Cairo University  
Faculty of Computers and Information



**CS251**

**Software Engineering I**

Social Network

Software Design

Shadow/Coders

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Contents

[Team 3](#_Toc25570061)

[Document Purpose and Audience 3](#_Toc25570062)

[System Models 3](#_Toc25570063)

[I. System Decomposition 3](#_Toc25570064)

[II. Class diagrams 6](#_Toc25570065)

[Important Algorithm 7](#_Toc25570066)

[III. Sequence diagrams 7](#_Toc25570067)

[Class - Sequence Usage Table 9](#_Toc25570068)

[Ownership Report 10](#_Toc25570069)

**Team**

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**Document Purpose and Audience**

# Purpose

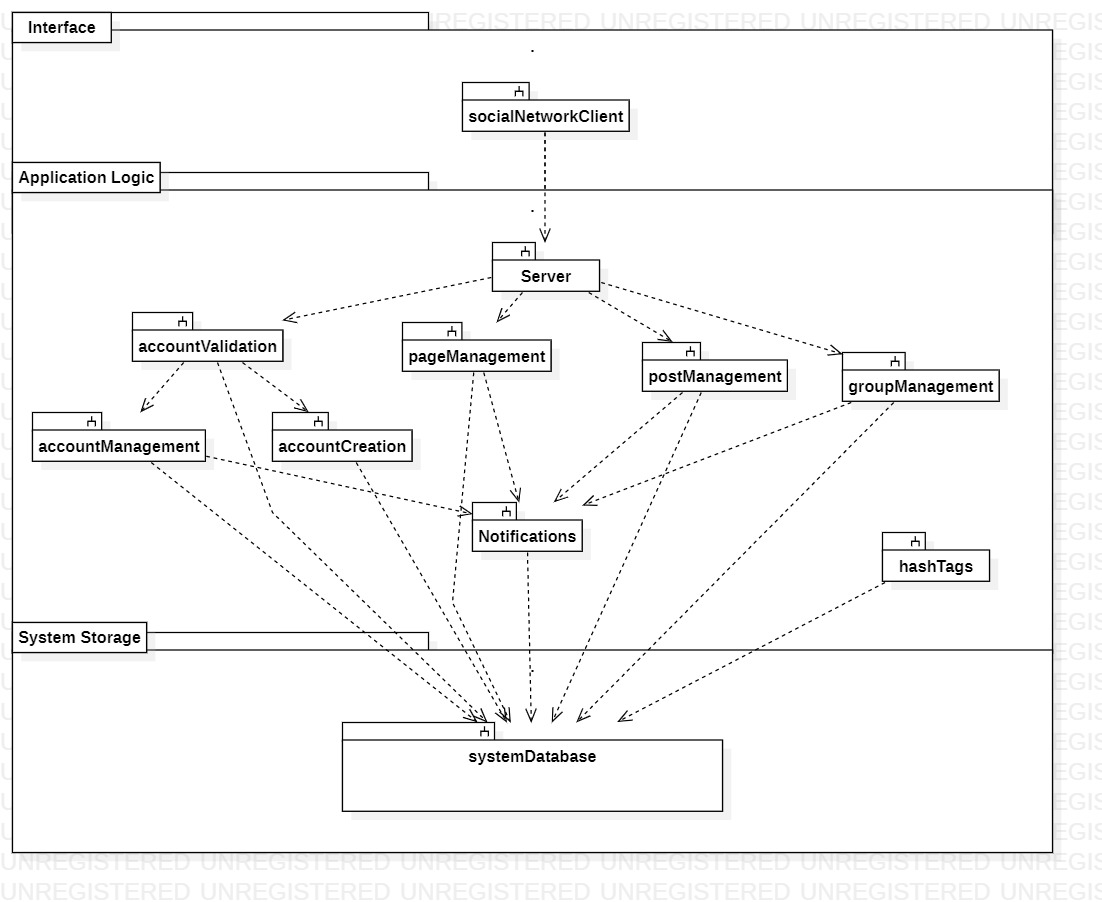
The result of the design activities based on the requirements analysis done in the previous phaser. the design activities are documented in this software Design document (SDD). This document contains the System decomposition, class diagram and several sequence diagram examples for the system ordered by the client (the TA).

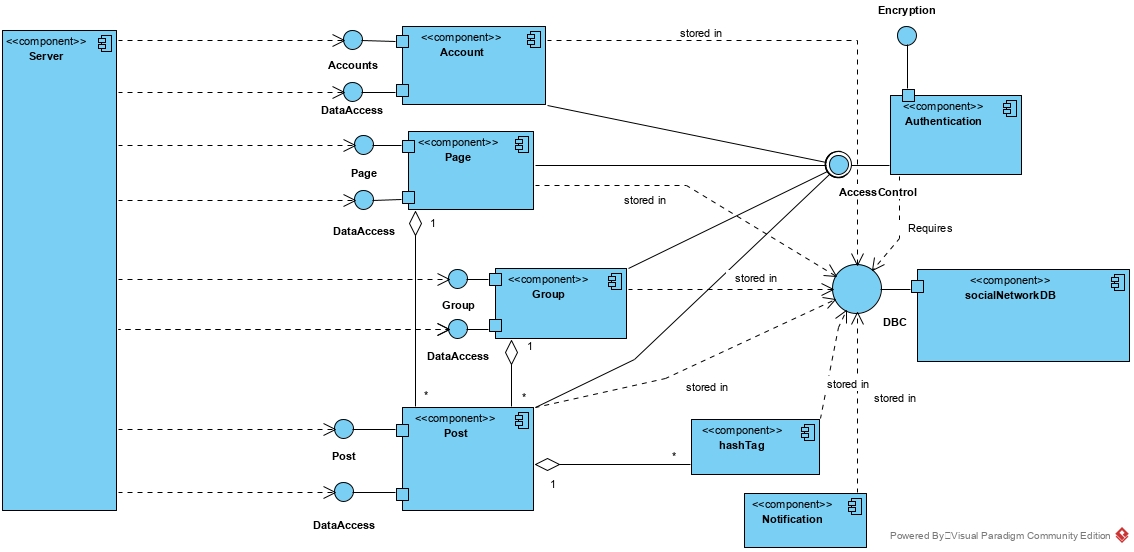
# Audience

The audience includes the TA (the customer), the system analysts and designers (which is our team), the project manager (the team leader) and may include the professor.

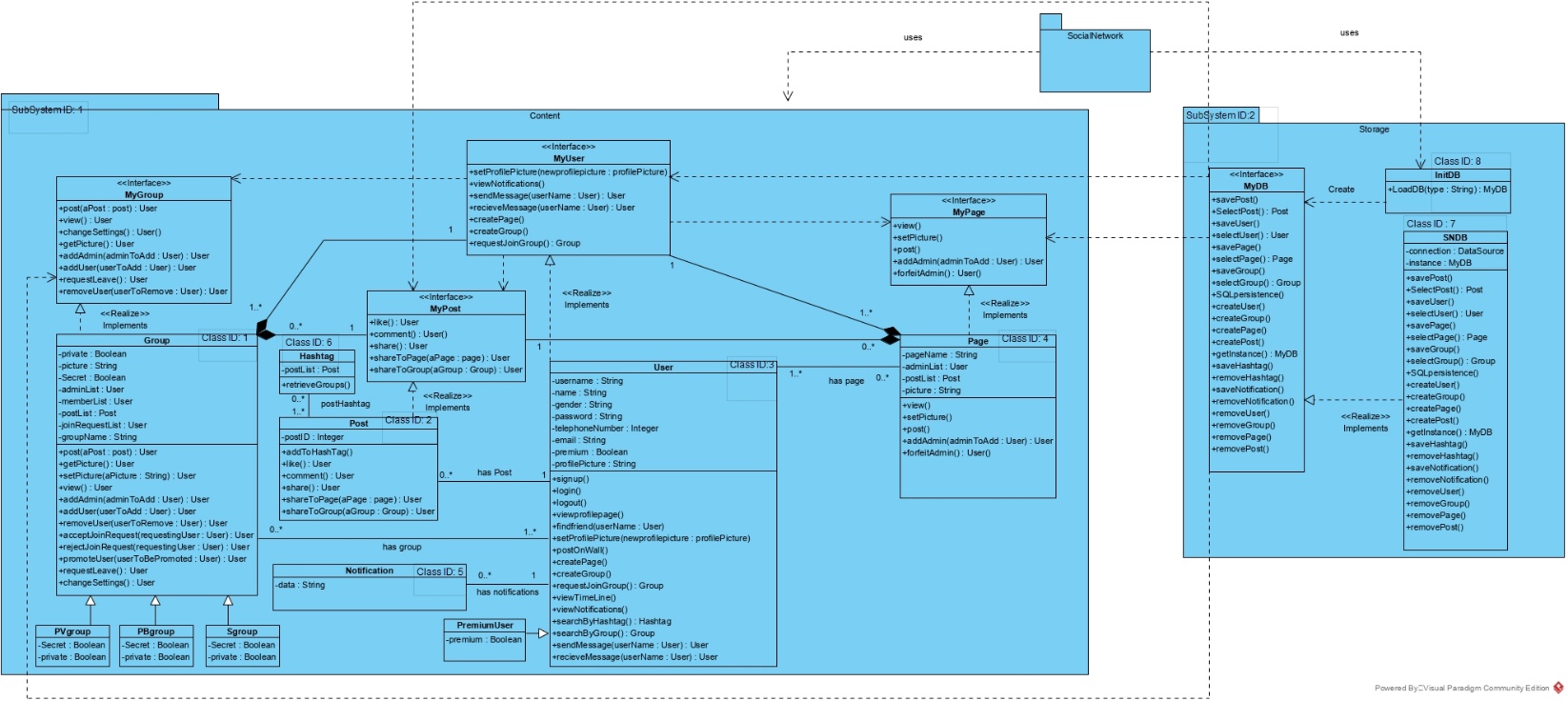
# **System Models**

## **I. System Decomposition**





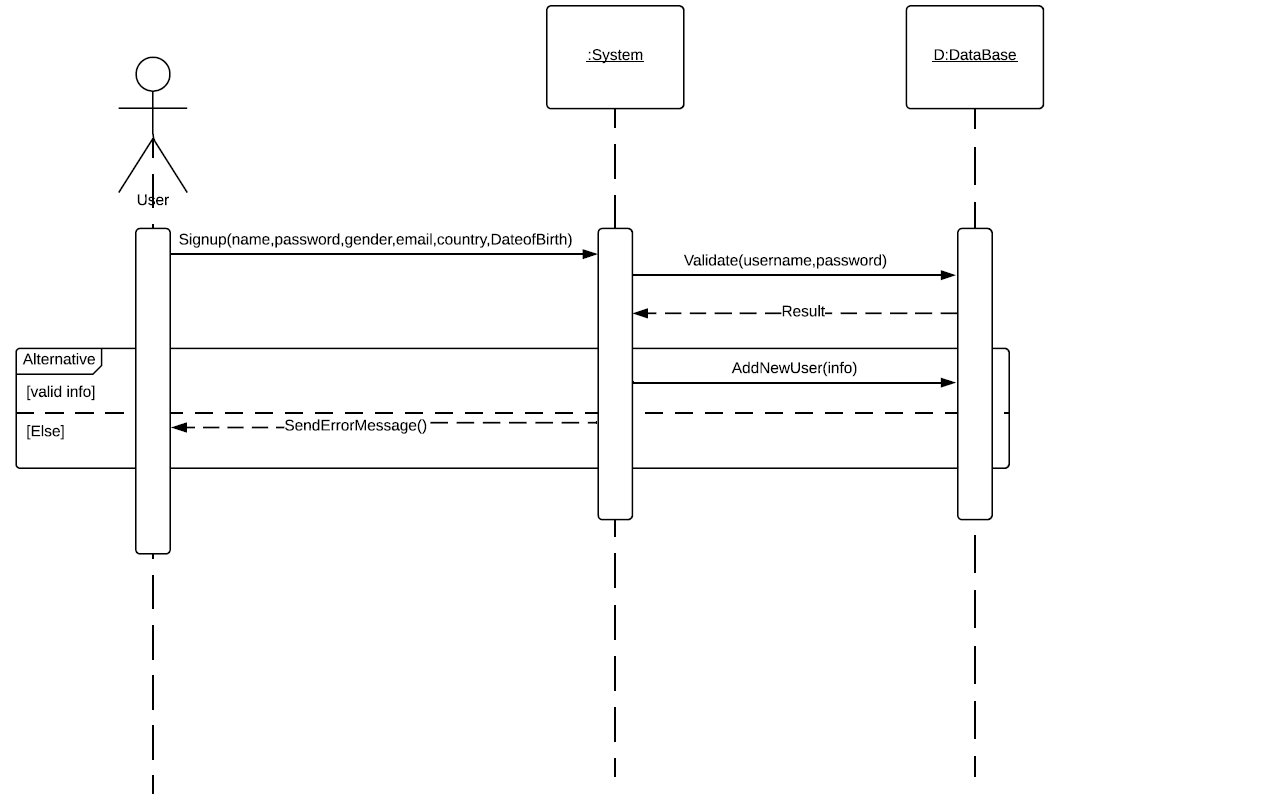
## **II. Class diagrams**



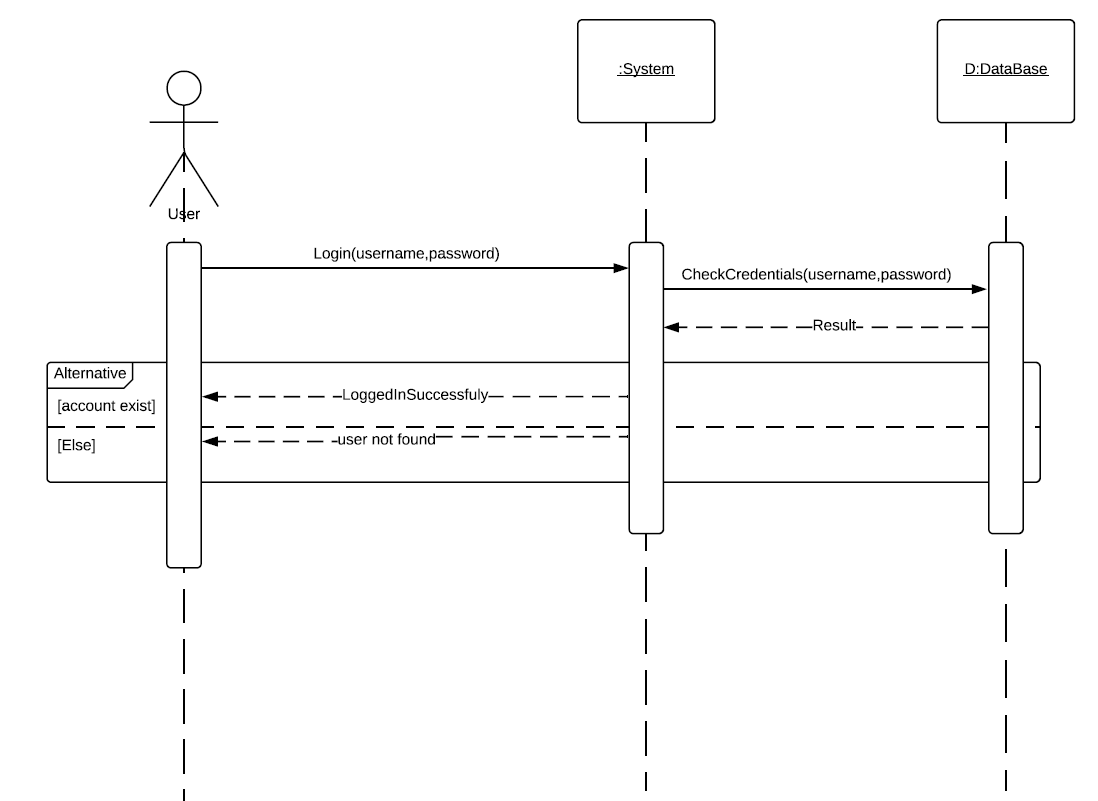
| **Class ID** | **Class Name** | **Subsystem ID** | **Description & Responsibility** |
| --- | --- | --- | --- |
| 1 | Group | 1 | The group class represents groups in our social network and it is responsible for changing the picture of the group and controlling the users inside the group in relation to the group. Groups have 3 types : private , public and secret. |
| 2 | Post | 1 | The Post class controls posts and enables us to share them across the social network and make likes or comments |
| 3 | User | 1 | The User class in in control of the account , it enables us to sign up, login , logout show our timeline and add friends and send and receive messages as well as control our information |
| 4 | Page | 1 | The Page class represents pages in our social network and it is responsible for changing the picture of the page and controlling the users inside the page in relation to the page. |
| 5 | Notification | 1 | The Notification class is simply responsible for showing notifications as string we have made a specific class for notifications to help distinguish them. |
| 6 | Hashtag | 1 | The Hashtag class is a part of the Post class and it allows us to have posts with specific hashtags so that they could be related to a certain topic |
| 7 | SNDB | 2 | The SNDB class is the database class and it is responsible for creating, deleting and saving information from and inside the database. |
| 8 | InitDB | 2 | The InitDB class is used to initialize an Instance of the database |

**III. Sequence diagrams**

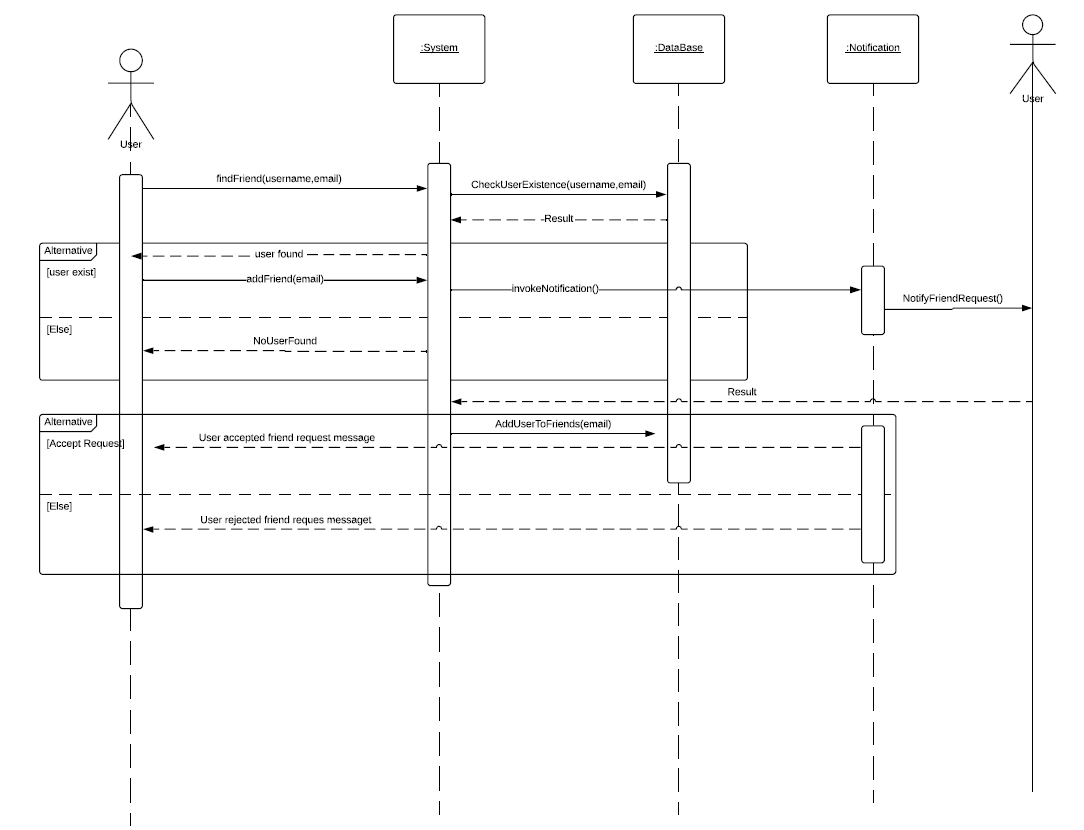
**ID :1 Name : Sign up**



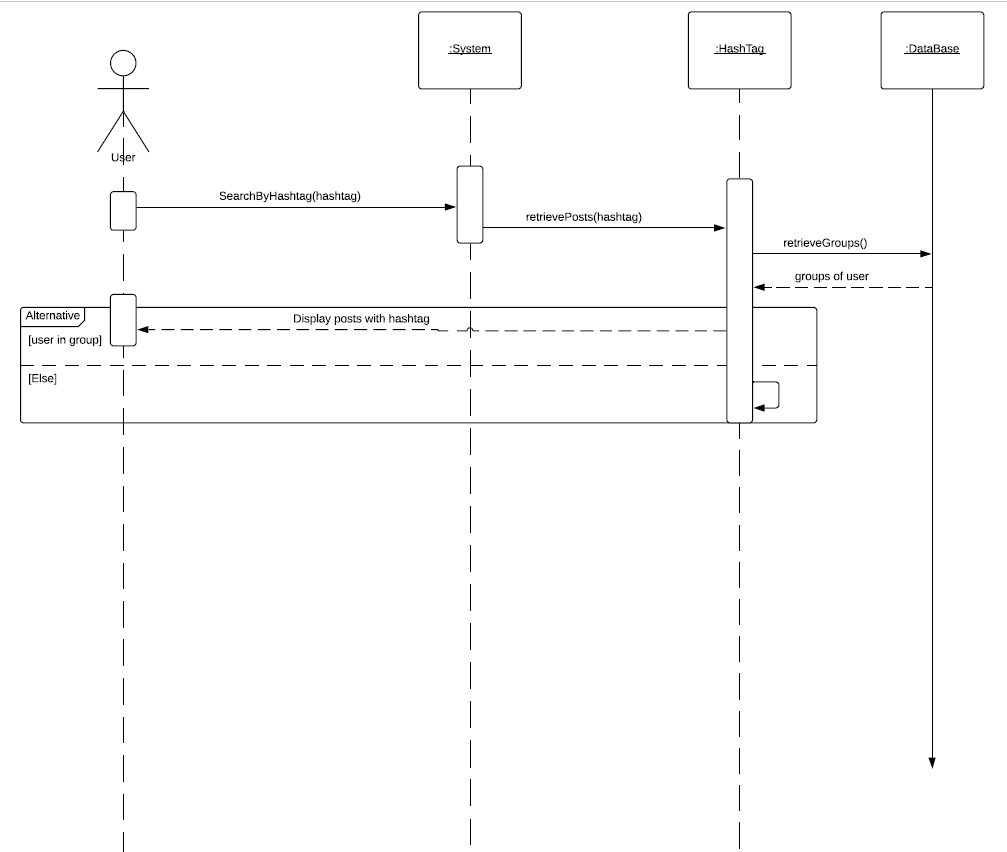
**ID : 2 Name: Log in**



**ID : 3 Name : find friend**



**ID : 4 Name : Search By Hashtag**



**Sequence Usage Table**

|  |  |  |
| --- | --- | --- |
| Class Name | Sequence Diagrams | Overall used methods |
| User | 1,2,3,4 | signup,login,findFriend,addFriend,searchByHashtag |
| Notification | 3 | notifyFriendRequest |
| HashTag | 4 | retrieveGroups |