COMP-3008 Practical 05

- Study the BASE Astah file
- A partial design is provided
- Answer the following questions
- Follow the submission requirements

1. Design and Reify Relationships

- In the Design Classes diagram, reify the association class into a design class with relationships
- Based on all the information provided, refine relationships into aggregations and compositions between the design classes as appropriate
- Make sure each relationship is fully specified with navigability, multiplicity, and role names

2. Design an Interface

- Instances of classes **Course** and **Student** must be identified by a name and number
- For a **Course** instance, the name is exactly its given name attribute and the number is the concatenation of its code and number with a separating dash (i.e., concat(code, '-', number))
- For a **Student** instance, the name is the concatenation of firstName and lastName with a separating space (i.e., concat(firstName, ' ', lastName)) and the number is exactly the value of the number attribute.
- Design an *Identifiable* interface that ensures any "identifiable" class will have implemented methods for getting its name and number
- Add design elements to the Design Classes diagram so that a developer is contractually obligated to implement classes **Course** and **Student** with *Identifiable* behaviours
- Attach notes to the *Identifiable* methods in each class to explain the implementation of each *Identifiable* behavior in that class

Business Requirements

- The maximum Enrolment in a course shall be 120 students
- The minimum Enrolment in a course shall be 0
- The maximum Enrolled courses for a student shall be 6
- The minimum Enrolled courses for a student shall be 0
- Every Student shall have a Student Card
- Deleting a Student shall delete their Student Card

Submission Requirements

1. Arrange the solution diagram and its outer frame for a professional presentation
2. Export the solution diagram as a PNG file
3. Insert the PNG file into the provided Word document TEMPLATE
4. Replace **YourName** and **##** in the header of the Word document with your name and section number
5. Save the Word document as a **PDF file**
6. Submit **only** the **PDF** and **Astah** files to the dropbox in Learn
7. **DO NOT zip** the files