**Social Network API Requirement Analysis Document (RAD)**

**1. Introduction:**

**1.1 Purpose of the document:**

This document provides you (developer) with a description of the system, it will show you the scope of the system, functional requirement, non-functional requirements, and system design, it will show you weather this system satisfies your requirements or no.

In the “scope of the system” part we will discuss briefly every part in the system, the constraints on the system, what the system can do, and what it can’t do.

In the “proposed system” part we will discuss the functional requirements (functions in the system that make the system acceptable) and the non-functional requirements (another features that prioritize our system like quality and platform) of the system.

**1.2 Scope of the system:**

This system includes all main functions that allow developer to develop his/her complete social network (ex. Facebook), summarized at managing users (creating, deleting, or editing), managing groups (creating, editing members), managing posts (creating, deleting, returning number of likes, managing comments), managing pages (creating, returning list of fans), creating hashtags, and also managing messages (specifying sender and receiver).

This system is written in java and can be used by java developer, to avoid system crash: groups can carry till up 500 user, each user can have maximum 100 friends, and each page can’t be liked by more than 1000 user.

**1.3 Objectives and success criteria:**

**1.3.1 The objective of this project (API for social network):**

* Provide all main functions that developers may need to develop complete social network.
* Provide developer friendly methods.

**1.3.2 The success criteria that satisfies the API:**

* The API must be available before the end of the semester.
* The API must be implemented and used by different programing languages ex: java, c#.

**1.4 Definitions and abbreviations:**

API (application programing interface): classes and methods implemented for developers to use for developing certain kind of projects.

Social network: A tool that helps its users to stay in touch with each other’s.

**2.Current system:**

There is no current system, this is a new system.

**3.Proposed system:**

**3.1 Overview:**

Our API used to help end-users (developers) to develop their own social networks.

Must provide for developers all required methods to develop the networks like signing up, logging in, logging out, managing profiles, posting, create hashtags, creating pages, liking pages, creating groups. Joining groups, making friends, sending and receiving messages.

**3.2 Functional requirements:**

**3.2.1 Arrival of the API to the developer’s PC:**

The developer request the API, and it is delivered to the developer by email address.

**3.2.3 Creating users:**

Developer can create premium or normal users under certain conditions defined by him and the function creates a profile and a friend list (initially empty).

**3.2.4 Creating Groups:**

Developer can create groups, sets its maximum number of users, and sets its privacy.

**3.2.5 Joining Groups:**

Developer can call this by providing the user to join and the group to be joined, and the function update this group by updating its members list and also updating the joining user.

**3.2.6 Sending message:**

Developer can call this function by providing it the name of the sending user and receiving user.

**3.2.7 Creating post:**

Developer can call this function by passing to it the text to be posted and the user posting and the function adds this text to other users depending on the type of posting user and his friends.

**3.2.8 Creating hashtag:**

Developer can call this by providing a post and a keyword and the function creates or updates a list of the keyword by adding this post.

**3.3 Non-functional requirements:**

**3.3.1 Reliability:**

Can run on java and c# programming languages.

**3.3.2 Quality:**

Methods doesn’t take large amounts of memory and are easy to use.

**3.3.3 Stability:**

Methods doesn’t conflict with each other’s or make use of the same memory (system don’t crash minimum 80% of time depending on the developer use).

**3.4 System models:**

**3.4.1 Installing API model:**

X received the API by email, copied in the java library.

**3.4.2 Creating user model:**

X was coding on eclipse IDE and called create user function by passing suitable information about user, and the function added the user to system.

**3.4.3 Creating group model:**

X was coding on a system containing 5 users, he called the create group by passing the creating user, privacy level and name and the function added the group to the system with 1 user (creating user).

**3.4.4 Joining group model:**

X was coding on a system containing 3 users and 2 groups, he called this function by providing it the 2nd user and the 1st group, the function checks for maximum number of members and it added this user to the group.