# Group 1 – Communications System

Software Requirements Specification

Revision History

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| **Date** | **Revision** | **Description** | **Author** |
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# Purpose

This document outlines the requirements for the Communications System.

## Scope

This document will catalog the user, system, and hardware requirements for the Communications system. It will not, however, document how these requirements will be implemented.

## Definitions, Acronyms, Abbreviations

**Admin (IT)** – A user who maintains all user capabilities with special permissions such as viewing chat logs.

## References

Use Case Specification Document – Step 2 in assignment description

UML Use Case Diagrams Document – Step 3 in assignment description

Class Diagrams – Step 5 in assignment description

Sequence Diagrams – Step 6 in assignment description

## Overview

A chat communication system designated for large corporations. This communications system enables users to communicate via text either in a group or privately through two modes: offline and online.

# Overall Description

## Product Perspective

## Product Architecture

The system will be organized into 4 major modules: the Logging module, the Chat module, the GUI module, and the User Management module.

The system will be organized into \_\_\_ major modules: the \_\_\_ module, the \_\_\_ module, and the \_\_\_\_\_ module.

Note: System architecture should follow standard OO design practices.

## Product Functionality/Features

The high-level features of the system are as follows (see section 3 of this document for more detailed requirements that address these features):

2.3.1 Both asynchronous and synchronous chatting

2.3.2 Text-based messages

2.3.3 Chat groups

2.3.4 Direct messaging

2.3.5 Unique user ID

2.3.6 The system has a Graphical User Interface (GUI)

2.3.7 Groups and conversations are saved

2.3.8 Messages arrive promptly

## Constraints

2.4.1 Only IT users can access and view the logs in the system.

2.4.2

List appropriate constraints.

Constraint example: SR7 Since users may use any web browser to access the system, no browser-specific code is to be used in the system.

## Assumptions and Dependencies

List appropriate assumptions

Assumption Example: It is assumed that the maximum number of users at a given time is 15,000.

2.5.1 Long messages will be split into multiple messages depending on the size limit.

2.5.2 It is assumed that multiple groups containing the same members can be created.

# Specific Requirements

## Functional Requirements

### Common Requirements:

Provide requirements that apply to all components as appropriate. SR10

Example:

3.1.1.1 SR9 Users should be allowed to log in using their issued id and pin, both of which are alphanumeric strings between 6 and 20 characters in length.

3.1.1.2 SR23 The system should provide HTML-based help pages on each screen that describe the purpose of each function within the system.

### Logging Module Requirements:

Provide module specific requirements as appropriate. SR10

Example:

3.1.2.1 SR9 Users should be allowed to log in using their issued id and pin, both of which are alphanumeric strings between 6 and 20 characters in length.

3.1.2.1 All chats sent though the system are logged with User IDs and timestamps.

3.1.2.2 Chat logs are viewable only by admin (IT) after a successful login.

### Chat Module Requirements:

Provide module specific requirements as appropriate. SR10

Example:

3.1.2.1 SR9 Users should be allowed to log in using their issued id and pin, both of which are alphanumeric strings between 6 and 20 characters in length.

### GUI Module Requirements:

Provide module specific requirements as appropriate. SR10

Example:

3.1.2.1 SR9 Users should be allowed to log in using their issued id and pin, both of which are alphanumeric strings between 6 and 20 characters in length.

### User Management Module Requirements:

## External Interface Requirements

Provide module specific requirements as appropriate. SR10

Example:

3.2.1 SR9 SR1 The system must provide an interface to the University billing system administered by the Bursar’s office so that students can be automatically billed for the courses in which they have enrolled. The interface is to be in a comma-separated text file containing the following fields: student id, course id, term id, action. Where “action” is whether the student has added or dropped the course. The file will be exported nightly and will contain new transactions only.

3.2.1 The system will have a server application which

## Internal Interface Requirements

Provide module specific requirements as appropriate. SR10

Example:

3.3.1 SR17 The system must process a data-feed from the grading system such that student grades are stored along with the historical student course enrolments. Data feed will be in the form of a comma-separated interface file that is exported from the grading system nightly.

3.3.2 SR24 The system must process a data-feed from the University billing system that contains new student records. The feed will be in the form of a comma-separated text file and will be exported from the billing system nightly with new student records. The fields included in the file are student name, student id, and student pin number.

# Non-Functional Requirements

## Security and Privacy Requirements

Example:

4.1.1 The SR8 System must encrypt data being transmitted over the Internet.

## Environmental Requirements

Example:

4.2.1 SR20 System cannot require that any software other than a web browser be installed on user computers.

4.2.2 SR25 System must make use of the University’s existing Oracle 9i implementation for its database.

4.2.3 SR26 System must be deployed on existing Linux-based server infrastructure.

## Performance Requirements

Example:

4.3.1 SR27 System must render all UI pages in no more than 9 seconds for dynamic pages. Static pages (HTML-only) must be rendered in less than 3 seconds.