SOFE3650U Software Design and Architecture

Assignment 2

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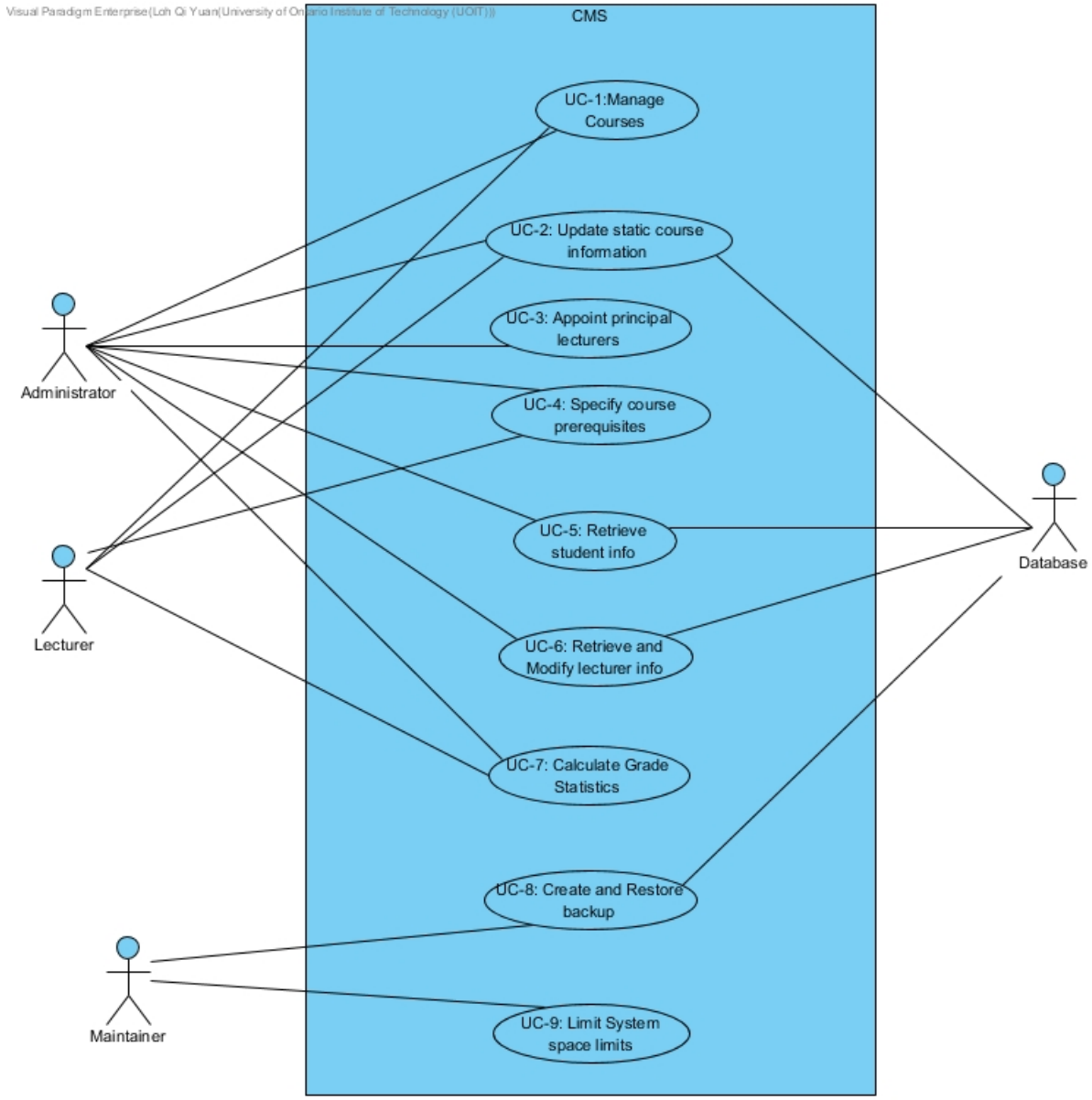
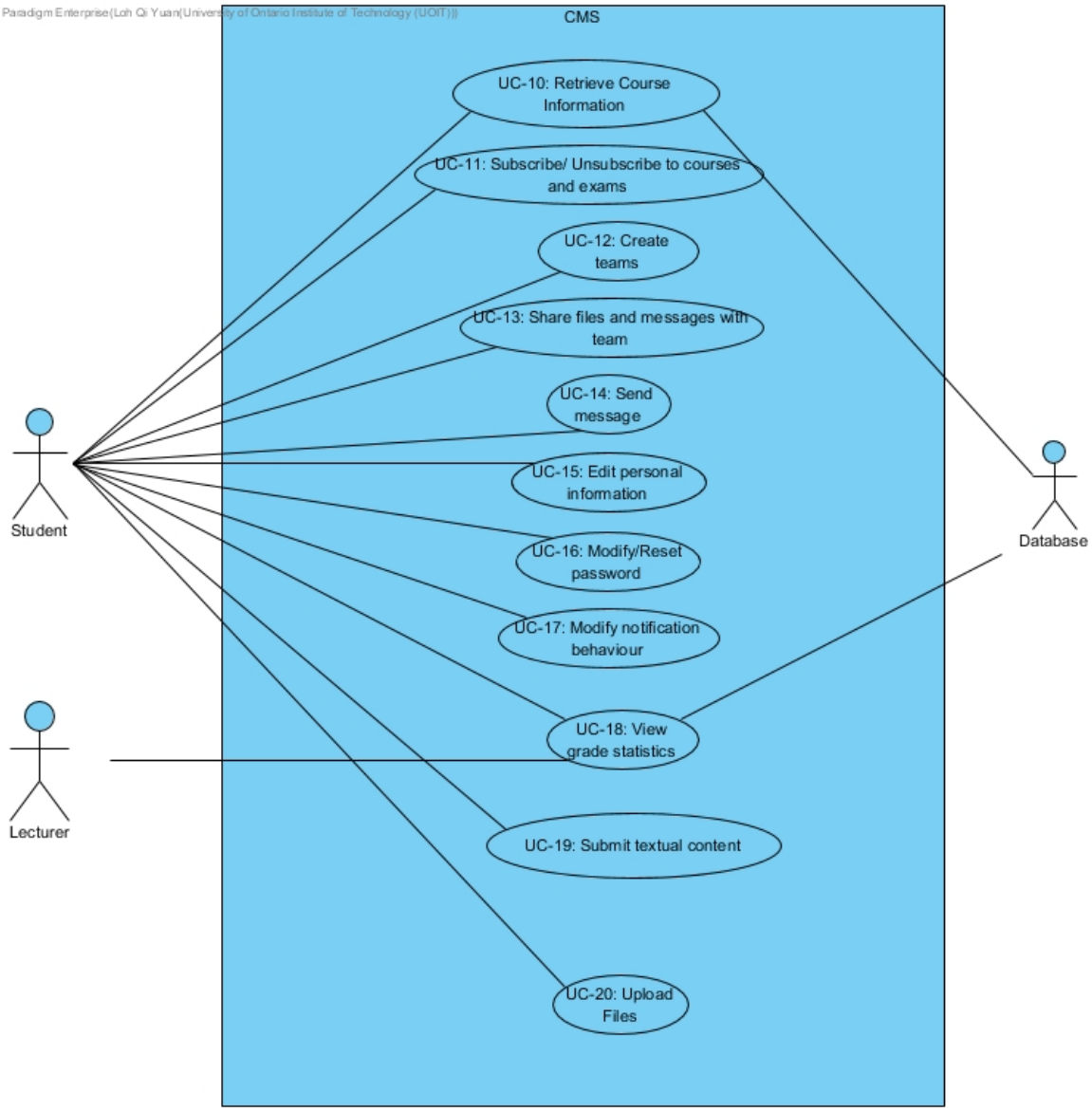
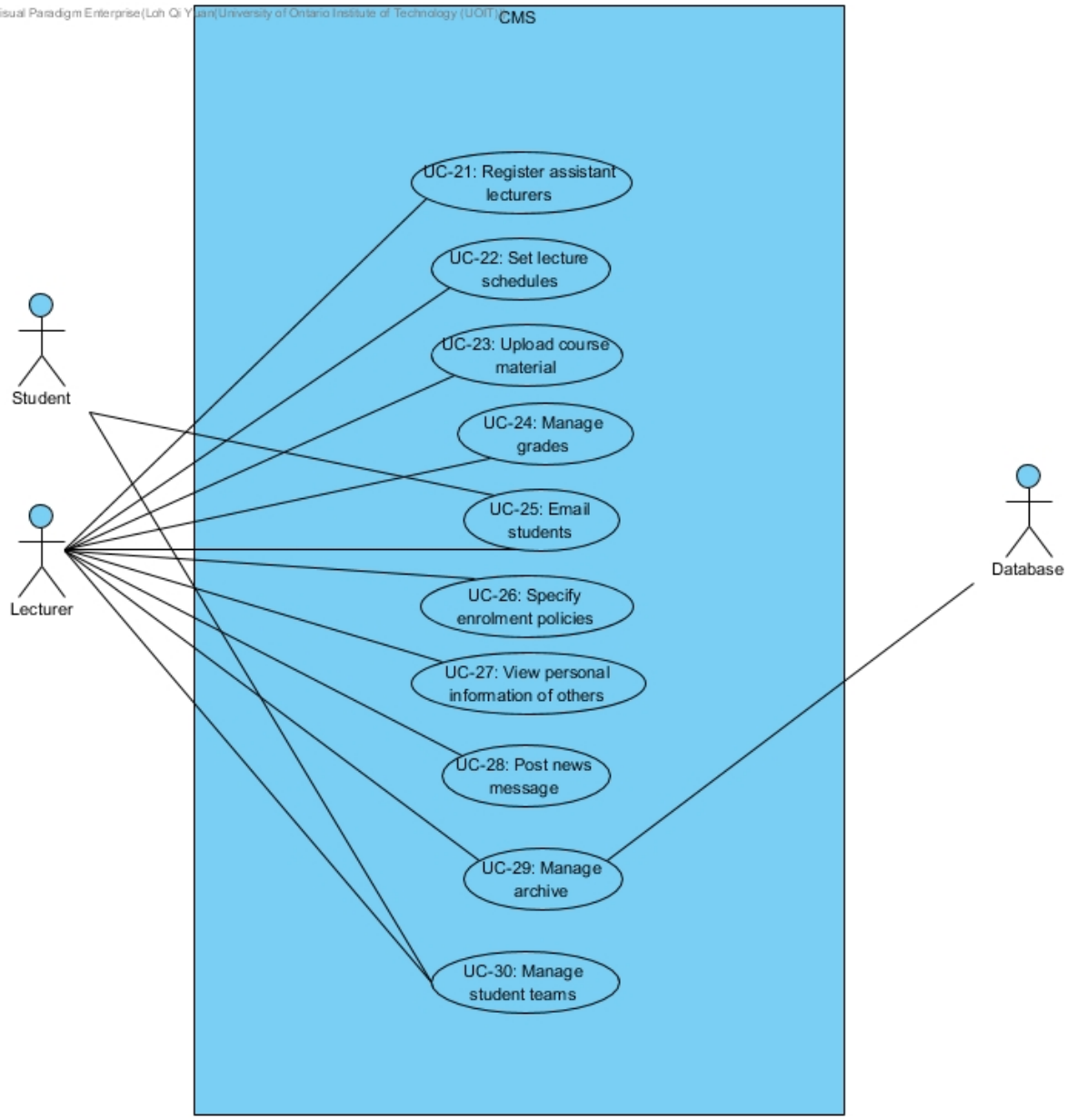
Q1a)


Visual Paradigm Enterprise(Loh Qi Yuan(University of Ontario Institute of Technology (UOIT)))
CMS
UC-1:Manage Courses
UC-2: Update static course information
UC-3: Appoint principal lecturers
UC-4: Specify course prerequisites
UC-5: Retrieve student info
UC-6: Retrieve and Modify lecturer info
UC-7: Calculate Grade Statistics
UC-8: Create and Restore backup
UC-9: Limit System space limits
Administrator
Lecturer
Maintainer
Database

Visual Paradigm Enterprise(Loh Qi Yuan(University of Ontario Institute of Technology (UOIT)))



Visual Paradigm Enterprise(Loh Qi Yuan(University of Ontario Institute of Technology (UOIT))



Q1b) Specify the quality attribute scenarios associated to the Use Cases.

ID	Quality Attribute	Scenario	Associated Use Case
QA1	Privacy	Prevent students from viewing grades of others. Provide a user-customizable visibility policy for personal information	UC15 ,16, 27
QA2	Availability	No unexpected downtime/ expected downtime to be announced at 48 hours in advance. Downtime only during low-intensity hours, at most 4hours/month	ALL
QA3	User friendliness	Bilingual support. Max 3 click to reach content. Single login to access all content. Intuitive, descriptive, consistent UI.	ALL
QA4	Accessibility	Accessible by blind users.	ALL
QA5	Security	Allow only students to change study information of others. Allow lecturers to view dynamic course information by other lecturers, manage dynamic content visibility. Allow lecturers to view grade of all students. Students can only view own grades.	UC1, 5, 18, 24
QA6	Interoperability	Export to commonly used calendar formats. Import BOZ roster info into course roster. System to be	UC1,2, 11

		interoperable with secondary uni systems	
QA7	Extensibility/Evolvability	Easily extensible, evolvable. Allow admin to make exceptions to student enrolment	UC5,6, 8, 9
QA8	Testability	Easily testable	UC8, 9
QA9	Scalability	scalable	UC8, 9
QA10	Maintainability	Easily maintainable	UC 8,9

Q1c) Specify the constraints imposed on the CMS.

Constraint 1: System must be accessed through a web browser (Chrome, Firefox, IE, Safari) on different platforms: Windows, OSX and Linux

Constraint 2: A minimum of 200 simultaneous users must be supported.

Constraint 3: System must support different forms of accessibility options such as Text-to-speech.

Constraint 4: All course information since the start must be stored.

Constraint 5: System must be backed up every 24hours