**COMP 3711**

**Assignment Fall 2017 Submission Cover Sheet**

**Due by: November 30, 2017, 5pm (Thursday)**

**SET: 3O**

**Student Name: William Murphy Student\_Id: A00912720**

**Student Name: Benny Wang Student\_Id: \_\_\_\_\_\_\_\_\_\_**

**Student Name: Tim Bruecker Student\_Id: \_\_\_\_\_\_\_\_\_\_**

|  |  |  |
| --- | --- | --- |
| **Section** | **Max** | **Your Mark** |
| Consolidated Report (layout and clarity) | 4 |  |
| Chosen Agile Methodology and explanation | 8 |  |
| 1 Use Case Text Story for *Select course to teach use case* | 8 |  |
| 1 Consolidated Use Case Diagram for *Registration System* | 5 |  |
| 1 Domain Class Diagram for *Select course to teach use case* | 5 |  |
| 1 System Sequence Diagram for *Select course to teach use case* | 8 |  |
| 1 Interaction Diagram (Sequence Diagram and Collaboration Diagram) for *Select course to teach use case* | 16 |  |
| 1 consolidated Design Class Diagram (with list of assumptions) for *Select course to teach use case* | 12 |  |
| Explanation of RDD rationale and GRASP patterns used in design | 12 |  |
| 1 State Machine Diagram for *Select course to teach use case* | 8 |  |
| Software classes (submitted in .java files) only for *Select course to teach* use case. Note: 0 marks if they cannot be compiled and run by the instructor | 14 |  |
| **Total** | **100** |  |

**Comments:**

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# Introduction

# Chosen Agile Methodology

We chose to use the SCRUM methodology for this project because it enables us to adapt to changing customer requirements, quickly deliver a minimum viable product, and adapt to changes in the technology we are using to develop the project.

The SCRUM methodology exists to solve 2 major problems. The first problem is that customers will change their minds about what they want or need. The second problem is that there will be unpredictable challenges during development. SCRUM solves these problems by maximizing the team’s ability to deliver quickly, and to respond to newly discovered requirements.

# Fully Dressed Use Case

|  |  |  |
| --- | --- | --- |
| Use Case Name | Select Course Sections to Teach | |
| Use Case Scenario | 1. Add a course section 2. Remove a course section 3. Review the current course load 4. Print the current course load | |
| Brief Description of Use Case | The instructor can add & remove courses from their course load, and review & print their current course load. | |
| Actors | Instructor | |
| Related Use Cases | Request Course Roster | |
| Stakeholders | Summit Institute of Technology | |
| Preconditions | Instructor has valid login credentials. | |
| Postconditions | 1. A course has been added to the course load 2. A course has been removed 3. The course load has been reviewed 4. The course load has been printed 5. Use case begins again, or instructor quits program | |
| *Activities Flow*  Main Flow | *Actor Action*   1. Instructor logs in. 2. Instructor selects a semester. 3. Instructor selects Add. 4. Instructor selects Delete. 5. Instructor selects Review. 6. Instructor selects Delete. 7. Instructor selects Quit. | *Systems Response*   * 1. System verifies login credentials.   Errors: E-1   * 1. Prompts Instructor to select a semester (current or future). Errors: E-2   2. Prompts Instructor to select the desired activity (Add, Delete, Review, Print, or Quit).   3. System enters S-1.   4. System enters S-2.   5. System enters S-3.   6. System enters S-4.   7. Use case ends |
| S-1: Add Course | 1. Selects a course section to teach.   Errors: E-3   1. Confirms the selected course section. | * 1. Displays the course screen containing available information course section names and CRN numbers for the semester   2. Displays the course detail information for the course section.   Errors: E-4   * 1. Links the Instructor to the selected course section.   Errors: E-5   * 1. Use case begins again. |
| S-2: Delete Course | 1. Selects course section to delete.   Errors: E-6 | * 1. Displays the course screen containing available course section names and CRN numbers for the semester.   2. Removes the link associating the course section and the Instructor.   Errors: E-7   * 1. Use case begins again. |
| S-3: Review Schedule | 1. Finished reviewing. | * 1. Retrieves and displays the following information for all course sections for which the Instructor has selected: * Course name * Course number * CRN * Time of course * Start date * End date * Location   Errors: E-8   * 1. Use case begins again. |
| S-4: Print Schedule |  | * 1. Prints the Instructor’s schedule.   Errors: E-9   * 1. Use case begins again. |
| Exception Conditions | E-1: An invalid instructor ID number and/or password is entered. The instructor can re-enter the instructor correct Id, password or terminate the use case.  E-2: An invalid semester is entered. The user can re-enter the semester or terminate the use case.  E-3: An invalid course name/number is selected. The user can re-enter a valid selection or terminate the use case.  E-4: Selected course sections cannot be displayed. The user is informed that this option is not available at the current time. The use case begins again.  E-5: The links association between the instructor and the course sections cannot be created. The information is saved and the system will create the links later. The use case continues.  E-6: An invalid course sections name/number is selected. The user can re-enter valid selection or terminate the use case.  E-7: The link association between the instructor and the course sections cannot be removed. The information is saved and the system will remove the link later. The use case continues.  E-8: The system cannot retrieve schedule information. The use case then begins again.  E-9: The schedule cannot be printed. The user is informed that this option is not available at the current time. The use case begins again. | |

# Diagrams

All of the diagrams used during the development of the product can be found here.

## Use Case Diagrams

## Domain Class Diagram

## System Sequence Diagram

## Interaction Diagrams

## Design Class Diagram

## State Machine Diagram

# RDD and GRASPS

# Conclusion

# Appendix