**Phase Four**

**Front:**

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| --- | --- | --- | --- |
| **Class Name:** Student | **ID:** ‎1 | | **Type:** concrete Domain |
| **Description:**  An individual wishing to register at the school | | | **Associated Use Cases:** 1-1,1-2 |
| **Responsibilities**  Register for classes  Provide personal information to login system | | **Collaborators**  Registrational record  Login System | |

**Back:**

|  |
| --- |
| **Attributes:**  ID, Name, Major, Gender, Date of Birth, Address, Email, Phone, Emergency Contact |
| **Relationships**:  **Generalization (a-kind-of):**  **Aggregation (has-parts):** Undergraduate, Post-Graduate  **Other Associations:** Registrational record, Login System |

**Front:**

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| --- | --- | --- | --- |
| **Class Name:** undergraduate | **ID:** ‎2 | | **Type:** concrete Domain |
| **Description:**  An individual student classification based on years and class registrations | | | **Associated Use Cases:** 1-1,1-2 |
| **Responsibilities** | | **Collaborators** | |

**Back:**

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| --- |
| **Attributes:**  Year, Major, Tuition, Modality Preference |
| **Relationships**:  **Generalization (a-kind-of):**  **Aggregation (has-parts):**  **Other Associations:** Student |

**Front:**

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| --- | --- | --- | --- |
| **Class Name:** Post-graduate | **ID:** ‎3 | | **Type:** concrete Domain |
| **Description:**  An individual student classification based on years and class registrations | | | **Associated Use Cases:** 1-1,1-2 |
| **Responsibilities** | | **Collaborators** | |

**Back:**

|  |
| --- |
| **Attributes:**  Year, Major, Tuition, Modality Preference |
| **Relationships**:  **Generalization (a-kind-of):**  **Aggregation (has-parts):**  **Other Associations:** Student |

**Front:**

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| --- | --- | --- | --- |
| **Class Name:** Registrational record | **ID:** ‎4 | | **Type:** concrete Domain |
| **Description:**  Registration information provided to Student | | | **Associated Use Cases:** 1,1-2,4,5 |
| **Responsibilities**  Update when students add classes  Update when students drop classes  Display grade  Provide online communication option | | **Collaborators**  Student  Class  Login System | |

**Back:**

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| --- |
| **Attributes:**  Grade, Date Added, Date dropped, Online Chat |
| **Relationships**:  **Generalization (a-kind-of):**  **Aggregation (has-parts):**  **Other Associations:** Student, Class, Login System |

**Front:**

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| --- | --- | --- | --- |
| **Class Name:** course | **ID:** ‎5 | | **Type:** concrete Domain |
| **Description:**  An individual wishing to register at the school | | | **Associated Use Cases:** 2 |
| **Responsibilities**  Provide course description  Display course availability | | **Collaborators**  Class | |

**Back:**

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| --- |
| **Attributes:**  Type, Tittle, Course Number, Credit, Availability, Instructors |
| **Relationships**:  **Generalization (a-kind-of):**  **Aggregation (has-parts):**  **Other Associations:** Class |

**Front:**

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| --- | --- | --- | --- |
| **Class Name:** Class | **ID:** ‎6 | | **Type:** concrete Domain |
| **Description:**  An individual wishing to register at the school | | | **Associated Use Cases:** 3,6 |
| **Responsibilities**  Display available classes  Display available instructors  Show modality options | | **Collaborators**  Online, Face to Face | |

**Back:**

|  |
| --- |
| **Attributes:**  Date, Time, Instructors, Class Number, Class Type, Waitlist |
| **Relationships**:  **Generalization (a-kind-of):**  **Aggregation (has-parts):** Online, Face to Face  **Other Associations:** Course, Registrational record |

**Front:**

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| --- | --- | --- | --- |
| **Class Name:** Online | **ID:** ‎7 | | **Type:** concrete Domain |
| **Description:**  Modality type available for classes | | | **Associated Use Cases:** 6 |
| **Responsibilities** | | **Collaborators** | |

**Back:**

|  |
| --- |
| **Attributes:**  Date, Time, Instructor, Type, Semester Length |
| **Relationships**:  **Generalization (a-kind-of):**  **Aggregation (has-parts):**  **Other Associations:** Class |

**Front:**

|  |  |  |  |
| --- | --- | --- | --- |
| **Class Name:** face to face | **ID:** ‎8 | | **Type:** concrete Domain |
| **Description:**  Modality type available for classes | | | **Associated Use Cases:** 6 |
| **Responsibilities** | | **Collaborators** | |

**Back:**

|  |
| --- |
| **Attributes:**  Date, Time, Instructor, Type, Semester Length |
| **Relationships**:  **Generalization (a-kind-of):**  **Aggregation (has-parts):**  **Other Associations:** Class |

**Front:**

|  |  |  |  |
| --- | --- | --- | --- |
| **Class Name:** Login system | **ID:** ‎9 | | **Type:** concrete Domain |
| **Description:**  An individual wishing to register at the school | | | **Associated Use Cases:** 5-1 |
| **Responsibilities**  Ask for username and password  Verify login information  Give access to registrational record and student home page. | | **Collaborators**  Student  Registrational record | |

**Back:**

|  |
| --- |
| **Attributes:**  ID, Name, Departments, password, username |
| **Relationships**:  **Generalization (a-kind-of):**  **Aggregation (has-parts):**  **Other Associations:** Student, Registrational record |

Explanation: The classes above show a description, responsibilities, associated Use Cases and Collaborators in the front side and Attribute and associations at the back. The front part shows which uses cases relates to the class along with the detailed responsibility and description of what the class does. The back shows what attributes are included in the class and which other classes are related to that specific class.

Class Diagram

Diagram

Description automatically generated

Explanation: the class diagram above shows the relationship between the class student, Registration Record, Class, Course, Login System, Undergraduate, Post-graduate, Online and Face to Face.

Each class has the attributes and methods it represents, and the arrows show the relationship between the classes. The login system is important to login as a student to see any registration information as well so there is an arrow connecting student class, registrational record with the login systems class.

**Phase five**

Sequence diagram

Chart

Description automatically generated

Communication diagram

Diagram

Description automatically generated

Object State Diagram

Diagram

Description automatically generated

Explanation: The sequence diagram shows the process it takes a student to register for a class and the response a student sees at the end of the process. The communication diagram shows how a student requests for to register and views classes from the record. This process then displays the available classes to the student. The Object state diagram validates the login information a student enters and shows available classes then checks if prerequisites have been met. If all the requirements are fulfilled, then a student is able to enroll.

**Phase Six**

Graphical user interface, application, Word

Description automatically generated

This phase groups related classes into one package and shows how each package relates to eachother. This is based on the class diagram. Student class is related to registrational record. Course and class are related to each other and registrational record relates to course and class. The grouping and the relationships between the packages above show that.

**Phase Seven**

Diagram, schematic

Description automatically generated

Diagram

Description automatically generated

Explanation: The above pictures show the relationship between the DAM, Problem domain class and RBDMS. Each table is related to the problem domain and the class and Student DAM are shown in the middle to show the relation.