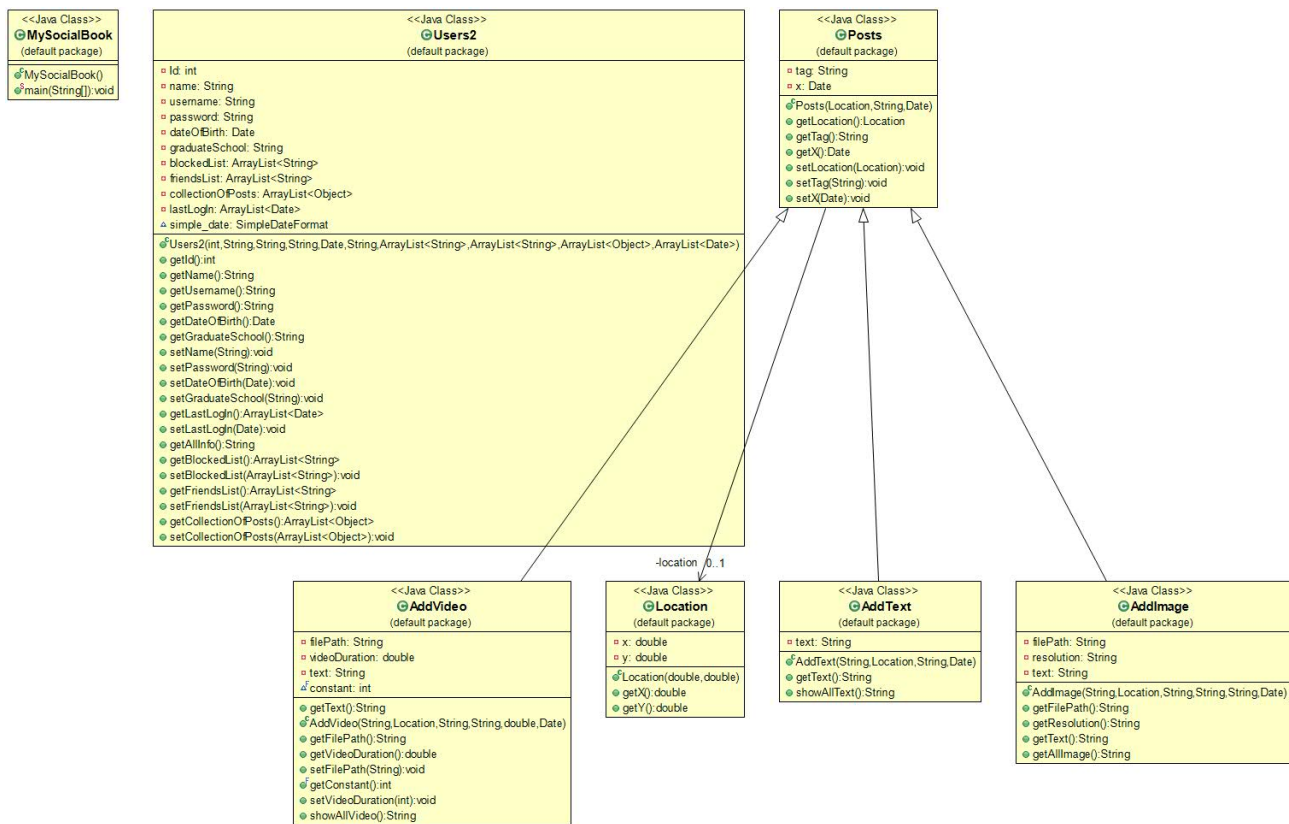


Figure 2: UML DIAGRAM1

1 USERS2.java

This java file includes all parameters that a user has to have. Every User in the system has a unique userID(integer), a name(string), a unique username(string), a password(string), a date of birth(Date), information about school (string), a last log-in date(Date), a collection of friends(ArrayList), a collection of blocked users(ArrayList), and a collection of posts(ArrayList(Object)). I created attributes for all those informations. All those informations can be considered as personal informations so, I have made them all private to keep those informations safe. Also, I created getAllInfo()(String) method in order to get all information about the user.

1.1 Users2 Getter and Setter methods

In java if you want to access a private information you have to use getter and setter methods. I used getter method in order to get the users' private information and used setter method to change that private informations. I didn't create getter and setter method for Id and username because these variables cannot be changed later.

2 Posts.java

I created this java class in order to add a post for a user. This class also is a super class and it has three subclass: AddImage,AddVideo,AddText.This class has three attributes which also in common all posts. Location from location class, x(Date),tag(String).These attributes also private and I created getter methods to get these variables and setter methods to change these variables.

3 AddText.java

I created this class to add a text post to a user. This class extends Posts class. In addition the post class attributes, this class also have an extra private attribute:text(String). I also used getText() method to reach the text variable and I also created a method showAllText()(String) to get the all information about that text.

4 AddImage.java

I created this class to add a Image post for a user.This class extends Posts class. In addition, it has three attributes: text(String),filePath(String),resolution(String). These attributes also private.I created getter methods to get these variables. Also I created a method getAllImage()(String) to get the all informations about the Image post.

5 AddVideo.java

I created this class to add video post to a user.This class also extends Posts class. In addition,it has three attributes: text(String),filePath(String),videoDuration(double). These attributes also private. I created getter methods in order to access these private attributes.Furthermore, I created a constant variable that named constant and used final keyword in order to prevent changing that constant variable later .Also I created getConstant()(integer) method in order to get that constant variable and also create showAllVideo()(String) method in order to get the all informaton about that Video Post.

6 Location.java

I created this class in order to get the Posts' locations.This class has two variables:x(double) and y(double) and both of them private.I created getter method in order to get these private variables.

7 MySocialBook.java

I created this class to run our program. I created main class here.Also I read the files here.This class shows the output of our codes'. In this class I created an ArrayList(ArrayList

< Users2 >

) in order to store the users who are registered the system. I used this arraylist to get all neccessary information about the users that signed-in or registered the system. This class read the files and save the users by using the Users2 class. Also I created an Array that named "list" to split the lines with "tab" character. Furthermore, additionally I commented MySocialBook.java.

8 The contribution and the general idea

In the early days of the project I got stressed and got panic because I had no idea how to build this project. As time passes, I started building the project in my mind and I got handle my fears. In the beginnig,actually I hated this project but when I finished the project I was so happy and so glad to get this project. By doing this project, I have learned the meaning and the function of "private" keyword in java also how to use ArrayList in java. Furhermore, I practiced and revised polymorphism and inheritance.

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