CS251: Software Engineering I

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Project Title : Social Network

Software Requirements Specifications
for social network

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Contents

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Document Purpose and Audience

- This document is presenting a software requirements specifications, which is a description of a software system to be developed, laying out functional, non-functional requirements, and system models. It is for a back-end API (Application Programming Interface) for a Social Network, which is a dedicated website which enables users to communicate with each other by posting information, comments, messages, images, like Facebook, etc..

- It targets developers (to be able to maintain or develop functions), 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 purpose of the software scope is to clarify for the actors what functions could be done within this system, it 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
API	Stands for: Application Programming Interface, is the way for an application to interact with certain system/ application/ library, etc..
Hashtag	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.
Premium User	A user with advanced feautures.
Fan Page	A page created and maintained by a fan. It could have many different purposes like: Local business, product, art, communities, celebrities, etc...
Privacy Types	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

User Functional Requirements			
ID	Function Name	Description	Function Complexity

| 1	Sign Up	- The social network allows new user to sign up by submitting: Name/ Email/ Gender/ Password/ Profile Picture/ Date of Birth, to create a new account.	4
2	Sign in	- The system allows to the users who have accounts to sign in, by submitting his email and password.	5
3	Sign out	- The system allows the user to log out from his account.	4
Messages Functional Requirements			
4	Send messages	- The user is allowed to type messages to his friend list.	3
5	View messages	- When the user is logged in, he can view unread, or read messages between his friend list.	2
Posts Functional Requirements			
6	Write a post	*Profile Page: -User is allowed to write a post in his profile page. *Group: - User is allowed to write a post in a joined group. *Fan Page Admin: - User is allowed to write a post in a page only if he owns it.	3
7	Like a post	- The user is enabled to like a post that one of his friend list wrote it.	2
8	Share a post	- The user is enabled to share a post, if and only if it is written by one of his friends in his friend list.	2

9	**Write a comment**	- The user is allowed to comment on his friend's posts.	**3**
Groups Functional Requirements			
10	**Create a group**	- The user is allowed to create and manage a group, choosing its type of privacy.	**4**
11	**Delete a group**	- The user is allowed to delete his own group.	**2**
Pages Functional Requirements			
12	**Create a page**	- The user is allowed to create his own fan page, and specifying or categorizing it.	**4**
13	**Delete a page**	- The user is allowed to delete his own page.	**2**
Hashtags Functional Requirements			
14	**Review Hashtag posts**	- The user writes a specific hashtag. -The system gets all the posts containing this hashtag, sorted according its importance	**3**

Non Functional Requirements

	Details
Performance	• Login operation will not take more than 10 seconds.
Availability	• The system should be up 99% of the time.
Reliability	• The system must not be down for more than 10 times in it 10 years life span
Usability	• There are tips for any feature and help guide for the user.
Security	• The password is hidden and you can't change it unless you re-enter your old password. • There is also alternative e-mail in case user forget his password.
Platform	• The system can operate on any browser (like Internet Explorer, Mozilla Firefox, Google Chrome, Opera, etc..) which is a computer program with a graphical user interface for displaying HTML files, used to navigate the World Wide Web.

System Models

Use Case Model
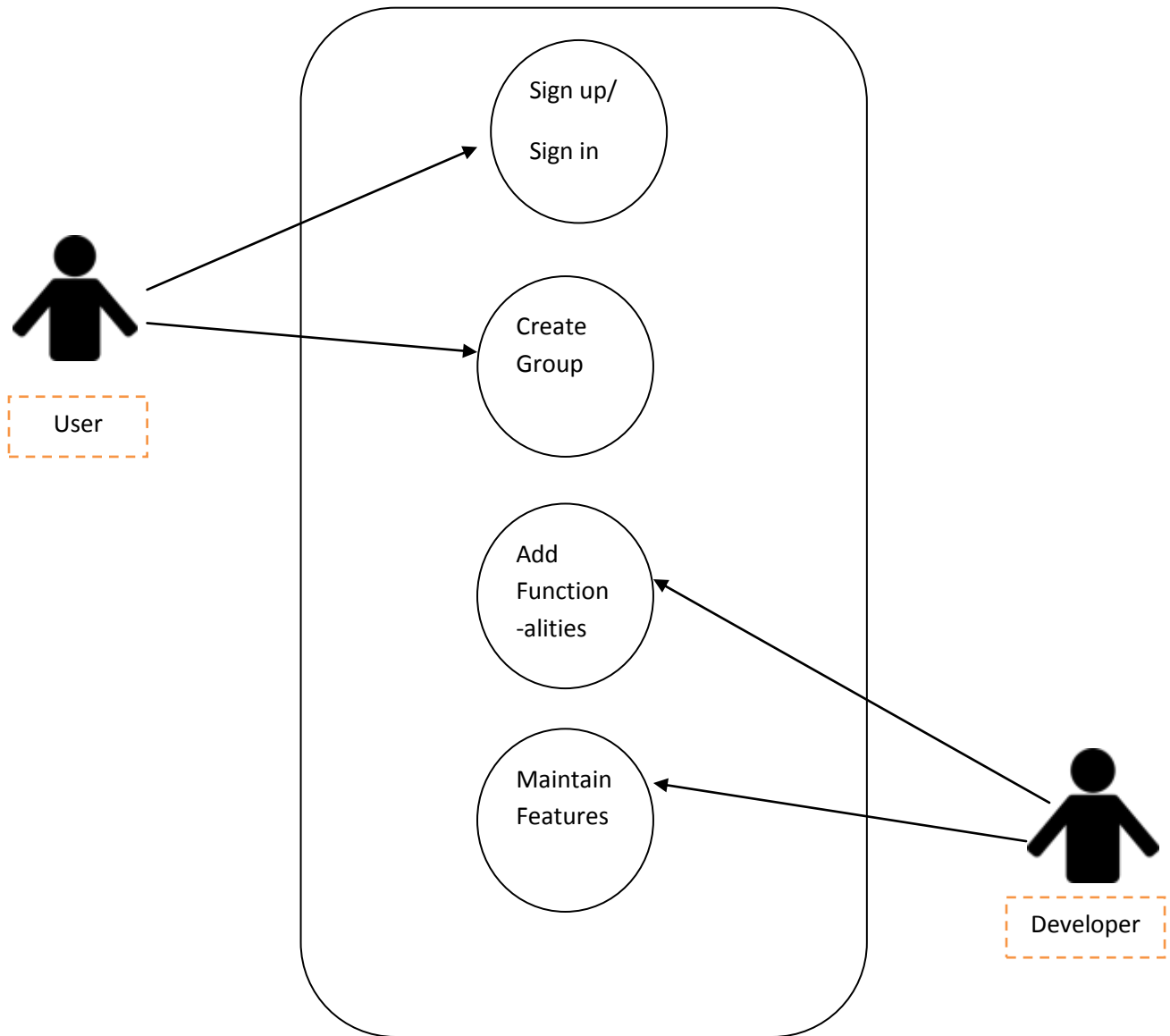
Use Case Tables

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:	**User Action**	**System Action**
	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:		

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:	**User Action**	**System Action**
	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:	#6
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:	**User Action**	**System Action**
	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:	#14
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:	**User Action**	**System Action**
	1- User enters the hashtag	

	2- System view all the posts with this hashtag, arranged with its importance.
Exceptions:	-
Includes:	-
Notes and Issues:	-

Use Case ID:	#10
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:	**User Action**	**System Action**
	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:	#7
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:	**User Action**	**System Action**
	1- User likes some post	
		2-Increases the number of likes by one.
Exceptions:	-	
Includes:	-	
Notes and Issues:	-	

Use Case ID:	#3	
Use Case Name:	Sign out	
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:	**User Action**	**System Action**
	1- User signs out.	
		2- System logs out the user from his profile.
Exceptions:		
Includes:	-	
Notes and Issues:	-	

Use Case ID:	#6
Use Case Name:	Delete a group
Actors:	User: is the person who uses and interact/interface with the social network
Pre-conditions:	- The user is logged in & the user owns a group.
Post-conditions:	- The group doesn't exist anymore.

Flow of events:	User Action	System Action
	1- User deletes his group	
		2- System asks from the user to type his password, to confirm his request.
	3- User enters his password.	
		4- The system deletes the group.
Exceptions:	- User enters a wrong password. - The system won't allow the deletion of the group, until the user writes the correct password.	
Includes:	-	
Notes and Issues:	-	

Ownership Report

Item	Owners
All the project	*All the members*