SRS Document Of

Course Management System

Done By

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Course Management System

1. Introduction

1.1 Purpose

The purpose of this document is to present a detailed description of the course management system. It will explain the purpose and features of the system, the interfaces of the system will do, the constraints under which it must operate and how the system will react to external stimuli. This document is intended for both stakeholders and developers of the system.

1.2 Scope

It domain use to use it large domain it use for efficient useful it service it university and faculty and schools in university in each course to access to link e-learning to show course and useful it service

1.3 Definitions and abbreviations

SHS : Student Homework Submission.
SIS : Student Information System.
SGT : Group Grading Template.
AIS : Academic Information System.
CMS : Course Management System.

1.4 References

INTERNET, TAS,IBM REQUESTPRO,INSTRUCTOR.

1.5 Overview

The next chapter, the Overall Description section, of this document gives an overview of the functionality of the product. It describes the informal requirements and is used to establish a context for the technical requirements specification in the next chapter.

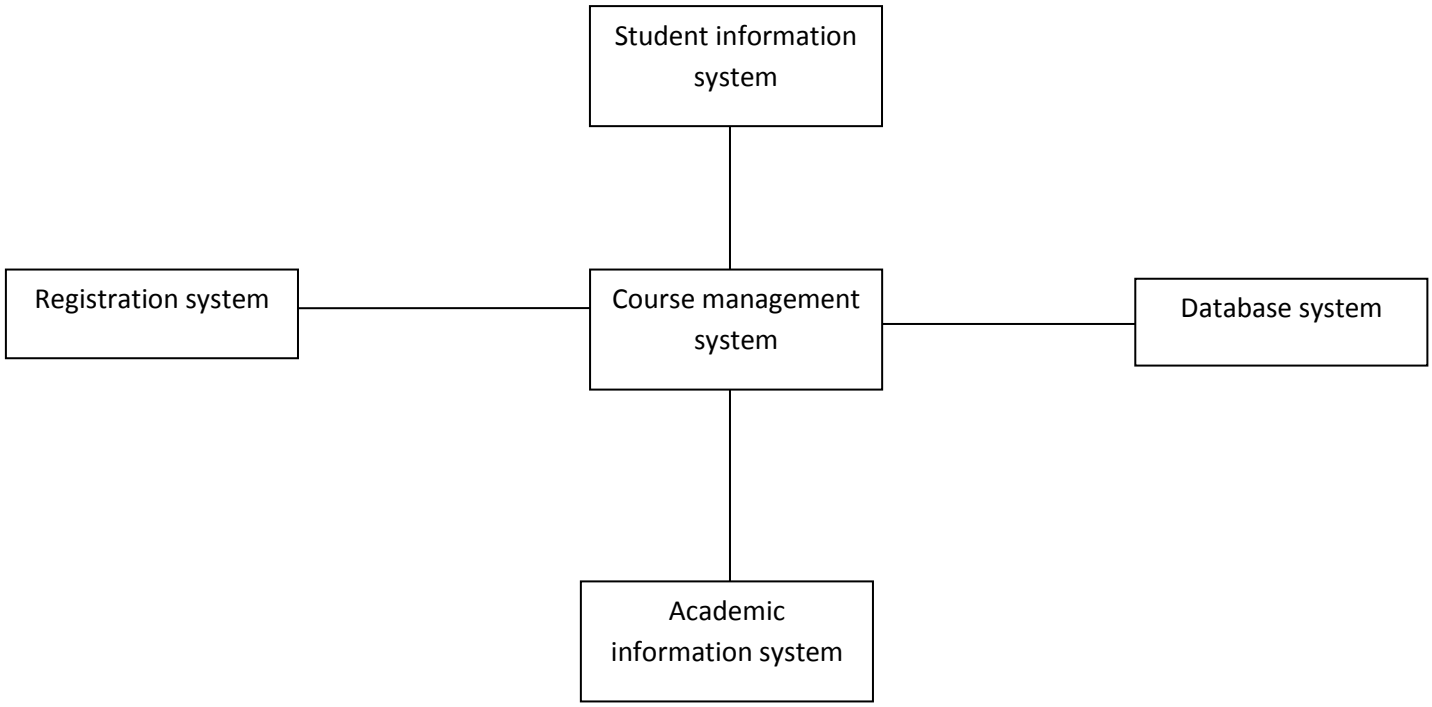
The third chapter, Requirements Specification section, of this document is written primarily for the developers and describes in technical terms the details of the functionality of the product.

Both sections of the document describe the same software product in its entirety, but are intended for different audiences and thus use different language.

2. Overall Description

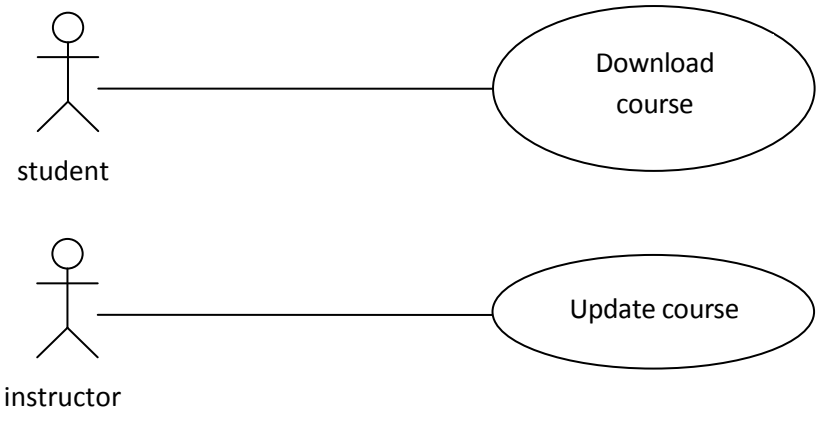
2.1 Product Perspective

The system will be operate within university environment. This environment has anther systems that will interact with this system so we need interfaces between this systems .



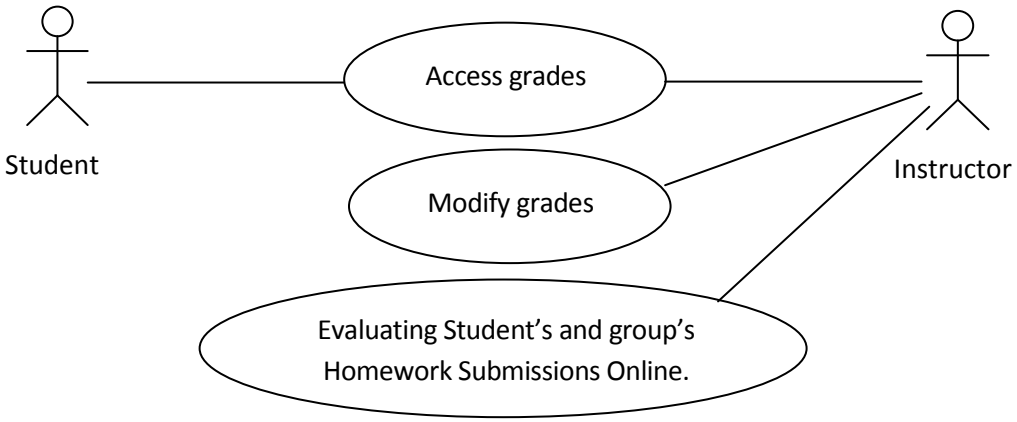
2.2 Product Functions

2.2.1 The system shall be able to Create Courses.

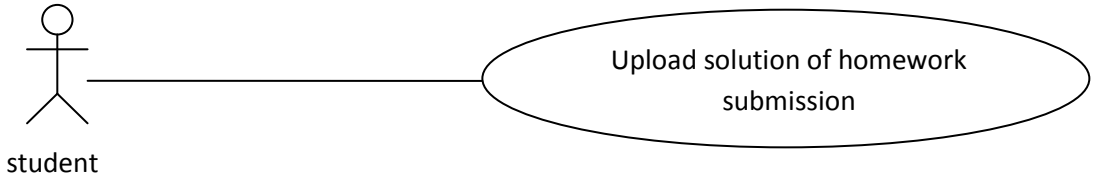


2.2.2 The system shall be able to automatically create accounts for students and instructors.

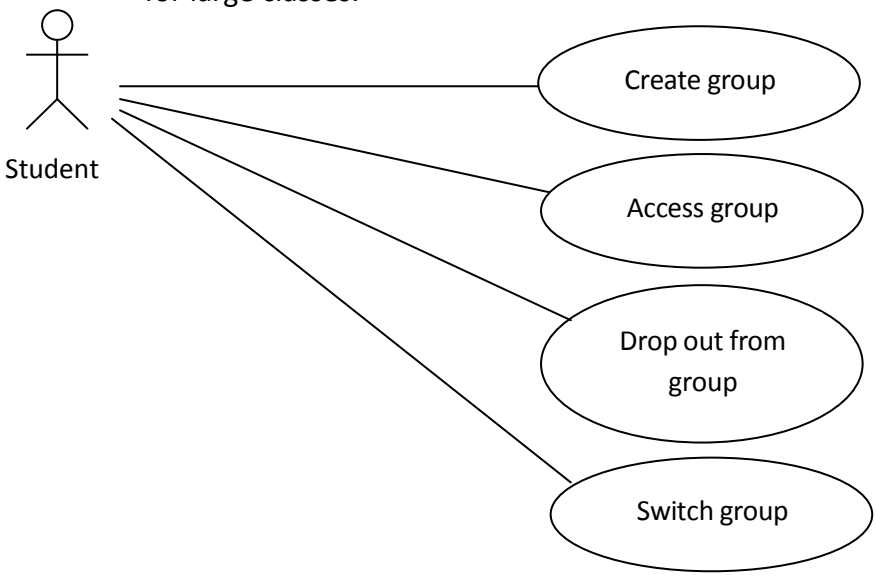
2.2.3 The system shall be capable of Managing Student Grades.



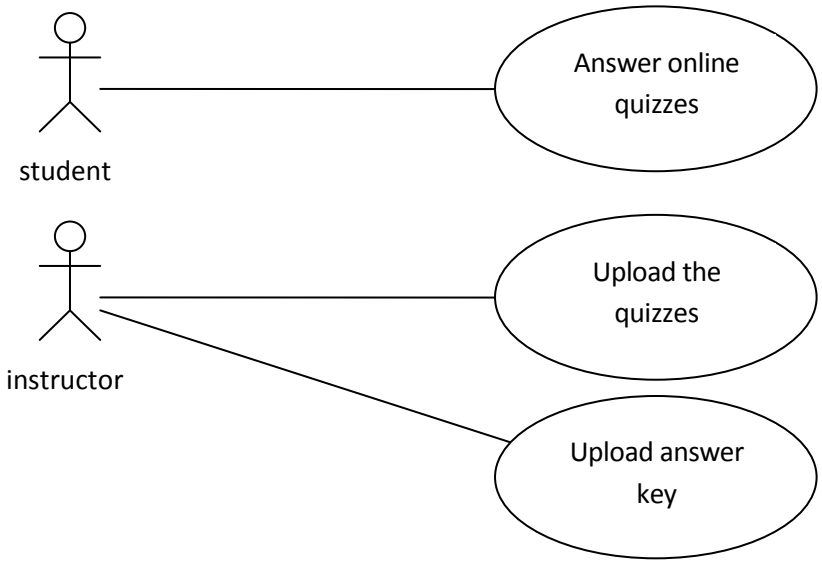
2.2.4 The system shall be capable of automatically accepting Homework Submissions.



2.2.5 The system shall support Group Management features especially important for courses with group projects, this is especially important for large classes.



2.2.6 The system should provide Online Quizzes.



2.3 user Characteristics

The student expected to be Internet literate Once he/she can log in the system and navigate between WebPages he/she can use basic functionality of the system.

Instructor expected to be internet literate and t be able use more complex functionality of the system.

2.3 Constraints

2.3.1 The system must run in windows operating system environment.

2.3.2 The system shall use oracle8i database for all data management tasks.

2.3.3 The system shall work based on XYZ-standard to keep copyright.

2.4 Assumptions and Dependencies

3. Specific Requirements

3.1 External Interface Requirement

3.1.1 User Interfaces

It must interfaces icons or wizard

3.1.2 Hardware Interfaces

Its must be pc computer to link to course management system

3.1.3 Software Interfaces

We must internet explorer to able to browser and show and interest course management system

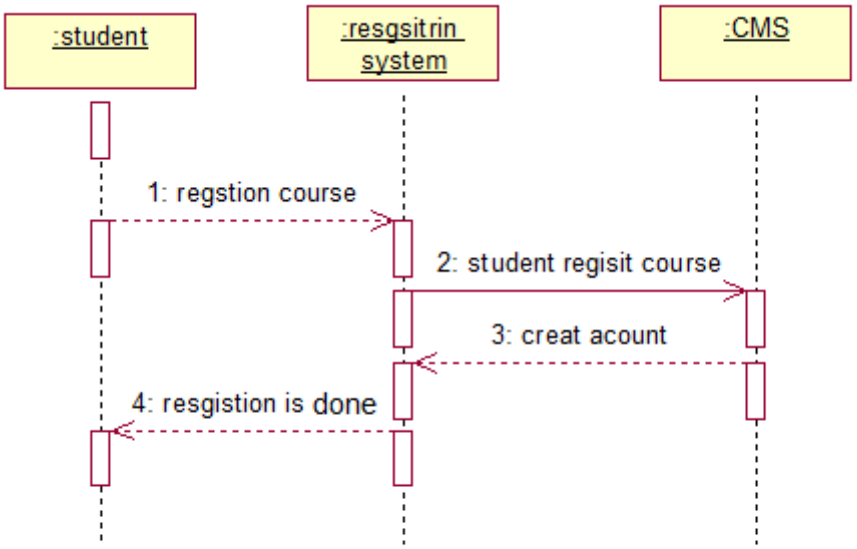
3.1.4 Communication Interfaces

We must user interface rather commadline

3.2 Functional Requirements

3.2.1 Creating Courses

3.2.1.1 Integration with registration system*:* The system shall periodically upload the latest registrar's classes list to determine courses that offered in the current semester.



3.2.1.2 The system shall generate course for each class that registered and determine the current set of students that enrolled in that class.

3.2.1.3 The system shall allow course instructor to update course content.

3.2.2 Grade Management

3.2.2.1 Allow grades to be entered online: The system shall allow instructors to enter and modify grades online.

3.2.2.2 Allow students to access their grades online: The system shall allow student to log in their account and check their grades at any time.

3.2.2.3 The system shall provides statistical information such as averages, standard deviation, median about students grades.

3.2.2.4 Track and Handle Re-grade Requests: The system shall be able to track and handle requests for re- grades, and all information about re-grades shall be available to the student, and the course instructor.

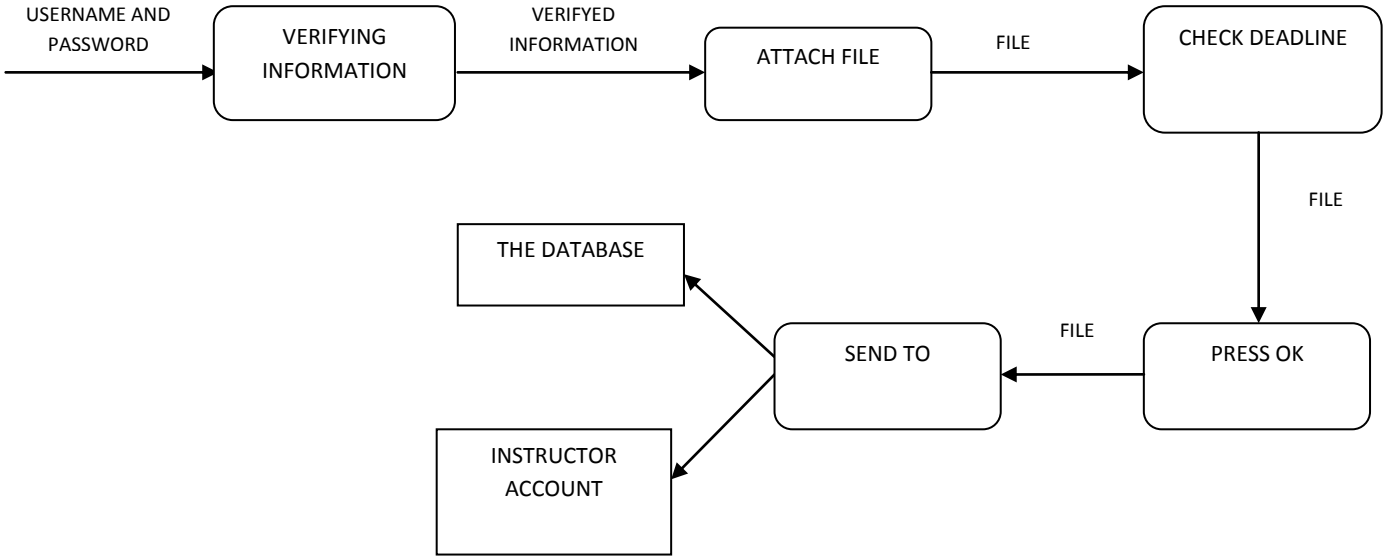
3.2.3 Homework Submissions

3.2.3.1 Accept submissions in multiple formats: The system shall accept submissions in multiple formats, including .zip, .cpp , .txt, .doc, etc.

3.2.3.2 Support for late submissions: The system shall provide information about late submissions, and also disallow submissions after a certain period of time.

Use Case Name	Upload Solution Of Homework Submission
Brief Description	In this case the student can upload homework submission in his/her account.
Actor	Student.
Precondition	Logged in the system. Logged in his/her account using username and password.
Basic flow	1. Check user information. 2. Choose SHS link. 3. Choose Attachment link. 4. Choose the file that have the solution of submission. 5. The system shall check the deadline to receive the solution of submission.

Alternative flow	In step 1, if the user information not accepted, then: 1. The system show message that show that you should have to enter valid username and password. In step 5, if student late on the deadline to receive the solutions, then: 1. The system shall prevent the student to upload the file. 2. The system shall give mark zero to this student. 3. Send the grade to student account and SIS.
Post condition	The file that has the solution shall send to instructor account.



3.2.3.3 Integration with grade management: The homework submission system shall be integrated with the grade management by using online grading templates that can be filled out, and automatically annotating code with line numbers.

3.2.3.3.1 assignment grades can be automatically posted to student account.

3.2.3.3.2 grader comments can be sent along with the grades.

Use Case Name	Evaluating Student's Homework Submissions Online.

Brief Description	In this case instructor can evaluate student's homework submissions online and enter specific grade for each student based on the evaluation.
Actor	Course instructor
Precondition	Logged in the system. Logged in his/her account by using username and password
Basic flow	1. Verify user information. 2. Choose SHS link. 3. the system order the submissions based on serial number for each student. 4. Instructor choose specific submission and evaluate it. 5. Choose SGT link. 6. Fill grading template.
Alternative flow	In step 1, if the user information not accepted, then: 1. The system show message that show that you should have to enter valid username and password. In step 6, if the user enter grade out of the range of Homework Submissions, then: 1. The system shall not accept the grade. 2. Show message that show that the user should have to enter grade within the range, (from 1-10).
Post condition	1. The system shall send grades and any comment with it to student account . 2. The system shall send grade to SIS.

3.2.4 Group Management

3.2.4.1 Ability to create groups: The system shall allow students to automatically create groups, and enforce certain conditions such as each student should be a member of exactly one group for a given project.

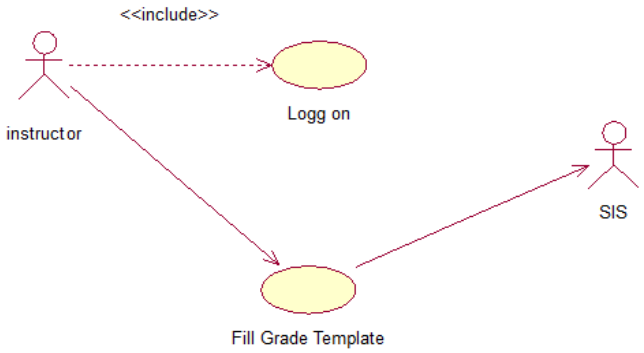
Use Case Name	Create Group
Brief Description	In this case students can create and participate in one group in order to work together in large Homework Submissions like project and store in there group.
Actor	Student.
Precondition	Logged in the system. Logged in his/her account by using username and password
Basic flow	1. Verify user information. 2. Choose Group link. 3. Choose create group link. 4. Choose one from the listed groups. 5. The system shall check if user participate in another group. 6. Check the number of members for the chosen group. 7. The system shall show to user group password and username. 8. The system shall store student serial number and his/her name in group information.

Alternative flow	In step 1, if the user information not accepted, then: 1. The system show message that show that you should have to enter valid username and password. In step 5, if the user participate in another group, then: 1. The system shall prevent user to participate in this group. 2. Show message that show that the user is member of another group, so he/she cannot participate in this group. In step 6, if the number of members for this group is in the maximum number, then: 1. The system shall prevent user to participate in this group. 2. Show message that show that the user must looking for another group.
Post condition	The user is member of this group and can access it in any time.

3.2.4.2 Integration with homework submissions: The system shall be able to accept group homework submissions.

3.2.4.3 Integration with grade management: The system shall support grade management for groups, and track how the group grade translates into individual student grades.

Use Case Name	Evaluating Group's Homework Submissions Online.
Brief Description	In this case instructor can evaluate group's homework submissions online and enter specific grade for each group based on the evaluation.
Actor	Course instructor
Precondition	Logged in the system. Logged in his/her account by using username and password
Basic flow	1. Verify user information. 2. Choose GHS link. 3. the system list the available groups. 4. Instructor choose group submission and evaluate it. 5. Choose GGT link. 6. Fill grading template.
Alternative flow	In step 1, if the user information not accepted, then: 1. The system show message that show that you should have to enter valid username and password. In step 6, if the user enter grade out of the range of Homework Submissions, then: 1. The system shall not accept the grade. 2. Show message that show that the user should have to enter grade within the range, (from 1-20).
Post condition	1. The system shall send grades and any comment with it to group. 2. The system translate group grade into individual students grades. 3. The system shall send grade to SIS.



3.2.4.4 Group Maintenance: Invariably, students either switch groups, or drop out from a group altogether. The system shall support such transitions and keep track of them.

3.2.5 Online Quizzes

3.2.5.1 The system shall instructor to upload quizzes.

3.2.5.2 The system shall allow instructor to upload answer key to the system.

3.2.5.3 The system shall allow student to answer quizzes.

3.2.5.4 The system shall compare answer key with student answer.

3.2.5.5 Integration with grade management: the system manage the quizzes' grades by sending it to grade management in order to allow instructor to modify the grades and student to see their grades.

Use Case Name	Answer online Quizzes
Brief Description	In this case student can answer Quizzes online and get his/her grade immediately after he/she finish answer the quizzes.
Actor	student
Precondition	Logged in the system. Logged in his/her account using username and password.

Basic flow	1. Check the user information. 2. Choose Quizzes link. 3. Begin answer the quizzes. 4. The system shall compare student answer with answer key. 5. If the student answer and answer key identical the system give specific mark for this question . 6. The system shall collect the student marks. 7. Choose finish button.
Alternative flow	In step 1, if the user information not accepted, then: 1. The system show message that show that you should have to enter valid username and password. In step 5, if the student answer and answer key not identical, then: 1. The system shall give zero for this question. 2. If the student dose not answer question the system shall give zero for this question.
Post condition	1. The student shall see his/her grade after he/she choose finish link. 2. The system shall store the grade in student account and instructor account. 3. The system shall send the grades to SIS.

3.2.6 Create Accounts

3.2.6.1 The system shall automatically create accounts for each class.

- 3.2.6.1.1 Create one account for course instructor regardless to the number of classes that he/she teach.
- 3.2.6.1.2 The account username is course name and its number.
- 3.2.6.1.3 The account password is the same password that in AIS.
- 3.2.6.1.4 Any change in the password in AIS the system shall reflect it on the instructor account password in CMS.
- 3.2.6.1.5 Create one account for each student that registered in this class.
- 3.2.6.1.6 The account username is course name and its number.
- 3.2.6.1.7 The account password is the same password that in SIS.
- 3.2.6.1.8 Any change in the password in SIS the system shall reflect it on the student account password in CMS.

3.2.6.2 Instructor account contain the classes that he/she teach, each class contain list of student that ordered based on student serial number.

3.2.6.3 Instructor can modify student grades from his/her account.

3.3 Performance Requirements

3.3.1 Response Time

Average response time shall be less than 2 second.

3.3.2 Throughput

The system shall accommodate 1000 booked per minute.

3.3.3 Recovery Time

In case of a system failure, redundant system shall resume operations within 30 seconds.
Average repair time shall be less than 1 hour.

3.3.4 Start-up/Shutdown Time

The system shall be operational within 1 minute of starting-up.

3.3.5 Capacity

The system accommodate 4000 concurrent users.

3.3.6 Utilization of Resources

The system shall store in the database no more than one million transactions.
If the database grows over this limit, old transaction shall be backed up and deleted from the operational database.

3.4 Software System Attributes

3.4.1 Security

1. *Firewall Protection*: The course management software system shall run inside a firewall.

2. *Support different roles*: The system shall support different roles for users, such as Instructors, Students, and administrative staff, the user logged in with given role should only be allowed access consistent with that role. **For example** a student shall only be allowed to see he/she grades not to modify it.

3.4.2 Reliability

The system shall not be down more 2 times in year.

3.4.3 Scalability

Scaling the system to large number of users: large courses will have hundreds of students.

The system shall be able to handle the load for such courses, especially near assignment deadlines when many students can be expected to access the course management system.