# IT 315 Final Project Part III Solution Submission Template

This template is a guide for you to organize your information. To complete it, **replace the bracketed text with the relevant information.** Some areas may be too large or too small for the information you’re inserting. Adjust the size of the areas as necessary.

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**Date:** June 7th, 2023

1. Generate your student information system (SIS) sequence diagram for the Register a Student for Classes use case.



Generate your SIS communication diagram for the Register a Student for Classes use case.



**SIS Method Contract 1 template** (refer to textbook pages 306–314):

|  |  |  |
| --- | --- | --- |
| Method Name:  Enter\_Credentials | Class Name:  Login | ID:  1 |
| Clients (Consumers):  Student | | |
| Associated Use Cases:  Login\_UseCase | | |
| Description of Responsibilities:  To give Student access to SIS | | |
| Arguments Received:  Credentials | | |
| Type of Value Returned:  If incorrect, display “Credentials Error”. | | |
| Pre-Conditions:  Student need to register | | |
| Post-Conditions:  Gives student access to SIS. | | |

**SIS Method Contract 2 template:**

|  |  |  |
| --- | --- | --- |
| Method Name:  Class\_Registration | Class Name:  Prerequisites | ID:  2 |
| Clients (Consumers):  Student | | |
| Associated Use Cases:  Prerequisites\_UseCase | | |
| Description of Responsibilities:  To allow Student to register bases on prerequisites. | | |
| Arguments Received:  Clicking on register. | | |
| Type of Value Returned:  If Student does not meet the Prerequisites, then display, “GPA or Course prerequisite error”.  If correct display available classes. | | |
| Pre-Conditions:  Student is required to meet the GPA, or hierarchical course prerequisites. | | |
| Post-Conditions:  Registers Student to the course successfully. | | |

**SIS Method Specification 1 template** (refer to textbook pages 314–318):

|  |  |  |
| --- | --- | --- |
| Method Name:  Claass\_Registration | Class Name:  Prerequisites | ID:  2.1 |
| Contract ID:  1 | Programmer:  W.Hernandez | Date Due:  06/12/2023 |
| Programming Language:  Python | | |
| Triggers/Events:  Meets or does not meet GPA, or course prerequisites. | | |

| **Arguments Received:**  **Data Type:** | **Notes:** |
| --- | --- |
| Class Registration click, GPA, Course prerequisites. |  |

| **Messages Sent & Arguments Passed:**  **ClassName.MethodName:** | **Argument Data Type:** | **Notes:** |
| --- | --- | --- |
| GPA  Prior Courses taken  Student Capacity | Criteria |  |
| Criteria |  |
| Criteria |  |

| **Argument Returned:**  **Data Type:** | **Notes:** |
| --- | --- |
| Error |  |
| If any of the Data Types do not meet the prerequisites, display Registration error. | |
| Misc. Notes:  More error specifics can be entered. | |

**SIS Method Specification 2 template:**

|  |  |  |
| --- | --- | --- |
| Method Name:  Class\_Options | Class Name:  Online or Physical | ID:  3.1 |
| Contract ID:  3 | Programmer:  W.Hernandez | Date Due:  06/12/2023 |
| Programming Language:  Python | | |
| Triggers/Events:  Selection of class after prerequisites are met. | | |

| **Arguments Received:**  **Data Type:** | **Notes:** |
| --- | --- |
| Prerequisites fulfilled. |  |

| **Messages Sent & Arguments Passed:**  **ClassName.MethodName:** | **Argument Data Type:** | **Notes:** |
| --- | --- | --- |
| Prerequisites met | Permission |  |
|  |  |
|  |  |

| **Argument Returned:**  **Data Type:** | **Notes:** |
| --- | --- |
| Online or Physical |  |
| When Student clicks on either, then the class displays browser and link, or class building and classroom. | |
| Misc. Notes: | |

1. Verify and validate your sequence diagram and communication diagram against your SIS functional model and structural model.

All sequences are linear and confirmed. Specifics give the programmer more details.

1. Explain your approach to the problem, the decisions you made to arrive at your solution, and how you completed it.

The approach to the problem is to keep it as linear as possible. The only time there should be complications is when prerequisites are being analyzed or when classes require selection.

1. Reflect on this experience and the lessons you learned from it.

The Sequences and Contracts are way more detailed and are the interphase from the designer to the programmer. This makes the software design process so much more efficient. This week demonstrates the handoff to the programmer. The interactions are very well organized and demonstrate teamwork. Although it has been my first time, I can only assume practicing more will make things easier.