Cairo University  
Faculty of Computers and Information



**CS251**

**Software Engineering I**

Social Network

Software Design

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# Team

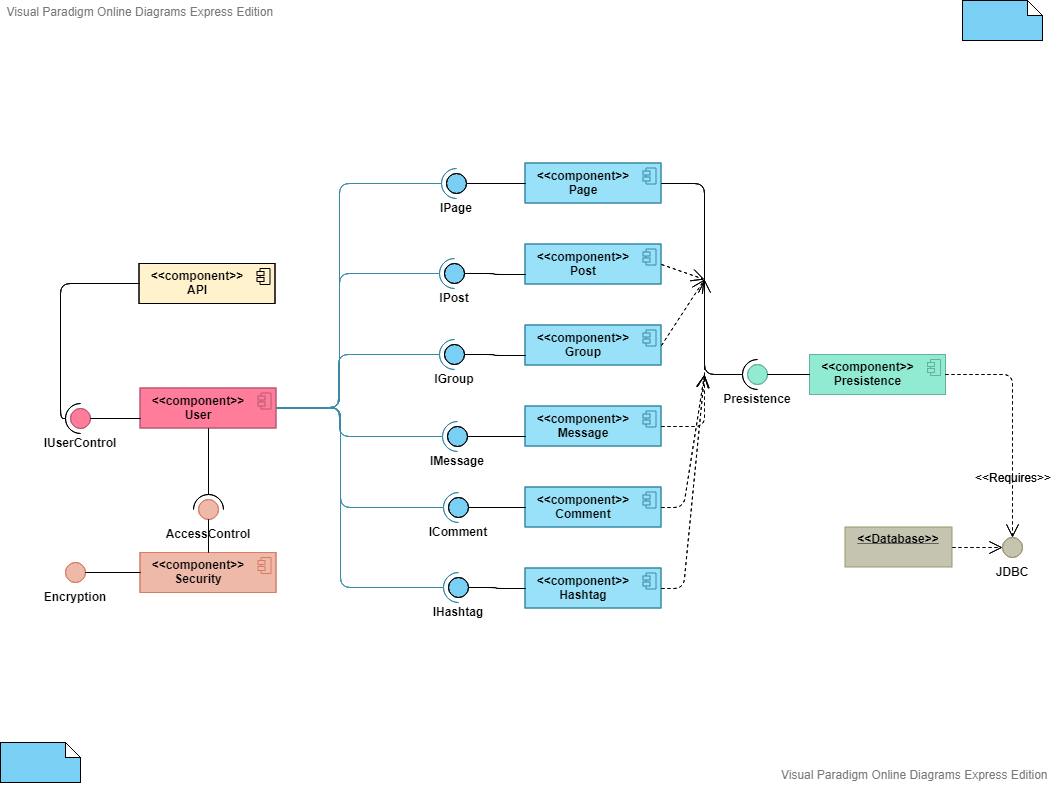
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# Document Purpose and Audience

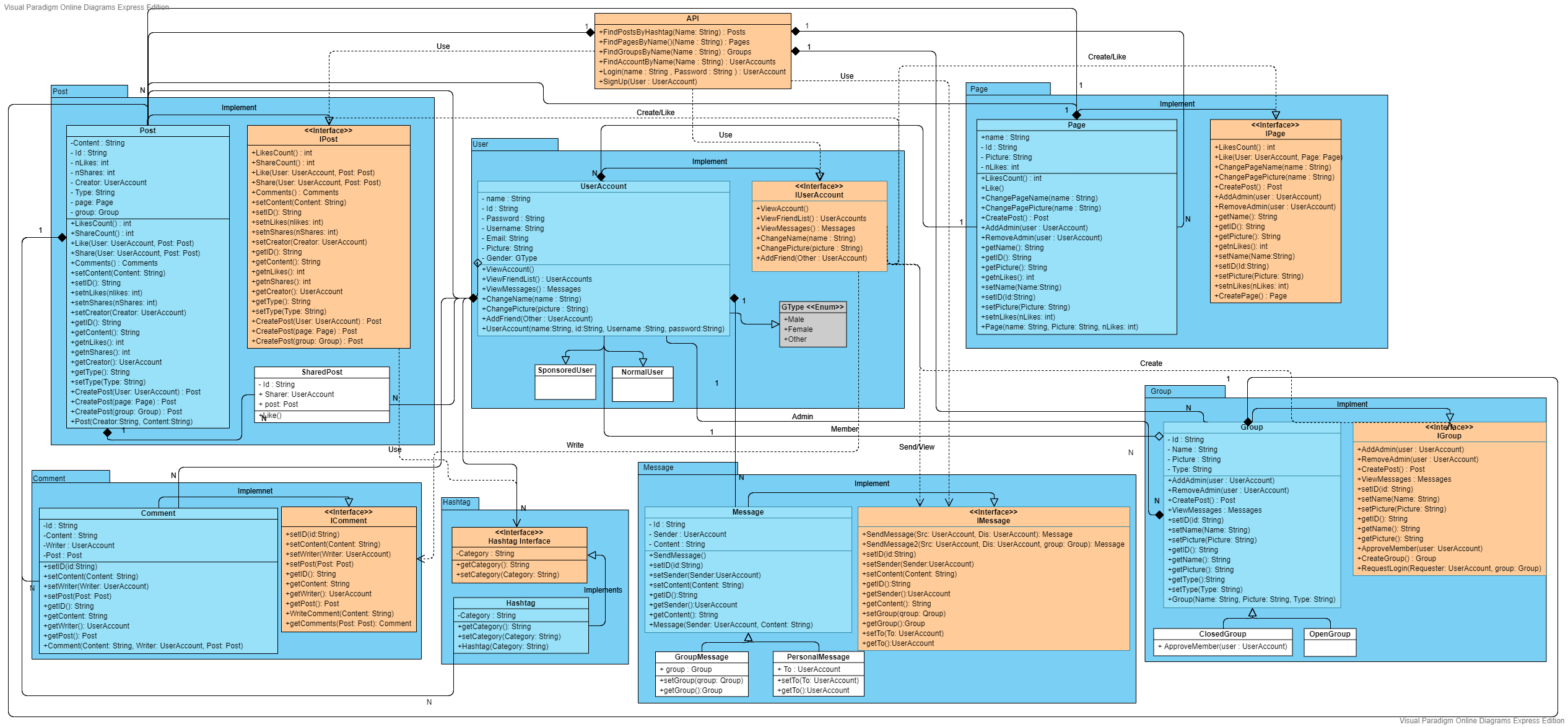
* This document is for illustrating the system design, system composition and sequence diagrams for some use cases.
* Expected audience: System Analyst, Project Manager and lead members.

# System Models

## I. System Decomposition

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## II. Class diagrams



| **Class ID** | **Class Name** | **Subsystem ID** | **Description & Responsibility** |
| --- | --- | --- | --- |
| API-C1 | API | API-P | This class responsible for managing the interface of system as logging in. |
| Post-C1 | IPost | Post-P | Interface for Posting and its functions. |
| Post-C2 | Post | Post-P | Implements all Posting functions as like post. |
| Post-C3 | SharedPost | Post-P | Shared Post that contains information of post and sharer. |
| Comment-C1 | IComment | Comment-P | Interface for Commenting and its functions. |
| Comment-C2 | Comment | Comment-P | Implements all Commenting functions as write comment. |
| Hashtag-H1 | IHashtag | Hashtag-P | Interface for Hashtag and its functions. |
| Hashtag-H2 | Hashtag | Hashtag-P | Implements Hashtag functions as write setters and getters. |
| User-U1 | IUserAccount | User-P | Interface for Account and its functions. |
| User-U2 | UserAccount | User-P | Implements all Account functions as view account and editing it. |
| User-U3 | NormalUser | User-P | Extends from UserAccount that defines a normal user. |
| User-U4 | SponsoredUser | User-P | Extends from UserAccount that defines a sponsored user. |
| User-U5 | GType | User-P | Enum to define the gender type of a user. |
| Message-C1 | IMessage | Message-P | Interface for messaging and its functions. |
| Message-C2 | Message | Message-P | Implements Message functions like send message. |
| Message-C3 | PresonalMessage | Message-P | Extends from Message that define personal message (message sent to one user). |
| Message-C4 | GroupMessage | Message-P | Extends from Message that define group message (message sent to group of users). |
| Page-C1 | IPage | Page-P | Interface for Pages and their functions. |
| Page-C2 | Page | Page-P | Implements Page functions like Add Admin. |
| Group-C1 | IGroup | Group-P | Interface for Groups and their functions. |
| Group-C2 | Group | Group-P | Implements Group functions as Add Admin. |
| Group-C3 | OpenGroup | Group-P | Default group type that has members and posts and any member can join it anytime. |
| Group-C4 | ClosedGroup | Group-P | Differs from open group in where member cannot join it unless an admin accepts it. |

## III. Sequence diagrams

* **List Sequence diagrams for all requirements. Provide for each Sequence an ID.**
* **Usually each use case is represented by a sequence diagram or more.**
* **Overall, all the diagrams should represent all requirements and possible flows.**
* **Make sure that each object in the sequence diagram has a corresponding class in the class description table above. If not, it will be REJECTED.**
* **Put actual function calls with proper parameters and return types corresponding to class diagrams.**
* **Following are couple of examples for small / meduim examples. We expect such diagrams, however there is a missing thing in them. Most of calls don’t have parameters. Please always specify the parameters in the call, matching the class diagram.**





### Class - Sequence Usage Table

* **In this table, we will list EVERY class in class diagram and which sequences used this class diagram. This helps in avoiding either unused classes or extra classes appears in sequence diagrams. In "Overall used methods" section, put all functions appeared in all sequences. If this table was built in ignorance of actual class / sequence diagrams = REJECTED for whole document.**

| **Class Name** | **Sequence Diagrams** | **Overall used methods** |
| --- | --- | --- |
| E.g. Employee | 1, 3, 5 (means Seq Ids 1, 3, 5 used Employee class) | Save, GetData |
|  |  |  |

# Ownership Report

* **Remove the following notes and any red notes**
* **For every item in this document, write the owners. If someone is owner of something, s/he understands it 100.%**
* **Team leader must verify the table with the team members.**

|  |  |
| --- | --- |
| **Item** | **Owners** |
|  |  |
|  |  |

# Policy Regarding Plagiarism:

**Students have collective ownership and responsibility of their project. Any violation of academic honesty will have severe consequences and punishment for ALL team members.**

1. تشجع الكلية على مناقشة الأفكار و تبادل المعلومات و مناقشات الطلاب حيث يعتبر هذا جوهريا لعملية تعليمية سليمة
2. ساعد زملاءك على قدر ما تستطيع و حل لهم مشاكلهم فى الكود و لكن تبادل الحلول غير مقبول و يعتبر غشا.
3. أى حل يتشابه مع أى حل آخر بدرجة تقطع بأنهما منقولان من نفس المصدر سيعتبر أن صاحبيهما قد قاما بالغش.
4. قد توجد على النت برامج مشابهة لما نكتبه هنا أى نسخ من على النت يعتبر غشا يحاسب عليه صاحبه.
5. إذا لم تكن متأكدا أن فعلا ما يعد غشا فلتسأل المعيد أو أستاذ المادة.
6. فى حالة ثبوت الغش سيأخذ الطالب سالب درجة المسألة ، و فى حالة تكرار الغش سيرسب الطالب فى المقرر.

# References

* http://www.mhhe.com/engcs/compsci/pressman/graphics/Pressman5sepa/common/cs1/design.pdf

# Authors

* Mostafa Saad and Mohammad El-Ramly