

CAMPUSTALK

System Requirements Specification

Revision History

Date	Version	Description	Author
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1. Introduction

This document describes the guidelines used by system being developed for communication in the college network between students and professors, called CampusTalk, to establish standard requirement documents, requirement types, attributes and traceability. It confines general strategy behind the project and serves as resource for all persons participating in this project.

1.1 Purpose

The purpose of CampusTalk is to provide a complete intranet ready browser-based webapp that allows internal communication between students and professors without relying on any third-party service. The webapp comprises modern web standards to provide desktop-like seamless experience within web browser.

1.2 Scope

This plan provides guidelines to developers, designers and analysts involved in developing the project.

1.3 Definitions, Acronyms and Abbreviations

- Student – The student of college using the network.
- Professor – The professor of the college using the network.
- Moderator – The designated student (as decided by professor) who moderates batch activity on the network.
- Administrator – The network-wide administrator controlling the proper functioning of the network.

1.4 References

- Yammer – <https://www.yammer.com/>
- Jive – <http://www.jivesoftware.com/>
- Social Network Services – http://en.wikipedia.org/wiki/Social_networking_service

1.5 Overview

This document contains specific details and strategies for managing the requirements for CampusTalk. It also details how requirements are organized and administered within the project, and describes how requirements will be identified, assigned attributes, traced and modified. It specifies milestones to be reached and standards to be adhered.

2. Requirements Management

2.1 Organization, Responsibilities and Interfaces

The following list of roles defines who is what in the system . It clarifies their part of responsibility in the development and usage of the system.

2.1.1 Customer

A person or an organization who takes financial responsibility for the system. This may not be the end-user in a large system.

2.1.2 User

A person who will use this system.

2.1.3 Stakeholder

The person or an organization, who is monetarily or materially affected by the outcome of the system.

2.1.4 Project Manager

The person who has overall responsibility for the development of the project. The project manager is responsible for the scheduling and allocation of the various tasks during the development of the project.

2.1.5 Quality Assurance

The function of Quality Assurance is the responsibilities of Project Manager and is responsible for ensuring that project standards are correctly followed by all project staff.

2.1.6 Developer

A person responsible for developing the required functionality in accordance with given requirements using project-adopted standards and procedures.

2.1.7 Team Leader

The team leader is the intermediate between project management and developers. The team leader is responsible for ensuring that a task is allocated and monitored to completion.

2.1.8 Configuration Manager

The configuration manager is responsible for setting up the product structure in the Change Management system, for defining and allocating work-spaces for developers, and for integration. The configuration manager also extracts the appropriate status and metrics reports for the project manager.

2.1.9 Requirements Specifier

The requirements specifier details the specification of a part of the system's functionality by describing the requirements aspect of one or several use cases and other supporting software requirements.

2.2 Tools, Environment and Infrastructure

Tool/Platform	Description
Ubuntu 12.04 LTS (or any Linux distro)	Development platform.
LibreOffice, Google Docs, Microsoft Visio, Rational Suite	Documentation and Diagramming.
Eclipse IDE	Development IDE
Git (with GitHub)	Version Control System
Spring Web MVC Module	Development Framework
JavaScript Frameworks	Client-end technologies
Java 7	Java Platform

3. User Categories

3.1 Identified Users

Identified users are the class of user that can access the data processed and stored in the system. The data stored is administered by CampusTalk Administrator, while other user classes (Student, Professor & Moderator) have certain privileges for accessing the data. The system has four key factors that deal with the data flow of the system, CampusTalk Administrator, Professors, Students and Moderators.

3.2 Access Privileges

It is important to have a control over who can access the data, without which integrity and security of the data can be hindered. Certain users that belong to the system may have only certain level of access to the information. Following is the overview regarding designation of the privileges.

- **CampusTalk Administrator** : The network-wide administrator controlling the proper functioning of the network.
- **Professors** : Can view any network's post and also can post it (except Student mass messaging private post).
- **Moderator** : The designated student (as decided by professor) who moderates batch activity on the network.
- **Student** : He/she can view his own network post and also can send private individual/bulk messages or can post public posts which will be visible to members of other batches.

3.3 Profile/Information Security

Once the system is implemented and information is stored, it is crucial to have the information and details of students and professors. Since sensitive data like credentials, personal email id, address, profile picture of user is stored in the system. Student/professor can set profile information visibility mode (Only Self, Batch-mates or open). Unauthorized access to such information can lead to severe consequences. Security not only means to secure the information from unauthorized access, but it also means to make information available for recovery in case of system failure.

4. Requirements Specification

4.1 Functional Requirements

Following is the set of requirements for the system to be developed:

- There will be an Administrator control panel for configuring for particular college.
- Administrator can create a group for each batch on site, and then can associate student email IDs that belong to certain Batch group.
- Group members can make a post with visibility modes (*Private* to batch or *Public*).
- Public posts are visible to members of every batch, while private posts are visible to only group members. Professors can see all posts.
- Anyone can comment the post as per the visibility mode.
- Moderator reviews the posts which have more than 5 abuse reports. and moderator will manage whether the post should be removed or not.
- Personal messages between group members.
- Members of "super-user" group (usually professors) can send mass message to any batch for announcements.
- Events can be created by any members.
- Super User can choose moderator for any batch group, or election can be created for moderator selection.

4.2 Objects

Objects are the entities involved in the system. This includes the Administrator, Moderator, Professors, and Students. The system modules that store and manipulate the information regarding all the posts with its visibility modes and comments, details regarding professors, moderators, super users.

4.3 Non-Functional Requirements

Non-functional requirements are the requirements that are not the part of how system should work, but rather, what should be done to make the system run smoothly. These requirements include crucial factors like; system's performance, safety of the information stored, prevention from unauthorized access, responsiveness of the system in every aspect. Following are the details of non-functional requirements.

- System Performance should be reliable and fast enough to deliver results even in peak load.
- The information stored should be safe from unforeseen accidents like, data loss, server crash, accidental deletion, migration to different location.
- Since information stored in the system is sensitive, the privacy of the profiles shouldn't be breached due to unauthorized access.
- The system should be responsive; it should deliver results fast enough which are accurate and reliable as well.

4.4 Design and Implementation Constraints

The non-functional requirements of the system suggests certain critical factors like, data safety, security, responsiveness, etc. and such factors can be attained only with properly crafted design of the system. The system can attain such attributes with following design constraints:

- Data stored in the system should be accessible only through password or similar secure access key.
- Data should be secured from loss in an event of system failure, be it due to internal or external factors. Eg. System should have strong data back up mechanism.
- The system should be responsive in case of retrieval of large amount of information and should provide accurate and reliable results.

4.5 User Documentation

CampusTalk is an attempt to make managing and running an Intranet College network more easily. Hence, the target users of the system must be aware of the entire system for how it works, and how they can get more out of it. The documentation should be easier enough to make users understand the nature of the system, and easier enough to understand for a novice.

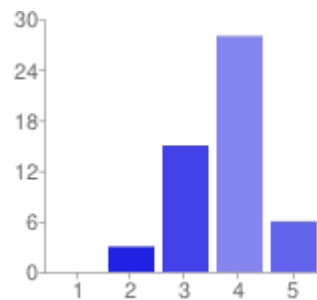
5. System Requirements Analysis

5.1 Fact-finding Chart

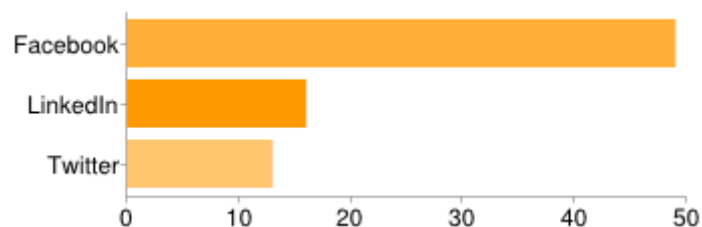
Objective	Technique	Subjects
Feasibility Study	Background Reading (Yammer, Jive, etc.)	Project Draft, Feasibility Report
Identify System Requirements	Questionnaire	System Requirements/Features
Identify User Behavior	Observation (N/A, since absence of existing system)	N/A
Identify User Opinions	Interview (N/A since user is broad/general)	N/A

5.2 Questionnaire and responses

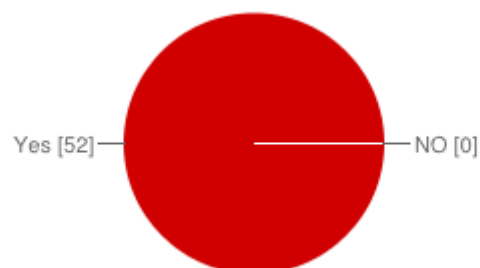
- On the Scale of 1 to 5 how much do you think communicating with your batch-mates and professor over the social network is useful for you?



- Which of your existing web accounts from the following do you want to associated with the CampusTalk?
 - Facebook
 - LinkedIn
 - Twitter



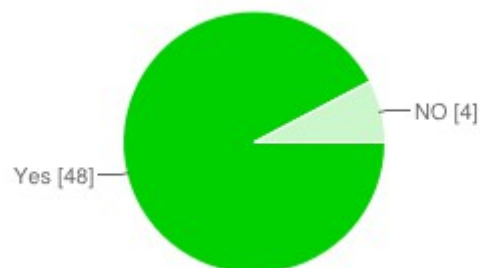
- Do you want file sharing facility?



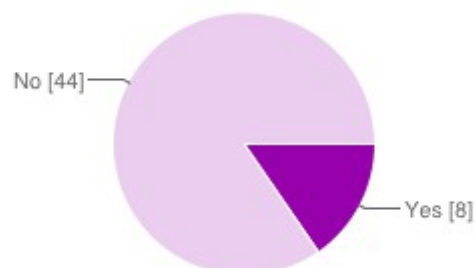
- Do you want live-chat facility (along with offline messaging)?



- You want CampusTalk be accessible over the internet outside Campus?



- Allow Professors to see each of the students' activities on the site?



- Your Suggestion/Thoughts on having yet-another-semi-social-network as CampusTalk.
 - The app must be accessible outside campus over the internet, such that non-hostler students stay connected with fellow batch-mates.
 - Ability to access intranet course-materials from the webapp.
 - Ability to edit content posted on the webapp.
