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DEPARTMENT OF COMPUTER SCIENCE

COS 301 - SOFTWARE ENGINEERING

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## COS 301 - Mini Project

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# SOFTWARE REQUIREMENTS SPECIFICATION AND TECHNOLOGY NEUTRAL PROCESS DESIGN

## BUZZ SPACE DISCUSSIONS/MINI PROJECT

Version: Version 0.1 Alpha For further references see [gitHub](#). February 25, 2015

# Contents

## 1 Introduction

This document specifies a discussion board which aims to add educational benefits to a user. This is an attempt to redesign the idea of a discussion board. We aim to keep it as simple as possible. Also adding functionality that will make it enjoyable to use. It must captivate a user's attention and keep the user involved in the discussions.

## 2 Vision

To provide a new perspective on discussion boards and how they can be used to benefit individuals, it must be educational and benefit the students. As most students using the discussion board we will attempt to recognize code and display it accordingly.

## 3 Background

The project was introduced to us by the Univeristy of Pretoria. Vreda Pieterse a lecturer at the University has been trying to find a way to get students more involved. Currently the discussion boards are under utilized. They are also looking for a modular system that can be integrated into their current website. This will be an educational benefit to the students.

## 4 Architecture requirements

The program will be accessed throughout the web. We will follow a responsive design approach. This will make our web application available on both Desktop and mobile devices of various screen sizes. It will also be necessary to be modular. So that the application can integrate into an existing system.

## 4.1 Access channel requirements

Mobile Devices	Students are using devices frequently.
Desktop Computers	This will be our main focus
Restful webservice clients	...

## 4.2 Quality requirements

## 4.3 Integration requirements

## 4.4 Architecture constraints

JavaEE, JPA and JPQL, JSF, HTML, AJAX.

# 5 Functional requirements

For further references see [gitHub](#).

## 5.1 Use case prioritiation

### Critical

- Login System.
- Logout System
- Creation of a Buzz thread.
- CRUD OWN posts(Creating,Reading; Updating; Deleting).
- CRUD Other people's posts

### Important

- Content Management (By higher level users and Administrators).

- User Restriction based on level.
- Automatic update of user status.
- Semi-Automatic evaluation of posts.
- Gathering and analization of statistical information.
- Social tagging system on threads (and posts).
- Searching and filtering of threads.
- Format code in an easy to view/edit layout.

### **Nice-To-Have**

- Keeping track of who read what (ie. Message Highlighting).
- Semi-Automatic functionality for generating thread summaries.
- Text formatting functionality based on user level.
- Self organization functionality.
- Automatic plagiarism checking system.
- Semi-Automatic detection of netiquette rule violations.
- Have functionality to vote for and evaluate posts.

## 5.2 Use case/Service contracts

### 1. CRUD (Creating, reading, updating, deleting posts) OWN posts

- **Pre-conditions**

Student is not registered for a course [Unless he/she is a Teaching Assistant/Tutor/Lecturer/Administrator]

Student must be a high enough level to participate in the thread. [Unless he/she is given permission by an Admin or Lecturer.]

- **Post-conditions**

Student is still registered for the course.

Student hasn't been blocked from the thread.

Student level must still be high enough to participate in the thread.

- **Request and Results Data Structure**

### 2. CRUD (Creating, reading, updating, deleting posts) OTHER People's posts

- **Pre-conditions**

Not an administrator. [Unless he/she is a Teaching Assistant/Tutor/Lecturer]

Not a high enough level. [Unless given permission by the System Administrator]

- **Post-conditions**

Individual must still be an Administrator/Teaching Assistant/Tutor/Lecturer.

Level must still be high enough to allow an individual to CRUD other people's posts.

Individual mustn't be blocked from that thread.

- **Request and Results Data Structure**

### 3. Keep track of what has been read and highlight all unread messages in a particular thread

- **Pre-conditions**

Not a registered student for the course [Unless individual is an Administrator/Teaching Assistant/Tutor/Lecturer.]

- **Post-conditions**

Individual must still be registered for that subject.

If not a registered student, the individual must still be an Administrator/Teaching Assistant/Tutor/Lecturer.

Individual mustn't be blocked from that thread.

- **Request and Results Data Structure**

**5.3 Required functionality**

**5.4 Process specification**

**5.5 Domain Model**