**Software Requirements Specifications**



Course Name : Software Engineering 1

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Document Purpose and Audience  
  
This document is for the purpose of analyzing the Social Network project.  
It introduces the SRS for the proposed system.  
This document is for developers to read and discuss, it will be a good start for any   
new developer joining the team.  
Also , any technically experienced person can read,discuss and review this document.

Introduction

Software Purpose

the purpose of the system is to develop an API for social network that allow users to stay connected and interact with each other.

it is simple and clear program and you can use it easily and don't require a big effort to use

it is free and available for all people

it'll offer basic services :create account , add friends,make groups and pages,message friends and receive messages ,etc..

it'll offer some features for premium users.

Software Scope

This is an API for any social network to depend on.

This software focuses on the basic operations that a user of a social network can perform, such features include:

1. create a new account (normal , premium)
2. add,view,delete a friend
3. make,edit,remove,like,share a post
4. upload some photos
5. create,join a group (private , public)
6. create,like,share a page and post to it (if administrator)
7. like,share,comment to friends' posts or pages
8. add a new hashtag to his posts or view posts with specific hashtag
9. message his friends and receive messages from his friends

it will not go through the complicated matters of advertising or any other monetary features (except for premium users)  
groups can have more than one administrator, but pages only have one.

Definitions, acronyms, and abbreviations

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| Acronyms,abbreviations | Definition |
| **URL** | **Uniform Resource Locator**  **(internet address)** |
| **API** | **An application programming interface** |
| **chat** | **chat is a place where you can talk to other people online** |
| **pp** | **Pp is a profile picture** |
| **hashtag** | **It’s symbol (#) to categorize the content of specific post** |
| **share** | **Display the user’s posts,pages**  **To the other users** |
| **post** | **It’s statements which user write them to express something specific** |
| **page** | **Page is a public profile created by businesses, organizations and celebrities** |
| **group** | **Group is a page created for an organization or business to promote activities** |

Requirements

Functional Requirements

* The system can create new users, normal or premium , if given the appropriate parameters => (user name,email,gender,premium?)
* the system stores the information of the user and allows for updating/deleting/inserting any additional information => (profile picture , birth date , address)
* the system offers different features for different types of users (to be discussed with PO)
* A user can create groups (given that he is authorized to do so), there are different types of groups (public groups, private groups)
* The group owner (who created the group) can add new members and promote any number of them to manage the group.
* Users can create pages for general purposes or for specific purposes.
* A page is managed by only the creator (to be further discussed)
* anyone can view the number of likes for any page.
* Anyone can like/share/comment on any page's post or activity.
* Any user can make a post , share it In a group , like his/her friends' posts and share and comment to them
* Premium users can mark their posts as global , which means not only his/her friends view them , but it goes on the main stream of the whole system
* A page can make posts with it's name by the owner
* Any post is stored along with its number of likes , shares and comments
* Any post can have a Hashtag in its body , which serves as a reference for all other related posts of the same topic (contains the same Hashtag)
* Any user can retrieve a list of all posts associated with a specific Hashtag, sorted in order of importance (sponsored posts goes before normal posts)
* Any user send/receive a message to/from any one of his friends
* Any group of users can create a group chat at which all of them can take part in the conversation
* The system stores conversations between users , but doesn't supply them to any one besides the participants of the conversation

Non Functional Requirements

* **Non-functional requirements describe how the system works**
  + **E.g. Withdraw operation will be done within 20 second. Network is using secured protocols. System allows up to 30,000 withdrawal per minute.**
  + **Think about the operation / system quality**
* **There are too many non functional requirements. Read in [wiki](http://en.wikipedia.org/wiki/Non-functional_requirement) and Chapter 4. Pick the suitable ones for your system. Non-functional requirements must be VERIFIABLE, i.e., MEASURABLE.**
  + **Some Types as just examples: Usability, Reliability, Performance, Security, Scalability, Portability, Maintainability**
  + **Select the sutiable ones, for each one write the details**
  + **Be realistic **

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|  | **Details** |
| **Usability** | * **system must be easy to use , the system rules must be simple.** * **A user should learn how to log in easily** * **all relevant information of using the system must be available to the user** |
| **Reliability** | * **the system should be crash safe in 80% of its run time** |
| **Performance** | * **Short response time , the system must not take more than 10 second to load** |
| **implementation** | * **Social network must be implemented in Java.** |
| **Interface** | * **The user interface of social network should be understandable to the user on the first view.** * **The user interface is based on a a main window,which includes a user email and password** |
| **Legal** | * **The social network should be financed over advertisement** * **The system should not be expensive for premium users** |
| **security** | * **The system provides privacy for the user** * **There are a strong security system to prevent a hacker to penetrate the user messages or personal information** |
| **Maintainability** | * **The system code must be orderly and can fix any mistakes in the system without any difficulties and able to improvable** |

System Models

Use Case Model

* **Using UML, write the use case model expressing the system actors & operations**

Use Case Tables

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| **Use Case ID:** | **2** | |
| **Use Case Name:** | **Make a comment** | |
| **Actosr:** | **Premium user , Regular user , Group admin ,**  **Page admin** | |
| **Pre-conditions:** | **User must log in system , must be friend to post user, or member in group,page** | |
| **Post-conditions:** | **Can make a comment in post** | |
| **Flow of events:** | **User Action** | **System Action** |
| **1- User Enter email and Password.** |  |
|  | **2- System Verify user data** |
| **3- User write comment in user’s post,or post in group,page** |  |
|  | **4-system receive and save the comment** |
| **Exceptions:** | **User enter email or password wrong , post is deleted**  **During writing the comment** | |
| **Includes:** |  | |
| **Notes and Issues:** |  | |

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| **Use Case ID:** | **4** | |
| **Use Case Name:** | **Change profile** | |
| **Actosr:** | **Premium user , Regular user** | |
| **Pre-conditions:** | **User must log in system , choose new picture for profile if he/she want to change profile picture , or edit the information if he/she want to change information** | |
| **Post-conditions:** | **The information , profile picture changed** | |
| **Flow of events:** | **User Action** | **System Action** |
| **1- User Enter email and Password.** |  |
|  | **2- System Verify user data** |
| **3- User enter to his information and edit them** |  |
|  | **4-system save and change the information** |
| **Exceptions:** | **User enter email or password wrong** | |
| **Includes:** |  | |
| **Notes and Issues:** |  | |

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| **Use Case ID:** | **6** | |
| **Use Case Name:** | **Join group** | |
| **Actosr:** | **Premium user , Regular user** | |
| **Pre-conditions:** | **User must log in system , group admin must confirm the join request** | |
| **Post-conditions:** | **User became member in the group and can make post or comment , like , share posts** | |
| **Flow of events:** | **User Action** | **System Action** |
| **1- User Enter email and Password.** |  |
|  | **2- System Verify user data** |
| **3- User send join request to group** |  |
|  | **4-system send the request to admin and he can confirm or refuse** |
| **Exceptions:** | **User enter email or password wrong** | |
| **Includes:** |  | |
| **Notes and Issues:** |  | |

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| **Use Case ID:** | **8** | |
| **Use Case Name:** | **Like page** | |
| **Actosr:** | **Premium user , Regular user** | |
| **Pre-conditions:** | **User must log in system , user must see the page and like if** | |
| **Post-conditions:** | **User became member in the page and can make post or comment , like , share posts** | |
| **Flow of events:** | **User Action** | **System Action** |
| **1- User Enter email and Password.** |  |
|  | **2- System Verify user data** |
| **3- User like the page** |  |
|  | **4-system make the user member in this page** |
| **Exceptions:** | **User enter email or password wrong , page is deleted during like the page** | |
| **Includes:** |  | |
| **Notes and Issues:** |  | |

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| **Use Case ID:** | **10** | |
| **Use Case Name:** | **Make group chat** | |
| **Actosr:** | **Premium user , Regular user** | |
| **Pre-conditions:** | **User must log in system , user must be friend with this group of chat** | |
| **Post-conditions:** | **User can receive messages and send messages to this group** | |
| **Flow of events:** | **User Action** | **System Action** |
| **1- User Enter email and Password.** |  |
|  | **2- System Verify user data** |
| **3- User open chat box and write the message to his friends** |  |
|  | **4-system send the message to his friends and receive the message to the user** |
| **Exceptions:** | **User enter email or password wrong , connection with his friends loss** | |
| **Includes:** |  | |
| **Notes and Issues:** |  | |

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| **Use Case ID:** | **12** | |
| **Use Case Name:** | **Share post as global** | |
| **Actosr:** | **Premium user** | |
| **Pre-conditions:** | **User must log in system** | |
| **Post-conditions:** | **User can write the statements and make them global** | |
| **Flow of events:** | **User Action** | **System Action** |
| **1- User Enter email and Password.** |  |
|  | **2- System Verify user data** |
| **3- User write the post** |  |
|  | **4-system publish the post to all users** |
| **Exceptions:** | **User enter email or password wrong** | |
| **Includes:** |  | |
| **Notes and Issues:** |  | |

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| **Use Case ID:** | **14** | |
| **Use Case Name:** | **Promote member** | |
| **Actosr:** | **Group admin** | |
| **Pre-conditions:** | **User must log in system , choose someone of members to become in change of the group** | |
| **Post-conditions:** | **This member became admin of the group** | |
| **Flow of events:** | **User Action** | **System Action** |
| **1- User Enter email and Password.** |  |
|  | **2- System Verify user data** |
| **3- admin choose some one and promote him** |  |
|  | **4-system save the promote and make this member admin of the group** |
| **Exceptions:** | **User enter email or password wrong , this member left the group during promoting him** | |
| **Includes:** |  | |
| **Notes and Issues:** |  | |

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| **Use Case ID:** | **16** | |
| **Use Case Name:** | **Manage the group** | |
| **Actosr:** | **Group admin** | |
| **Pre-conditions:** | **User must log in system , user must be admin in this group** | |
| **Post-conditions:** | **This admin can manage group and make this public,private.**  **Can confirm or refuse the join requests**  **Can promote some one**  **Can make a post ,etc .....** | |
| **Flow of events:** | **User Action** | **System Action** |
| **1- User Enter email and Password.** |  |
|  | **2- System Verify user data** |
| **3- admin edit the group and manage it** |  |
|  | **4-system save the changes in this group** |
| **Exceptions:** | **User enter email or password wrong** | |
| **Includes:** |  | |
| **Notes and Issues:** |  | |

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.**

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