Software Requirements Specification

for

Automated Software Engineering Student Subject Evaluations (ASESSE)

Version 1.0

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# Introduction

## Purpose

The purpose of this document is to provide an official detailed description of the requirements for the “Automated Software Engineering Student Subject Evaluation” (ASESSE) software. This document seeks to fully describe the expected behavior of the software including all high level functions, capabilities and constraints. This document will be used as a proposal to the customer and as a reference by the development team.

## Scope of Project

### Main Objective

The “Automated Software Engineering Student Subject Evaluation” (ASESSE) is a web-based application which automates the student peer review system for Software Engineering Students at Midwestern State University located in Wichita Falls, Texas. The main purpose is to allow students to review other students in their course group and to collate that information automatically for the professor.

### Specific Goals

Each student in a group should be able to connect to the website, enter a password specific to their course, and then provide the information requested with regards to their specific group members through a graphical user interface. While the submitting user name and their review of their group members are collected, they will be stored separately and disconnected from one another to maintain anonymity.

The professor, or administrator, should be able to setup new classes with their own specific passwords, change the passwords if needed, delete or clear a class that has been setup, check to see the progress of all students in completing their reviews, request an report for an individual student that aggregates the reviews of that student, and request a course aggregate report which puts all individual student reviews into one printable pdf document.

## Overview of Document

This document is divided into 5 major sections including the introduction to the document, users, system, other required deliverables, and risks. The introduction to the document provides the purpose of this document, the scope of the project and an overview of this document. The user section describes who the users will be, use cases with use case diagrams and various scenarios. The system section provides information regarding the development and target environments as well as the functional and non-functional requirements. The other required deliverables section illuminates any additional requirements of the project and the risk section covers risks related to the development and deployment of the system.

# Users

## Who are Users?

There are two types of users that interact with the system: the professor or administrator of the system, and students. Student users will access the system through a web address that only provides student user functions. Administrators will access the system through a separate password protected web address that will provide access to administrator functions.

## Use Cases

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Use Case ID** | **Use Case Name** | **Primary Actor** | **Implementation Complexity** | **Priority** |
| A | Student Submission | Student | Medium | 1 |
| B | New Course | Administrator | Low | 1 |
| C | Change Course Password | Administrator | Low | 2 |
| D | Remove Course | Administrator | Medium | 3 |
| E | Course Progress | Administrator | Medium | 2 |
| F | Individual Student Report | Administrator | High | 1 |
| G | Course Report | Administrator | High | 1 |

Use Case ID: A

Use Case Name: Student Submission

Primary Actor: Student User

Trigger: Student web address accessed

Pre-Conditions: Login password correct and course selected

Post-Conditions: Display success message and store submitted information in database keeping student name separate from reviews.

Description: Student connects to the web portal, selects their course, and gains access by entering the appropriate password. The student fills out reviews of other students in their group and clicks “Next” to proceed. The student enters their name and “Submit” to complete the process.

Use Case ID: B

Use Case Name: New Course

Primary Actor: Administrator User

Trigger: New Course option selected

Pre-Conditions: Login password correct

Post-Conditions: New course name and password added to database, success message displayed

Description: Administrator connects to web portal, enters password to gain access, and creates a new course with name and password.

Use Case ID: C

Use Case Name: Change Course Password

Primary Actor: Administrator User

Trigger: Change Course Password option selected

Pre-Conditions: Login password correct, course selected

Post-Conditions: New password added to database, success message displayed

Description: Administrator connects to web portal, enters password to gain access, and changes the password for selected course.

Use Case ID: D

Use Case Name: Remove Course

Primary Actor: Administrator User

Trigger: Remove Course option selected

Pre-Conditions: Login password correct, course selected

Post-Conditions: Course name, password, and reviews removed from database

Description: Administrator connects to web portal, enters password to gain access, and removes the course including all stored data.

Use Case ID: E

Use Case Name: Course Progress

Primary Actor: Administrator User

Trigger: Course Progress option selected

Pre-Conditions: Login password correct, course selected

Post-Conditions: Display database information necessary

Description: Administrator connects to web portal, enters password to gain access, requests course progress and system displays report as a list of students who have submitted reviews.

Use Case ID: F

Use Case Name: Individual Student Report

Primary Actor: Administrator User

Trigger: Individual Student Report option selected

Pre-Conditions: Login password correct, course selected, student selected

Post-Conditions: Display database information for selected student in selected course

Description: Administrator connects to web portal, enters password to gain access, requests individual student report and system displays aggregated review of that student.

Use Case ID: G

Use Case Name: Course Report

Primary Actor: Administrator User

Trigger: Course Report option selected

Pre-Conditions: Login password correct, course selected

Post-Conditions: Display database information for selected course, provides pdf file for download

Description: Administrator connects to web portal, enters password to gain access, requests course report and system displays aggregated student reviews for all students and presents option to save data as a pdf file.

## Use Case Diagram

## 

## Use Case Senarios

1. Student submits group evaluation
   1. Student selects course
   2. Student types in course password
   3. Student selects number of group members
   4. Student fills out forms to review other members of their group
   5. Student presses “Next”
   6. Student types in name
   7. Student presses “Submit”
   8. System sends confirmation to screen

Extensions:

2a. Incorrect password

1. System sends error message
2. User returned to initial login screen
3. Administrator creates new course
   1. Administrator types in password
   2. Administrator selects “New Course” option
   3. Administrator inputs course name, password and password confirmation.
   4. System displays success message
   5. Administrator selects “Continue”
   6. Administrator returned to main page
   7. Administrator logs out of system
   8. System displays success message

Extensions:

1a. Incorrect password

1. System sends error message
2. Administrator returned to initial login screen

3a. Course already exists

1. System sends error message
2. Administrator returned to main page

3b. Password fails password requirements

1. System sends error message with password requirements
2. Retry password creation
3. Administrator changes password for a course
   1. Administrator types in password
   2. Administrator selects existing course
   3. Administrator selects “change password” option
   4. Administrator inputs new password and password confirmation
   5. System displays success message
   6. Administrator selects “Continue”
   7. Administrator returned to main page
   8. Administrator logs out of system
   9. System displays success message

Extensions:

1a. Incorrect password

1. System sends error message
2. Administrator returned to initial login screen

4a. Password fails password requirements

1. System sends error message with password requirements
2. Retry password creation
3. Administrator removes a course
   1. Administrator types in password
   2. Administrator selects existing course
   3. Administrator selects “Remove Course” option
   4. System displays “Are you sure?” message
   5. Administrator selects “Yes” option
   6. System displays success message
   7. Administrator selects “Continue”
   8. Administrator returned to main page
   9. Administrator logs out of system
   10. System displays success message

Extensions:

1a. Incorrect password

1. System sends error message
2. Administrator returned to initial login screen

5a. Administrator selects “No” option

1. Administrator returned to main page
2. Administrator checks progress of submitted group reviews
   1. Administrator types in password
   2. Administrator selects existing course
   3. Administrator selects “Check Progress” option
   4. System displays list of names that have submitted reviews
   5. Administrator selects “Return to Home Page”
   6. Administrator returned to main page
   7. Administrator logs out of system
   8. System displays success message

Extensions:

1a. Incorrect password

1. System sends error message
2. Administrator returned to initial login screen
3. Administrator requests individual student aggregate report
   1. Administrator types in password
   2. Administrator selects “Individual Student Report” option
   3. Administrator selects course name
   4. Administrator selects student name
   5. System displays aggregate of reviews submitted for student
   6. Administrator selects “Return to Home Page”
   7. Administrator returned to main page
   8. Administrator logs out of system
   9. System displays success message

Extensions:

1a. Incorrect password

1. System sends error message
2. Administrator returned to initial login screen
3. Administrator requests printable course aggregated report of all students
   1. Administrator types in password
   2. Administrator selects “Course Report” option
   3. Administrator selects existing course
   4. System displays aggregate of reviews submitted for all students
   5. Administrator selects “Save Report”
   6. System provides download dialog box for pdf version
   7. Administrator saves document using dialog box options
   8. Administrator selects “Return to Home Page”
   9. Administrator returned to main page
   10. Administrator logs out of system
   11. System displays success message

Extensions:

1a. Incorrect password

1. System sends error message
2. Administrator returned to initial login screen

# System

<This template illustrates organizing the functional requirements for the product by system features, the major services provided by the product. You may prefer to organize this section by use case, mode of operation, user class, object class, functional hierarchy, or combinations of these, whatever makes the most logical sense for your product.>

## Development Environment

## Target Environment

## Functional Requirements

### Issues

### Major Subsystems

### Major Functions

### Major Classes

### Minor System Functions

## User Interface Specifications

## Non-Functional Requirements

### Management

Due to this being a student-developed project, there will be no cost incurred on our part. Project must be developed during the Fall semester and completed by December 2018. Periodic reviews and testing of the listed functions should be conducted to ensure that the project meets the requirements. This includes verifying the database every time while submitting each review.

### Technical

This project must run inside the web browser that is accessed over the network connection, rather than existing within a device memory. Likewise, the development environment will also be Windows 7 or Later version and it is to be written in some java development environment. Based on the customer requirement PDF format of each student review will be downloaded to the user’s desktop.

### Performance

Efficiency and reliability are not the major concerns for this project. However, the race participants or the students should be able to understand the application and utilize the application throughout the race. The project should also be user-friendly, in that it needs to be understand and impressed by the customer or the administrator .

### Security

The customer has requested that the completed project contains a standard password access to the administrator to login into the application and change or modify the databases and create new courses and password access for each course.

## System Evolution and Maintenance

As software system failure is predictable we can avoid those by Software Maintenance. As this is a semester project, Maintenance cannot be done after delivery. So before delivery of project we perform all the testing perfectly so that rate of failure could be low. Goal of the project is reached by developing application with best solutions possible.

# Other Deliverables Required

At the end of October 2018, a project plan,requirements specification document,test plan will be delivered to the administrator. At the end of November 2018, an updated specification documents, user manual and all the packages of the project will be delivered to the administrator.

# Risks

Risks during the development of this project might happen due to lack of communication between the team members. Project risk includes illness of team members, change in requirements, no experience of working on HTML and JavaScript. It also includes that when the web browser or server is not connected to the network connection.

Appendix A: Glossary

<Define all the terms necessary to properly interpret the Geospatial System Requirement Specification, including acronyms and abbreviations. You may wish to build a separate glossary that spans multiple projects or the entire organization, and just include terms specific to a single project in each Geospatial System Requirement Specification.>

Appendix B: References

Dr. Catherine V. Stringfellow, PhD. Department of Computer Science,

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