



CS251: Software Engineering I

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Project Title : Social Network

## **Software Requirements Specifications for social network**

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## Team

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## Document Purpose and Audience

- This document is presenting a software requirements specifications for a back-end API for a social network like Facebook, etc..
- It targets developers, software engineers and business developers who are trying to develop their professional network or create a new one.
- It targets also the project manager, who is responsible for the whole project.

## Introduction

### Software Purpose

- The purpose of the software is to develop a back-end API that will give the audience the basic features for a social network, to be able to develop a new social network and to add to it his own new features.
- It is also able to manage interactions between users, manage pages, groups and posts; with its different types. Adding some other features like hashtags and messages.

### Software Scope

- This software scope includes these major components:
  - 1- Users: Its different types (Normal and Premium).
  - 2- Groups: Create, manage groups, types of groups with respect to its privacy, and how users manage groups.
  - 3- Pages: Created and managed by users.
  - 4- Posts: Manage likes, shares from and its privacy according to different things (from profile/ page/ group) and the different types of posts.
  - 5- Hashtags: Categorize contents of specific posts and arrange the reviewed posts according to user type's importance.

6- Messages: Sending messages to people from your friend list, get messages and review group messages.

## Definitions, acronyms, and abbreviations

Definitions/ Abbreviations	Description
<b>API</b>	Stands for: Application Programming Interface, is the way for an application to interact with certain system/ application/ library, etc..
<b>Hashtag</b>	A word prefixed with the hash character #, to form a label. It allows grouping of similarly tagged messages, and also allows an electronic search to return all messages that contain it.
<b>Premium User</b>	A user with advanced features.
<b>Fan Page</b>	A page created and maintained by a fan. It could have many different purposes like: Local business, product, art, communities, celebrities, etc...
<b>Privacy Types</b>	Public: Anyone can see the group, its members and their posts. Closed: Anyone can find the group and see who's in it. Only members can see posts Secret: Only members can find the group and see posts.

## Requirements

### Functional Requirements

Function Name	Description
<b>Sign Up</b>	<ul style="list-style-type: none"><li>- The social network allows new user to sign up by submitting: Name/ Email/ Gender/ Password/ Profile Picture/ Date of Birth</li><li>- The system creates a new account with the submitted data.</li><li>- A new account is created for the new user.</li></ul>
<b>Sign in</b>	<ul style="list-style-type: none"><li>- The system allows to the users who have accounts to sign in, by submitting his email and password.</li><li>- The system checks the submitted data whether it is valid, existed or not.</li><li>-If it is valid, user is enabled to access his account.</li><li>-If it is not, the system tells the user to re-enter his data.</li></ul>
<b>Send messages</b>	<ul style="list-style-type: none"><li>- The user is allowed to type messages to his</li></ul>

	<p>friend list.</p> <ul style="list-style-type: none"> <li>- The system send the user's message to his friend.</li> </ul>
Write a post	<p><b>*Profile Page:</b></p> <ul style="list-style-type: none"> <li>-User is allowed to write a post in his profile page.</li> <li>-The system prints this post on the user profile to be seen by his friend list.</li> </ul> <p><b>*Group:</b></p> <ul style="list-style-type: none"> <li>- User is allowed to write a post in a joined group.</li> <li>-The system prints the user's post in the group.</li> </ul> <p><b>*Fan Page Admin:</b></p> <ul style="list-style-type: none"> <li>- User is allowed to write a post in a page only if he owns it.</li> <li>- The system prints the user's post in the page.</li> </ul>
Like a post	<ul style="list-style-type: none"> <li>- The user is enabled to like a post that one of his friend list wrote it.</li> <li>- The system increases the number of likes of this post.</li> </ul>
Share a post	<ul style="list-style-type: none"> <li>- The user is enabled to share a post, if and only if it is written by one of his friends in his friend list.</li> <li>- The system increases the number of shares of this post.</li> </ul>
Create a group	<ul style="list-style-type: none"> <li>- The user is allowed to create and manage a group, choosing its type of privacy.</li> <li>- The system creates the group in the social network, and applies any updates or settings that the user chooses.</li> </ul>
Create a page	<ul style="list-style-type: none"> <li>- The user is allowed to create his own fan page, and specifying or categorizing it.</li> </ul>
Review Hashtag posts	<ul style="list-style-type: none"> <li>- The user writes a specific hashtag.</li> <li>-The system gets all the posts containing this hashtag, sorted according its importance</li> </ul>

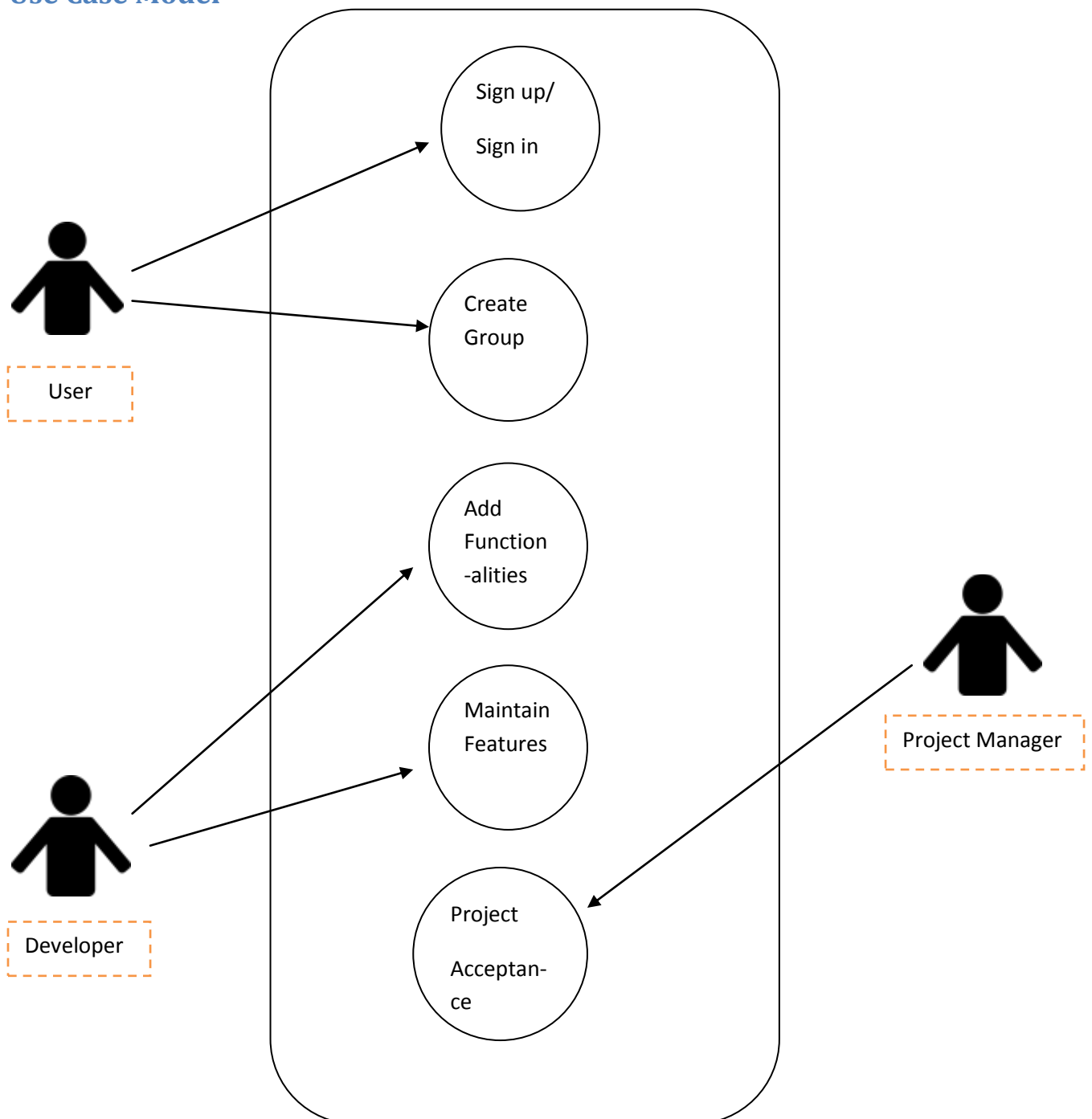
## Non Functional Requirements

	Details
Performance	<ul style="list-style-type: none"> <li>• Login operation will not take more than 10 seconds.</li> </ul>
Availability	<ul style="list-style-type: none"> <li>• they system should be up 99% of the time.</li> </ul>
Reliability	<ul style="list-style-type: none"> <li>• the system must not be down for more than 10 times in it 10 years life</li> </ul>

	span
Usability	<ul style="list-style-type: none"> <li>there are tips for any feature and help guide for the user.</li> </ul>
Security	<ul style="list-style-type: none"> <li>the password is hidden and you can't change it unless you re-enter your old password.</li> <li>there is also alternative e-mail in case user forget his password.</li> </ul>
Platform	<ul style="list-style-type: none"> <li>the system can operate on any browser.</li> </ul>

## System Models

### Use Case Model



## Use Case Tables

Use Case ID:	#1	
Use Case Name:	Sign Up	
Actors:	User: is the person who uses and interact/interface with the social network	
Pre-conditions:	-User data is ready (Email/ Username/ Password)	
Post-conditions:	An account is created	
Flow of events:	<b>User Action</b>	<b>System Action</b>
	1- User enters his data	
		2- System Verify user data
	3- User agree to the social network terms and conditions.	
		4- System creates a new account to the user
Exceptions:	-The user enters an email that already exist.  -The system will ask the user to enter a different email.	
Includes:		
Notes and Issues:		

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Use Case ID:	#2	
Use Case Name:	Sign in	
Actors:	User: is the person who uses and interact/interface with the social network	
Pre-conditions:	-User has an account	
Post-conditions:	User is logged in	
Flow of events:	<b>User Action</b>	<b>System Action</b>
	1- User enters his data	
		2- System Verify user data

	3- User view his account	
Exceptions:	-The user enters invalid data (wrong email/password)  -The system will ask the user to re-enter his data  -In case of forgetting the password, the system will send a message with the password to this user's email.	
Includes:	-	
Notes and Issues:	-	

Use Case ID:	#3	
Use Case Name:	Write a Post	
Actors:	User: is the person who uses and interact/interface with the social network	
Pre-conditions:	- The user is logged in	
Post-conditions:		
Flow of events:	<b>User Action</b>	<b>System Action</b>
	1- User writes his post, and click on "post".	
		2- System views the post on (his profile/ group he owns/ page he owns).
Exceptions:	-The user exceeds the number of letters of the post.  -The system won't allow posting it, and asks from the user to decrease the number of letters.	
Includes:	-	
Notes and Issues:	-	

Use Case ID:	#4
Use Case Name:	Review Hashtags



Actors:	User: is the person who uses and interact/interface with the social network	
Pre-conditions:	User is logged in	
Post-conditions:		
Flow of events:	<b>User Action</b>	<b>System Action</b>
	1- User enters the hashtag	
		2- System view all the posts with this hashtag, arranged with its importance.
Exceptions:	-	
Includes:	-	
Notes and Issues:	-	

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Use Case ID:	#5	
Use Case Name:	Create a group	
Actors:	User: is the person who uses and interact/interface with the social network	
Pre-conditions:	-User logged in	
Post-conditions:	- A group is created	
Flow of events:	<b>User Action</b>	<b>System Action</b>
	1- User chooses the name of the group, type of privacy, and choose admins.	
		2- System creates the new group with the chosen data.
Exceptions:	-The user doesn't add any members, when creation. -The system asks the user to add at least one member, when creation.	
Includes:	-	
Notes and Issues:	-	

Use Case ID:	#6	
Use Case Name:	Like a post	
Actors:	User: is the person who uses and interact/interface with the social network	
Pre-conditions:	User is logged in / Like a post, is available to his friends' posts only	
Post-conditions:		
Flow of events:	<b>User Action</b>	<b>System Action</b>
	1- User likes some post	
		2-Increases the number of likes by one.
Exceptions:	-	
Includes:	-	
Notes and Issues:	-	

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## Ownership Report

Item	Owners
All the project	<i>All the members</i>