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# Southern New Hampshire University

28 January 2021

IT 315 – 21EW3

Professor Mustafa

# IT 315 Final Project Part I Solution

**Name:** Matthew Clockel

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**Creation:**

Diagram

Description automatically generated

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| Use Case Name:  Maintain Student Records | ID:  1 | Importance Level:  High |
| Primary Actor:  Enrollment Staff | Use Case Type:  Detail, essential | |
| Stakeholders and Interests:  Enrollment staff – Maintain student records.  Students – Advices enrollment staff of any changes of information | | |
| Brief Description:  Enrollment staff will have permissions to add, modify, and/or delete any student record. | | |
| Trigger:  Enrollment staff are updated based on student progress and goals.  Type:  Internal | | |
| Relationships   * Association:   Enrollment staff   * Include:   Full access permissions for Enrollment staff. First name, Middle initials, Last name, Date of birth, Student ID, Department, Cumulative GPA.   * Extend:   CRUD student records   * Generalization:   Manage student information. | | |
| Normal Flow of Events:   1. Enrollment staff logs in. 2. Enrollment staff reviews student records to see what changes need to be made. 3. Enrollment staff identifies student records that need to be added, deleted, or modified.   If a record needs to be added, the S-1: Add student record subflow is performed.  If record needs to be deleted, the S-2: Delete student record subflow is performed.  If record needs to be modified, the S-3: Modify student record subflow is performed. | | |
| SubFlows:  S-1: Add Record  1.Enrollment staff adds student information.  S-2: Delete Record  1.Enrollment staff deletes student information.  S-3: Modify Record  1.Enrollment staff modifies student information. | | |
| Alternate/Exceptional Flows: | | |

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| Use Case Name:  Maintain Course Records | ID:  2 | Importance Level:  High |
| Primary Actor:  Enrollment Staff | Use Case Type:  Detail, essential | |
| Stakeholders and Interests:  Enrollment staff – Maintain student records | | |
| Brief Description:  This use case describes how enrollment staff can add, modify, and/or delete any course record. | | |
| Trigger:  Enrolled students will need their information updated. When the student completes courses, the records will need to be updated with new classes.  Type:  Internal | | |
| Relationships   * Association:   Enrollment staff   * Include:   Course ID, Course name, Credit hours, Description, Prerequisite course   * Extend:   CRUD   * Generalization:   Maintain course records | | |
| Normal Flow of Events:  1.Enrollment staff works with student to discuss classes.  2.Courses are added or removed based | | |
| SubFlows:  S-1: Add new course ID, course name, credit hours, description, and list prerequisites.  S-2: Delete old course ID, course name, credit hours, description, and prerequisites.  S-3: Update course ID, course name, credit hours, description and prerequisites. | | |
| Alternate/Exceptional Flows:  S-1.1a: Online classes enter Class URL and Class Browser  S-1.1b: Face-to-face classes enter Class Building and Class Room | | |

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| Use Case Name:  Maintain Class Records | ID:  3 | Importance Level:  Medium |
| Primary Actor:  Enrollment Staff | Use Case Type:  Detail, essential | |
| Stakeholders and Interests:  Enrollment staff – Maintain class records | | |
| Brief Description:  Enrollment staff will login to access the class records with full permissions. | | |
| Trigger:  When the class records need to be updated. This can included create, update, read, or delete of class records.  Type:  Internal | | |
| Relationships   * Association:   Enrollment staff   * Include:   Course ID, Class begin date, Class end date.  Online class – Class URL, Class browser  Face-to-face class – Class building, Class room   * Extend:   CRUD   * Generalization:   Maintain class records | | |
| Normal Flow of Events:   1. The enrollment staff will login and access the records. 2. Class records will need to be created, updated, read, or deleted. | | |
| SubFlows:  S-1: Add new course ID, Class begin date, Class end date.  S-2: Delete old course ID, Class begin date, Class end date.  S-3: Update course ID, Class begin date, Class end date. | | |
| Alternate/Exceptional Flows:  S-1.1a: If class is Online, include Class URL and Class Browser.  S-1.1b: If class is Face-to-face, include Class building and Class room. | | |

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| Use Case Name:  Register for Classes | ID:  4 | Importance Level:  High |
| Primary Actor:  Enrollment Staff  Student, Students | Use Case Type:  Detail, essential | |
| Stakeholders and Interests:  Enrollment staff – Will register classes for student based on the student’s career path.  Student – Will self-register for classes. | | |
| Brief Description:  Students login to register for classes and enrollment staff has CRUD permissions to the student records. | | |
| Trigger:  The student will need to add more classes to their schedule.  Type:  Internal | | |
| Relationships   * Association:   Enrollment staff  Student   * Include:   Online classes, Face-to-face classes   * Extend:   CRUD   * Generalization:   Register for classes | | |
| Normal Flow of Events:   1. The student or enrollment staff will login 2. The student will register for classes | | |
| SubFlows:  S-1: New class registration  1.Student will enter their information. | | |
| Alternate/Exceptional Flows: | | |

**Testing:**

When following the use case diagram, the SIS requirements match up. The SIS requirements specifically request CRUD access for the enrolment staff for the use cases. Students should not have access to certain use cases as displayed in the diagram. Students only have access to their own records to register for classes and not the rest of the databases. The enrollment staff has admin access to all the files needed and the ability to add, change, modify, or delete information.

**Approach Explanation:**

When looking at the use cases, all of them require access by the enrollment staff. The enrollment staff needs create, read, update, and delete (CRUD). The use case for maintaining class records shows a relationship with course ID, class begin date, and class end date. This use case also is showing a relationship between online classes that require a class URL and Class browser. Face-to-face classes have a relationship with class building and a classroom. The course records show a relationship with course ID, course name, credit hours, description, and prerequisite courses. The student records show a relationship with records of basic information about a student. This information includes the students first, middle, and last name. Also included in this use case is the students date of birth, student ID, department, and cumulative GPA. I added student access regarding registering for a class because students do have access to this option.

**Self-Reflection:**

These are your reflections on what you learned. Address what you found challenging and what you found easy. Discuss your experience creating your functional model and the lessons you learned from it. Specifically, draw connections between your experience and the object-oriented techniques and methods discussed in this course.

This assignment was challenging overall. There was a lot involved to complete this assignment. The first part was the use-case diagram. I used the website draw.io to complete this portion. This took some time to get the diagram finished. This diagram helped me understand the functionality of the software more in depth. By creating a diagram first, I have an increased perception of how the software should function. I had to read the SIS template and make sure to include CRUD functionality to certain use cases. What helped me was following the bullet points of the SIS template to complete the use-case diagram. The users have separate access to portions of the software and the use-case diagram shows the relationship between admin access staff and restricted access for students.