

# Introduction to Object-Oriented Programming Lesson Midterm Assignment Documentation

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This documentation is created by using LaTeX

## MIDTERM ASSIGNMENT

**Subject :** Classes, objects, encapsulation, inheritance, and polymorphism.

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**Out Date:** 05/03/2021 23:59:59

**Due Date:** 05/17/2021 23:59:59

## DECLARATION OF HONOR CODE<sup>1</sup>

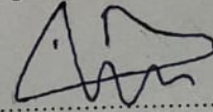
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In the course of Introduction to Object Oriented Programming (CENG 1004), I take academic integrity very seriously and ask you to do as well. That's why, this page is dedicated to some clear statements that defines the policies of this assignment, 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.

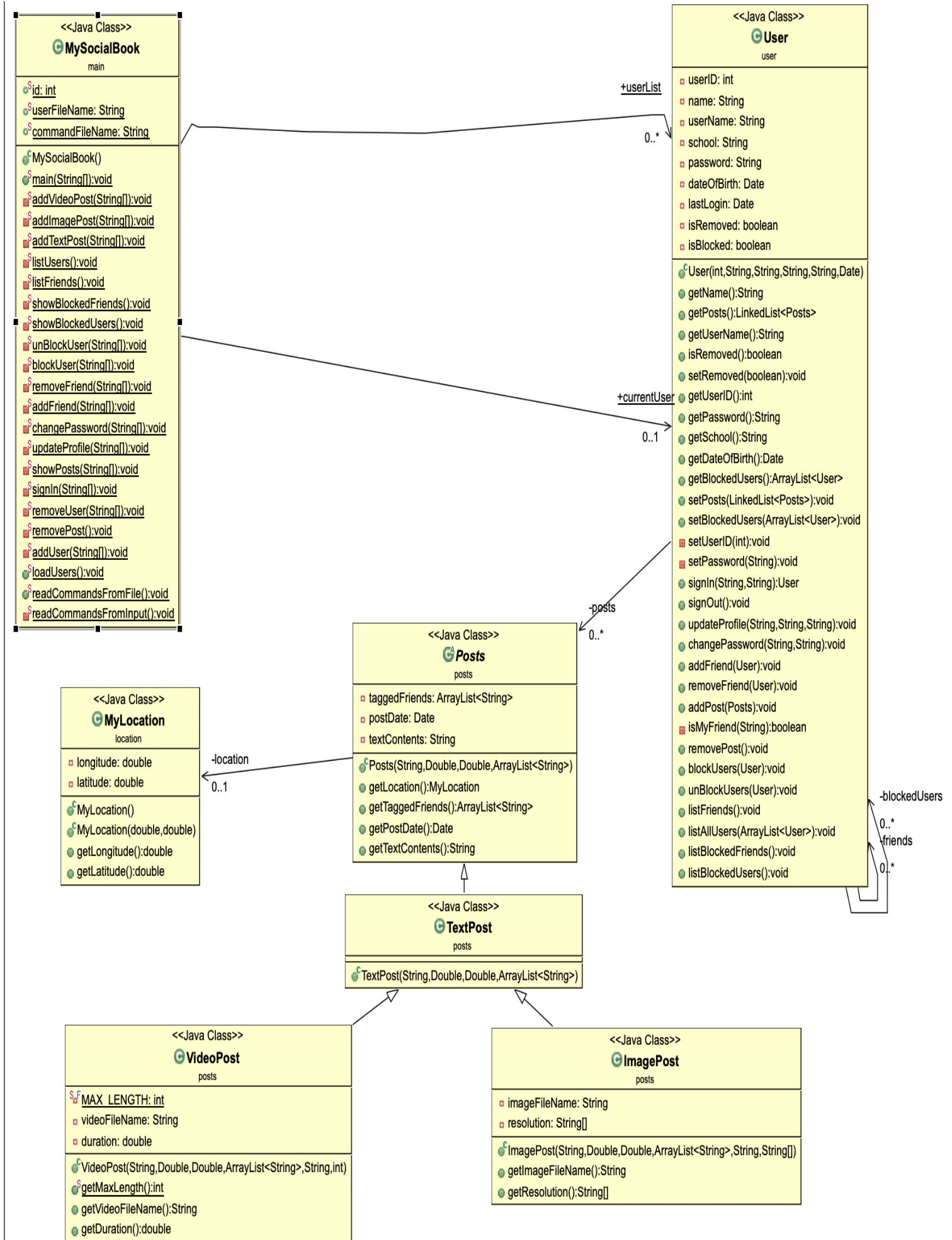
- This assignment must be done individually unless stated otherwise.
- You are encouraged to discuss with your classmates about the given assignments, but these discussions should be carried out in an abstract way. That is, you cannot copy code (in whole or in part) of someone else, cannot share your 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 .....



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



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Figure 2: The class's UML diagram is created by eclipse IDE.

# 1 MyCode

- I have 4 packages and 7 classes(one is abstract ,one is the main class)

```
user
  -User
main
  -MySocialBook(main)
location
  -MyLocation
posts
  -Post(abstract)
    -TextPost
    +ImagePost
    +VideoPost
```

- The 'TextPost', 'ImagePost', and 'VideoPost' classes ***Inherit*** from the 'Posts' abstract class.
- I wrote comment to all of my code everything is on there.
- I used packages to tidy my work-space.
- All user fields are private because I thought all user data has to be in secure. I wrote for them getters and setters(***Encapsulation***).
- I have a 'Posts' abstract class to split the types of posts.
- I use an abstract class because of the sentence in the assignment "mysocialbook should be designed such that it is open for an integration of any new post type (e.g., hypertext posts) that may or may not have a textual part." .
- I used Post class hierarchy like that because of the sentence in the assignment " mysocialbook should be designed such that it is open for an integration of any new post type (e.g., hypertext posts) that may or may not have a textual part.". So the system can have any kind of post including post does not have textual part.
- The user can add different types of posts. If there will be a mistake the system does not allow to add other kinds of object types such as (String, Date, Integer) and also system does not allow to add any Post object since it is abstract.
- I have a MyLocation class that has 2 attributes one of them longitude and one of them latitude with both in Double type.
- I used SimpleDateFormat class in order to format the birth date and post's date from Date to String in the expected output.
- I took the benefit of ***Polymorphism*** in order to create my post objects.I used it while adding them to the my post list.

---

```
Posts textPost = new TextPost(textContents, longitude, latitude, taggedFriends);

Posts imagePost = new ImagePost(textContents, longitude, latitude, taggedFriends,
    imageFileName, resolution);

Posts videoPost = new VideoPost(textContents, longitude, latitude, taggedFriends,
    videoFileName, videoDuration);
```

---

## 2 My Assumptions

- 1) I did homework on the first day, after that, you said maybe you could change the number of command-line arguments. Then I updated my code to work with both styles if you write two file names in the command line, it will read commands from the commands file. If you write one file name in the command line, it will take standard input from the terminal.
- 2) I checked in all operations whether the number of arguments is valid or not. If the number of argument is not valid all methods write a simple error message.
- 3) Another assumption is for signIn method I add an error message if the user that will be logged-in is not in the system.
- 4) For getting input from the command line if the user doesn't give me any valid command the method prints a simple error message.
- 5) Another assumption is for signOut method if the all users removed from the system or no one login the system that means there is no user to sign-out
- 6) If all user removed from system current user will be set to null since it is also a user then prints simply error message.
- 7) Another assumption is that if a user is removed from the system other informations of user are also removed from the system ( Maybe user has been blocked or user was current user friend or user was current user. ) I use an attribute that is named 'isRemoved' if current user is removed the system the other operations will not valid until another user login the system.
- 8) While adding a user or loading user if a user is added with userName that was taken before the system does not allow this situation because userName is unique..
- 9) If a user was blocked. The user can not be added as a friend to current user's friend list. Also system doesn't show as a friend this user with listfriend command.
- 10) My last assumption is that while getting input from the terminal the commands might be lowercase but I set them to uppercase.