College of Computer Science and Engineering

SWE 205 COURSE PROJECT REPORT

Project Title: UHB Courses Registration App

Second Semester, 2021 / 2022

Project Team Members				
	Student ID	**Name**	**Email address**	**Role**
1	220000xxx	Ghazi	s220000xxx@uhb.edu.sa	Leader
2	220000xxx	Abdullah	s22000xxx@uhb.edu.sa	Member
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5	220000xxx	Faisal	s2200000xxx@uhb.edu.sa	Member

Supervisor:	

ABOUT THE PROJECT

Introduction:

Student Information System (SIS) is one of the electronic systems of University of Hafr AlBtain (UHB) which provides capabilities for registering students in courses and all related academic activities. However, the UHB community (students, instructors, academic advisors, deans, …) are not satisfied with the current system and they think it is not effective. It is believed that new services should be added to the system, and many existing services should be improved. The UHB management has decided to launch a new project to develop "UHB Courses Registration App". The new project should solve the problems of the current system and promote the "Students Happiness". UHB management believes that students who have a high sense of happiness are more active and achieve better in their academic life. Students of SWE 205 course are expected to work on their course project to develop a prototype of the "UHB Courses Registration App" according to the instructions of this document.

Project Aim:

The project aims to develop an effective mobile application to improve the quality of UHB courses registration process and promote the "Student Happiness".

Project Goals:

- Applying software engineering methods and techniques gained from the course to develop a software prototype.
- Working effectively and cooperatively in a team.
- Improving the skills of time management, team management, conflict management, communication, leadership, and problem solving.

Project Scope:

The project will include all operations related to course registration, taking into consideration promoting the "Student Happiness".

The project is expected include the following operations:

1. courses addition
2. courses dropping
3. early registration and formal registration
4. regular semesters registration
5. summer semester registration
6. courses withdrawal
7. semester withdrawal
8. interruption and suspension of enrollment
9. re-enrollment
10. transfer from one major to another
11. supporting visiting students
12. tracking unexcused and excused absences
13. issuing DN grade
14. documenting grading
15. grades approval
16. calculating academic status (good standing, academic warning, discontinuation from study)
17. generating academic warning
18. academic advising
19. generating transcripts of students
20. generating all required reports

Assessment Method:

Attending and participating in the group meeting and activities	40%
Project Report	30%
Project Presentation	30%
TOTAL	**100%**

TASK 1: Preparation [WEEK 5]

1.1 Project Stakeholders:

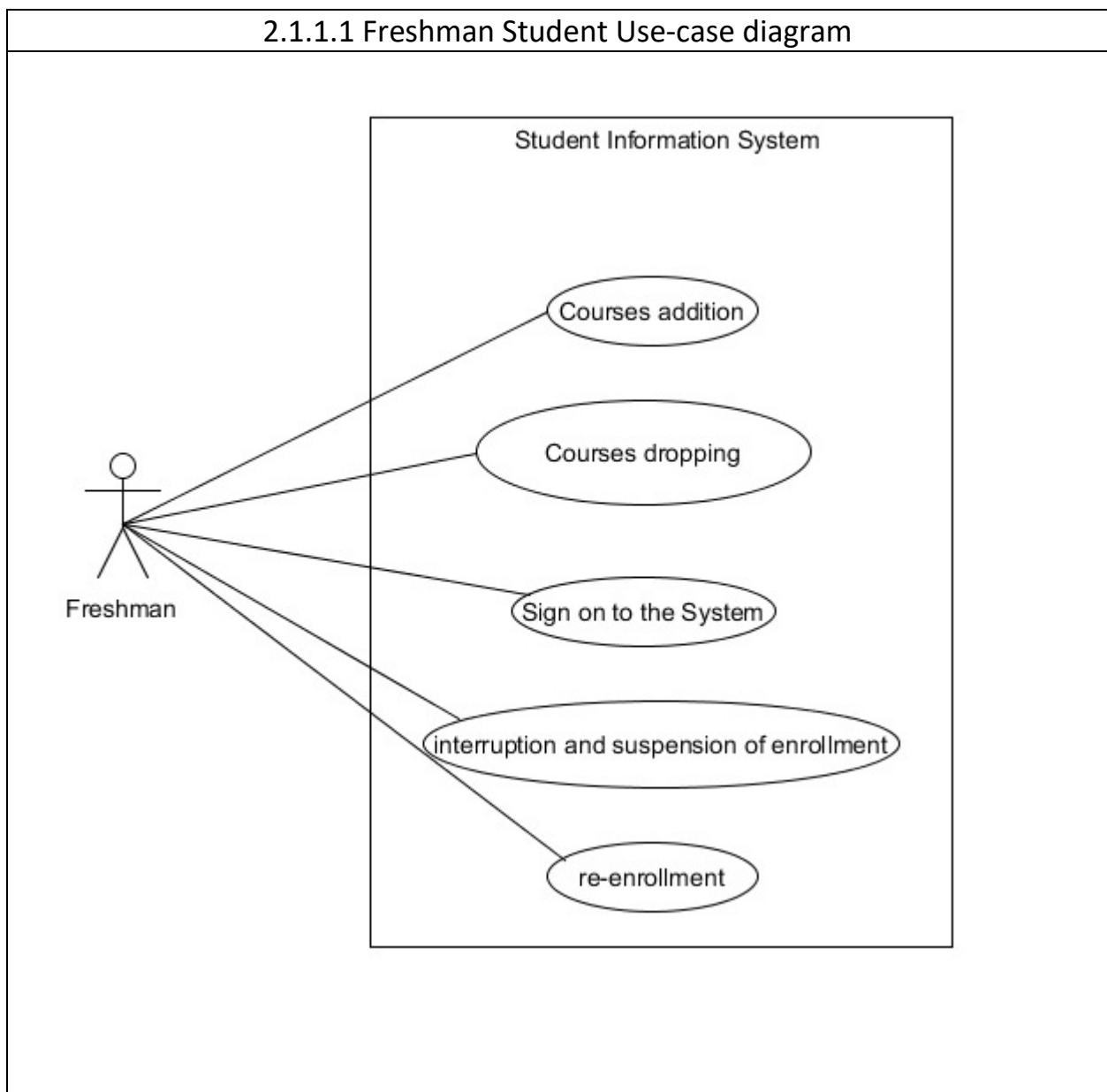| Stakeholder	Name	College	Email
Freshman Student (Year1 Student)	Turki	Computer Science & Engineering	s221000xxx@uhb.edu.sa
Senior Student (Year4 Student)	Waleed	Computer Science & Engineering	s219000xxx@uhb.edu.sa
Instructor	Dr. Raed	Computer Science & Engineering	raexxx@uhb.edu.sa
Academic Advisor	Dr. Ahmed	Computer Science & Engineering	aahxxx@uhb.edu.sa
Head of Department	Dr. Turki	Computer Science & Engineering	tajrxxx@uhb.edu.sa
Dean of College	Dr. Sami	Computer Science & Engineering	sibnsxxx@uhb.edu.sa

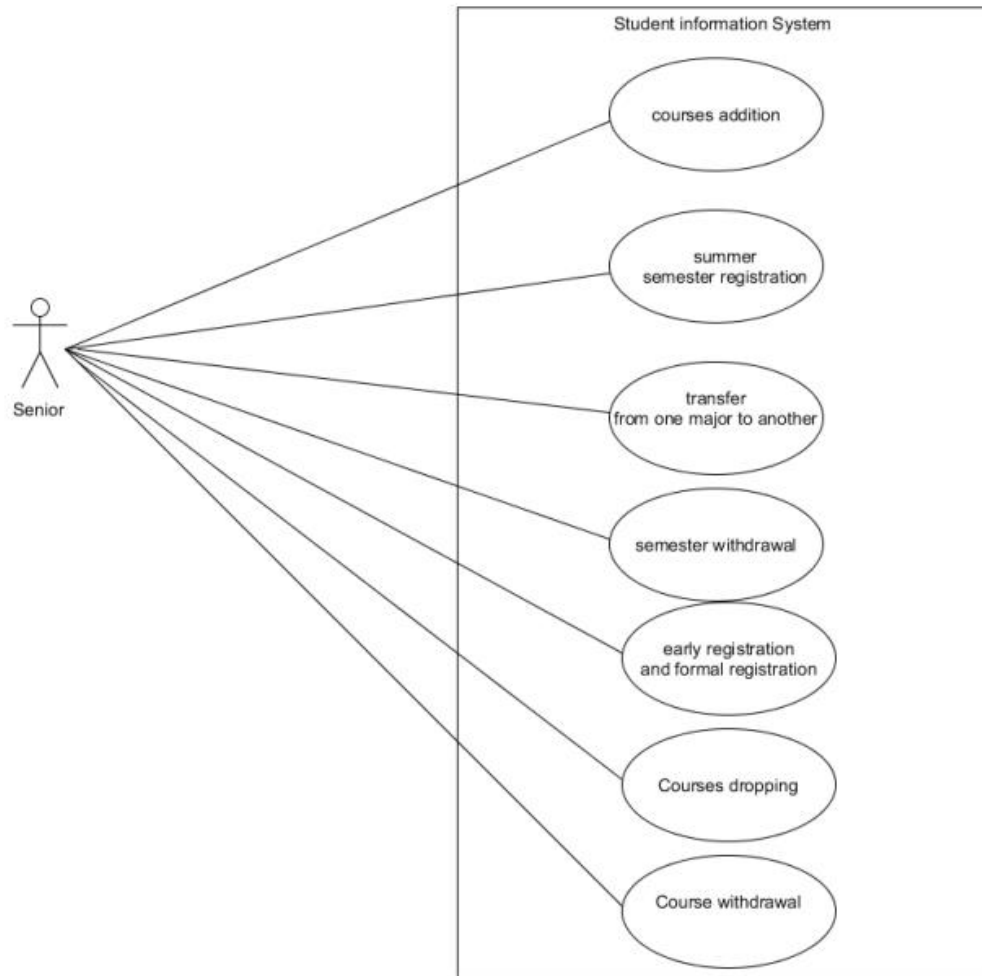**TASK 2: Requirements Engineering [WEEKS 6 and 7]**

2.1 Functional Requirements:
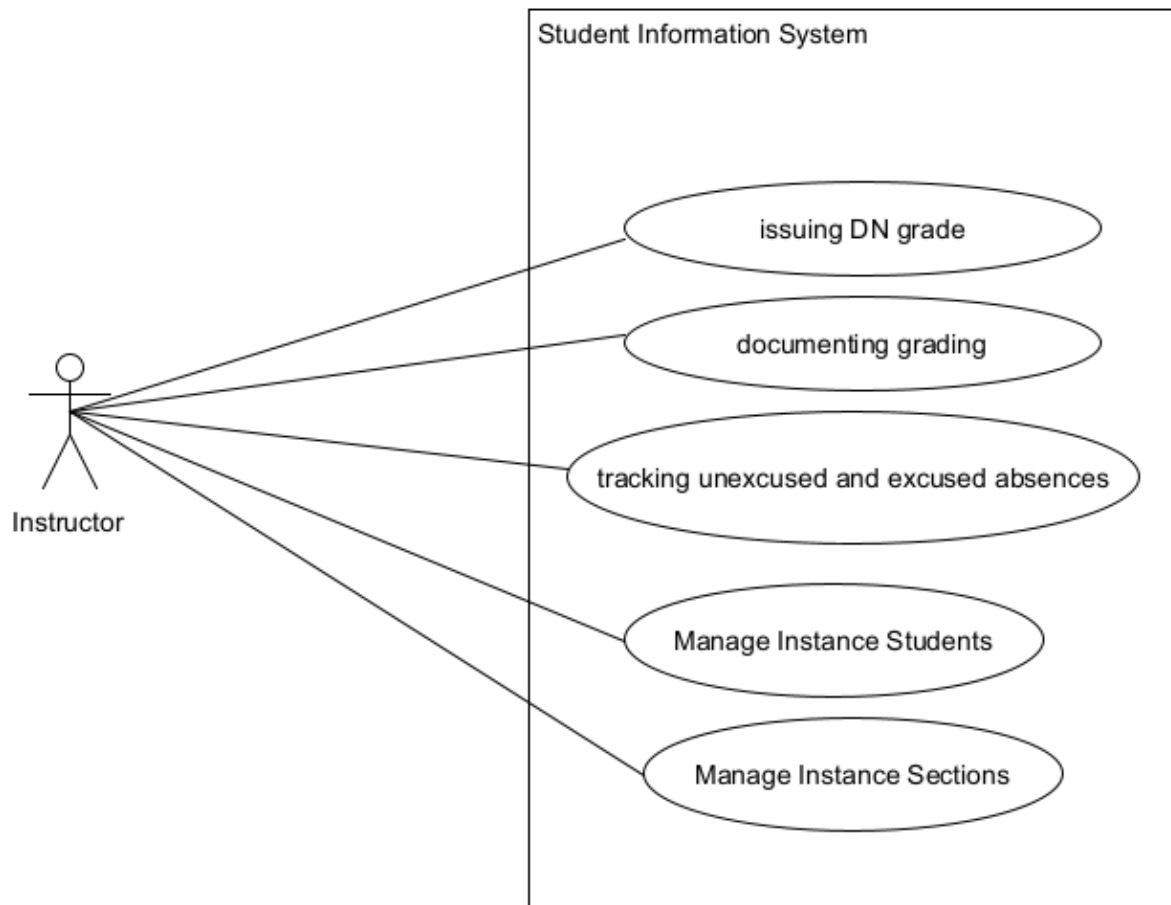
2.1.1. Stakeholders use-case diagrams

In this section, you shall create one use-case diagram for each stakeholder. The total is five use-case diagrams.

2.1.1.1 Freshman Student Use-case diagram

2.1.1.2 Senior Student Use-case diagram

Student information System

Senior

- courses addition
- summer semester registration
- transfer from one major to another
- semester withdrawal
- early registration and formal registration
- Courses dropping
- Course withdrawal

2.1.1.3 Instructor Use-case diagram

Student Information System

Instructor

- issuing DN grade
- documenting grading
- tracking unexcused and excused absences
- Manage Instance Students
- Manage Instance Sections

2.1.1.4 Academic Advisor Use-case diagram

Student Information System

- calculating academic status
- generating academic warning
- academic advising
- generating transcripts of students
- generating all required reports

Academic Advisor
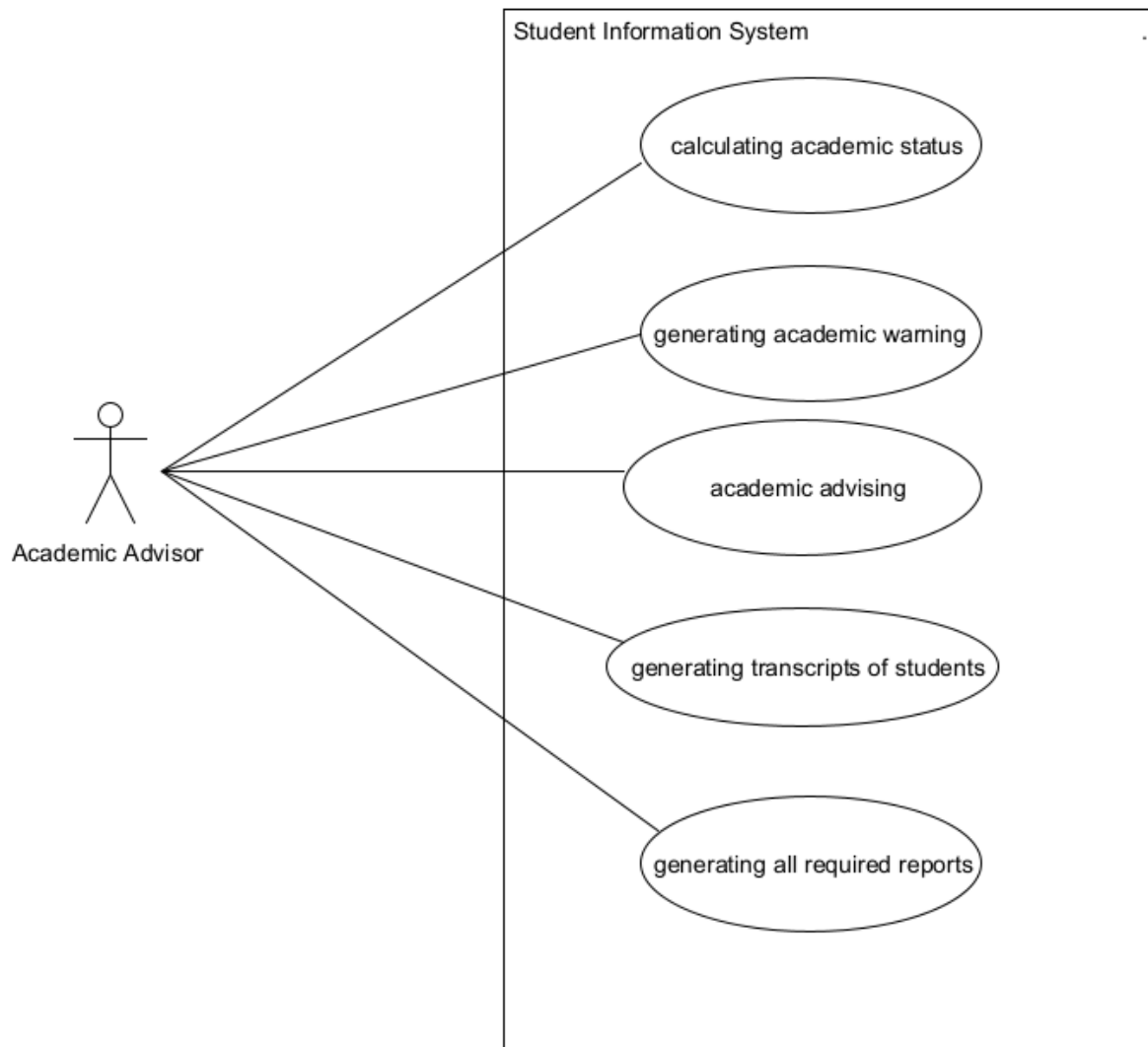
2.1.1.5 Head of Department Use-case diagram

Student Information System

Grades approval

Generating transcripts of students

Generating all required reports

Documenting grading

Head Of Department
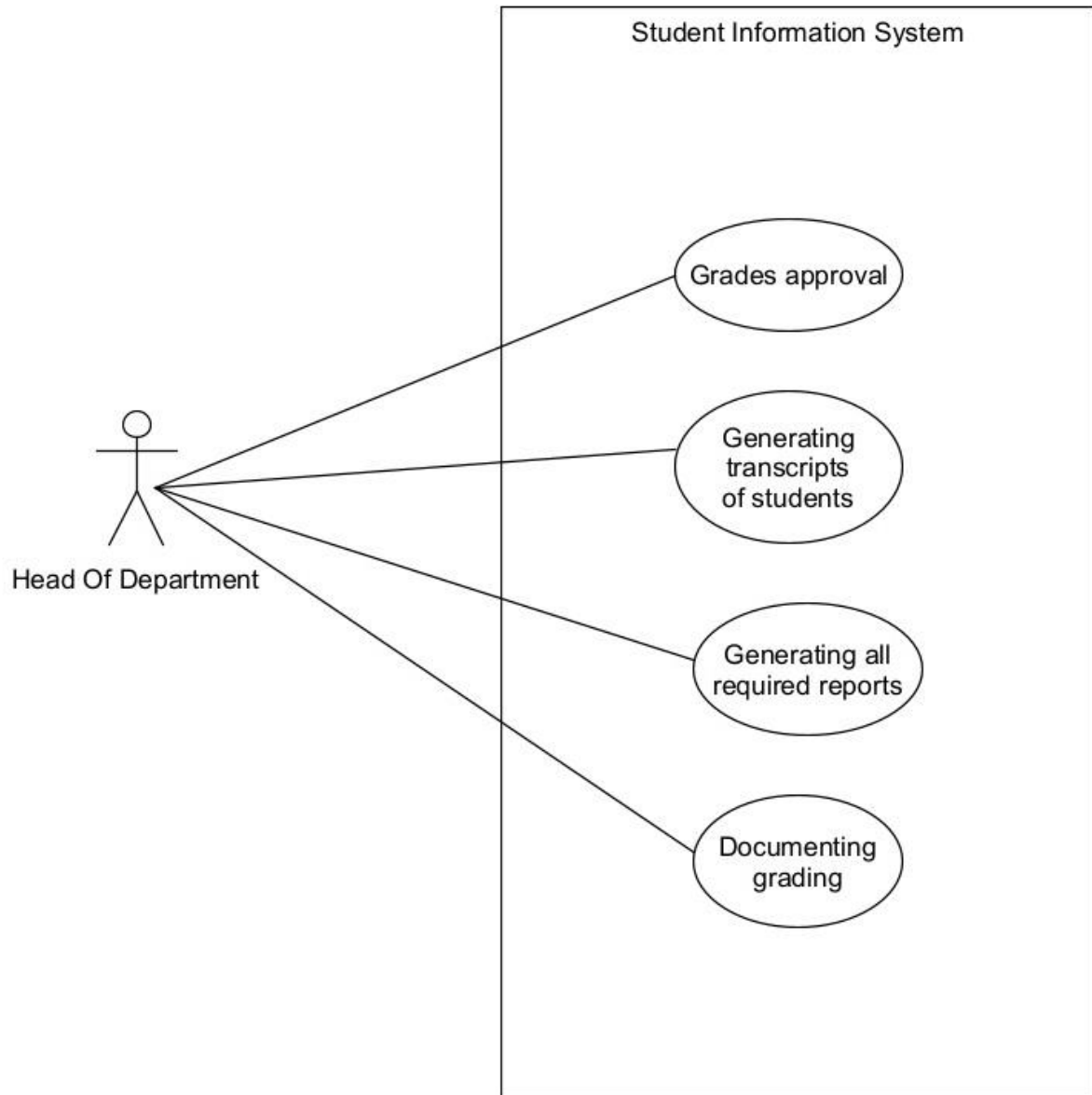
2.1.1.6 Dean of College Use-case diagram

Student Information System

tracking unexcused and excused absences

generating academic warning

generating all required reports

Manage Courses Department and Subjects

Dean of College
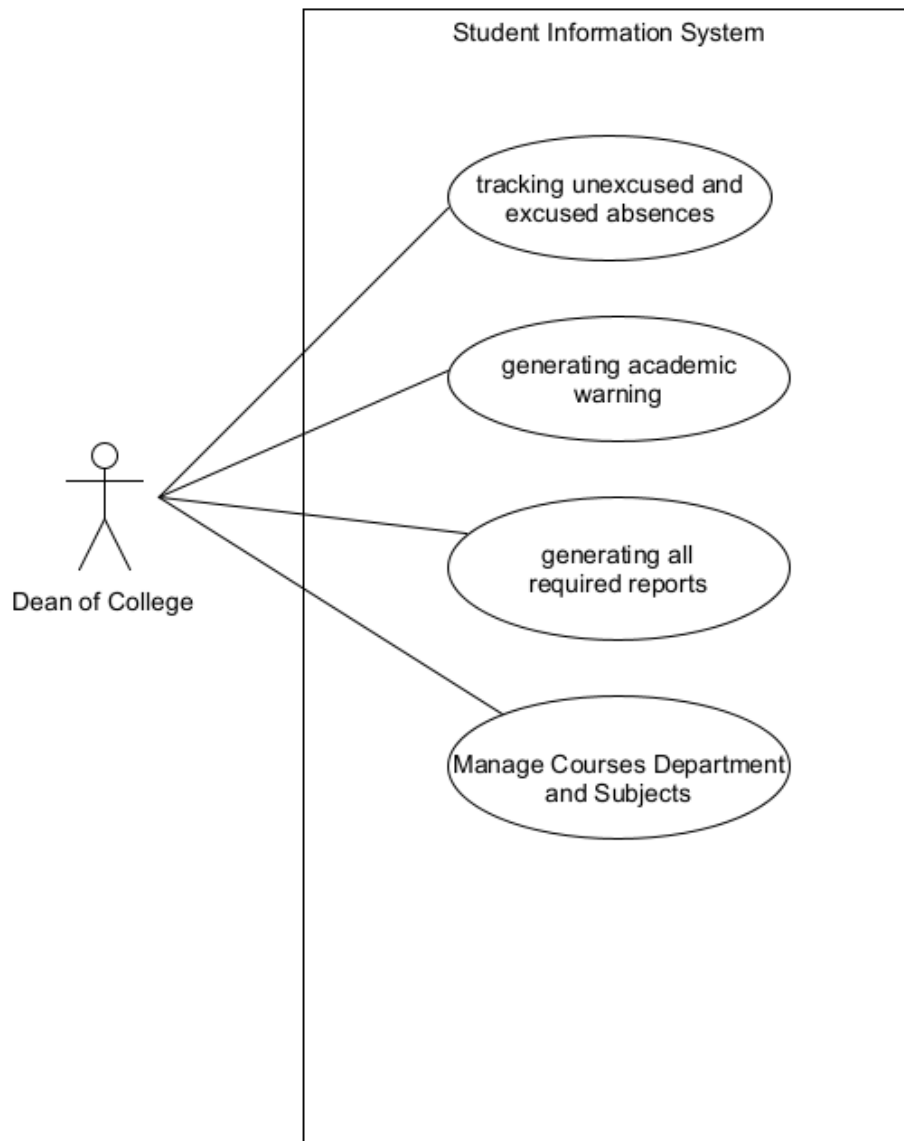
2.1.2 Use-case description:

The following table is used to describe each use-case in 2.1. :

ID:	2.1.1.1.
Name of use-case:	Sign on to the System
Actor(s):	Freshman
Brief Description:	Available any time when you need the system
Pre-conditions:	early registration and formal registration or regular semesters registration or summer semester registration
Flow of Events:	Open Student Information System put the username and password after that clicking registration icon and adding course after that put a search and then it shows the courses then adding course
Post-conditions:	The course will be added to student in Student Information System and Blackboard

ID:	2.1.1.2
Name of use-case:	summer semester
Actor(s):	Senior Student
Brief Description:	summer registration
Pre-conditions:	Subject requirements and registration of subjects according to the level of the student
Flow of Events:	Log in to the system and then choose a material you want for summer semester
Post-conditions:	after the process for a choose material You go to the weekly schedule and you see the Confirmed materials

ID:	2.1.1.3
Name of use-case:	Issuing DN grade
Actor(s):	Instructor
Brief Description:	Centralized on Blackboard, Calculation of exams
Pre-conditions:	From Blackboard directly goes to SIS grades and DN.
Flow of Events:	Doing the Calculation on an Excel then copy it and open SIS and do it manually.
Post-conditions:	Ease of grading and automatically get the grades and DN from Blackboard and directly upload to SIS.

ID:	2.1.1.4.
Name of use-case:	Academic advising
Actor(s):	Academic Advisor
Brief Description:	advises students concerning their academic plans and progress, academic schedule, choice of major, and other academic activities and career goals
Pre-conditions:	Make sure you have student that you are their academic advisor
Flow of Events:	First, sign in the sis system, Second identified each department, Third Select the ID of the student you want, after that you can contact him
Post-conditions:	Make the student comfortable and have no issue

ID:	2.1.1.5
Name of use-case:	Grade approval
Actor(s):	Head of department
Brief Description:	approved degree before documenting grading
Pre-conditions:	documenting grading
Flow of Events:	Log in to the system and then choose a class for grades, then the subjects and students will appear to you, and then you can view the grades.
Post-conditions:	After the process of processing the grades, the grades are sent to the system.

ID:	2.1.1.6
Name of use-case:	Manage Courses Department and Subject
Actor(s):	Dean of College
Brief Description:	Supervising departments in the college and subjects
Pre-conditions:	management experience
Flow of Events:	Using the sis site, then log in. All sections and materials appear to you. You can add and delete materials or modify them, change the time of the article, and show you if there are conflicts
Post-conditions:	There will be no conflict in all department or subject

2.2 Non-functional Requirements:

The non-functional requirements categories include (but not limited to): performance, availability, security, privacy, maintainability, reliability, and usability.

ID	Stakeholder	Description of Non-functional Requirement
2.2.1	Freshman	the system should have user friendly interface
2.2.2	Senior Student	The system must handle save login and logout through session
2.2.3	Instructor	The System response should be not less than 3 seconds
2.2.3.1	Instructor	The System must be reliable and do not miss or do not make a mistake for uploading grades or DN's
2.2.4	Academic Advisor	The System Should be straightforward
2.2.4.1	Academic Advisor	The database should be secured
2.2.5	Head of Department	The system makes sure that all student marks are monitored and verified before arrive.

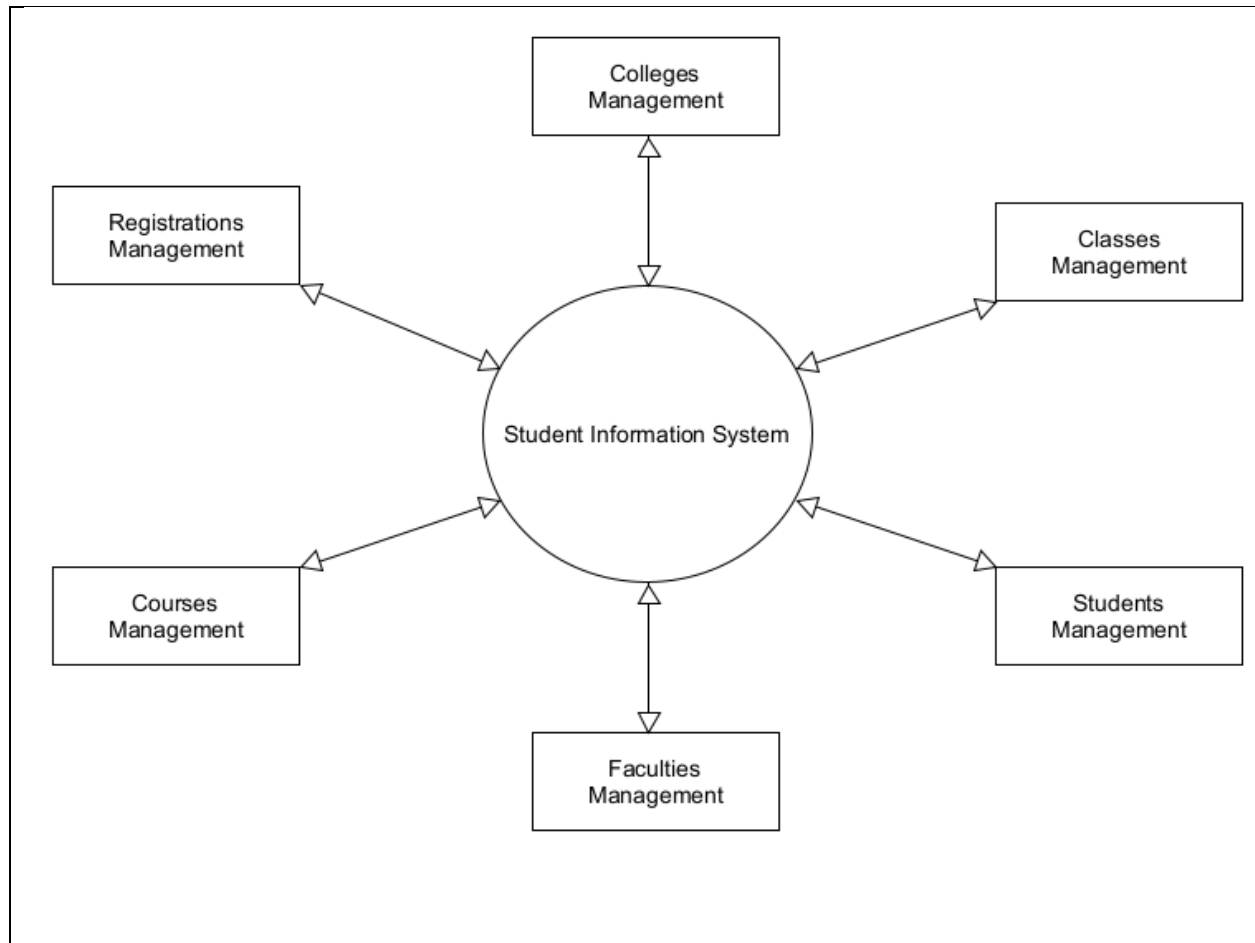|		
2.2.6	Dean of College	The system must be equipped with the highest and most recent means of protection

2.3 Requirements Approval:

The project team shall share the requirements specification (contents of sections 2.1 and 2.2) with the stakeholders, take their remarks, do the required modifications, and get their approval.

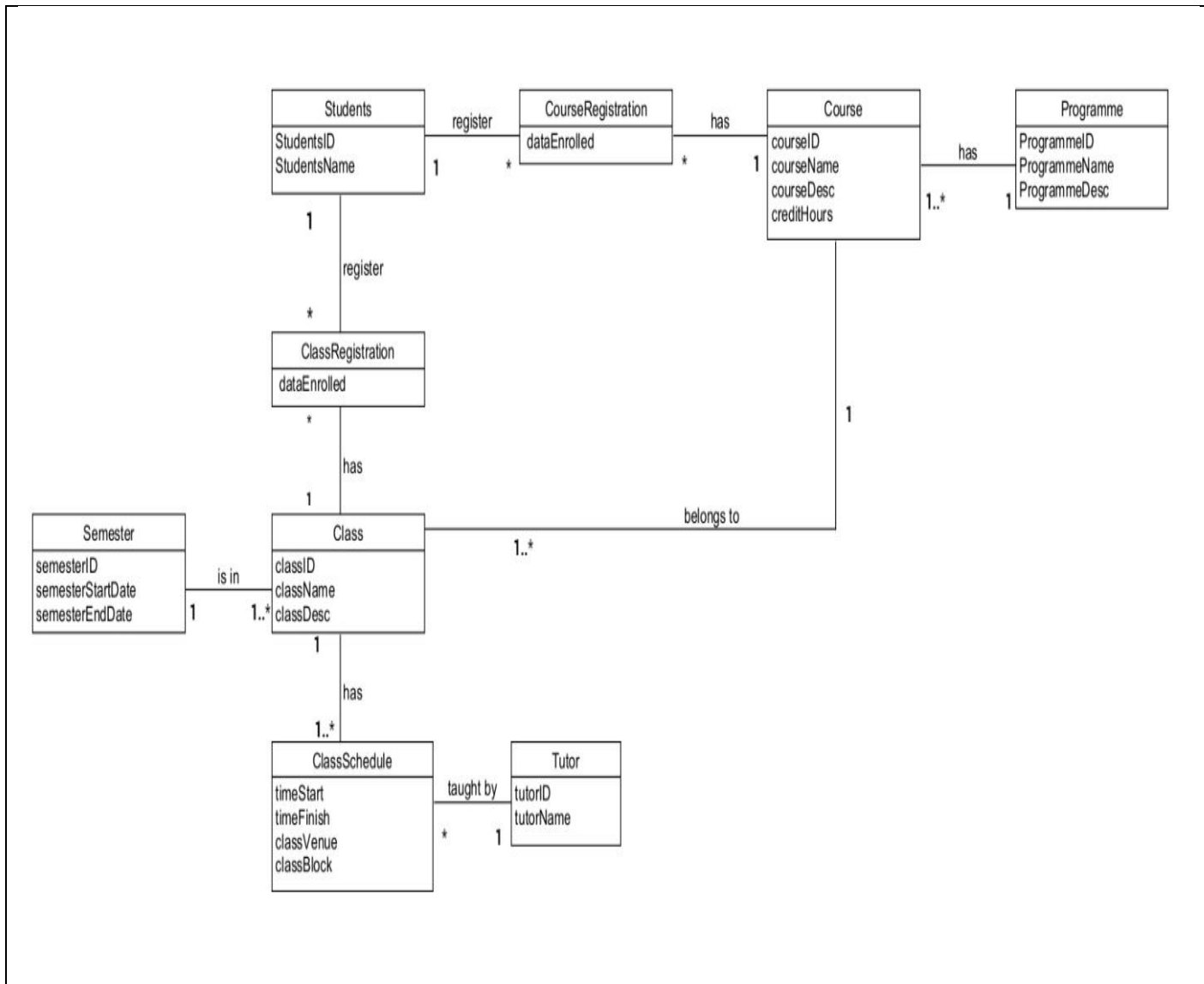| Requirements Approval				
Stakeholder	Name	College	Email	Signature
Freshman Student (Year1 Student)				
Senior Student (Year4 Student)				
Instructor				
Academic Advisor				
Head of Department				
Dean of College				

TASK 3: DESIGN [WEEKS 8 to 10]

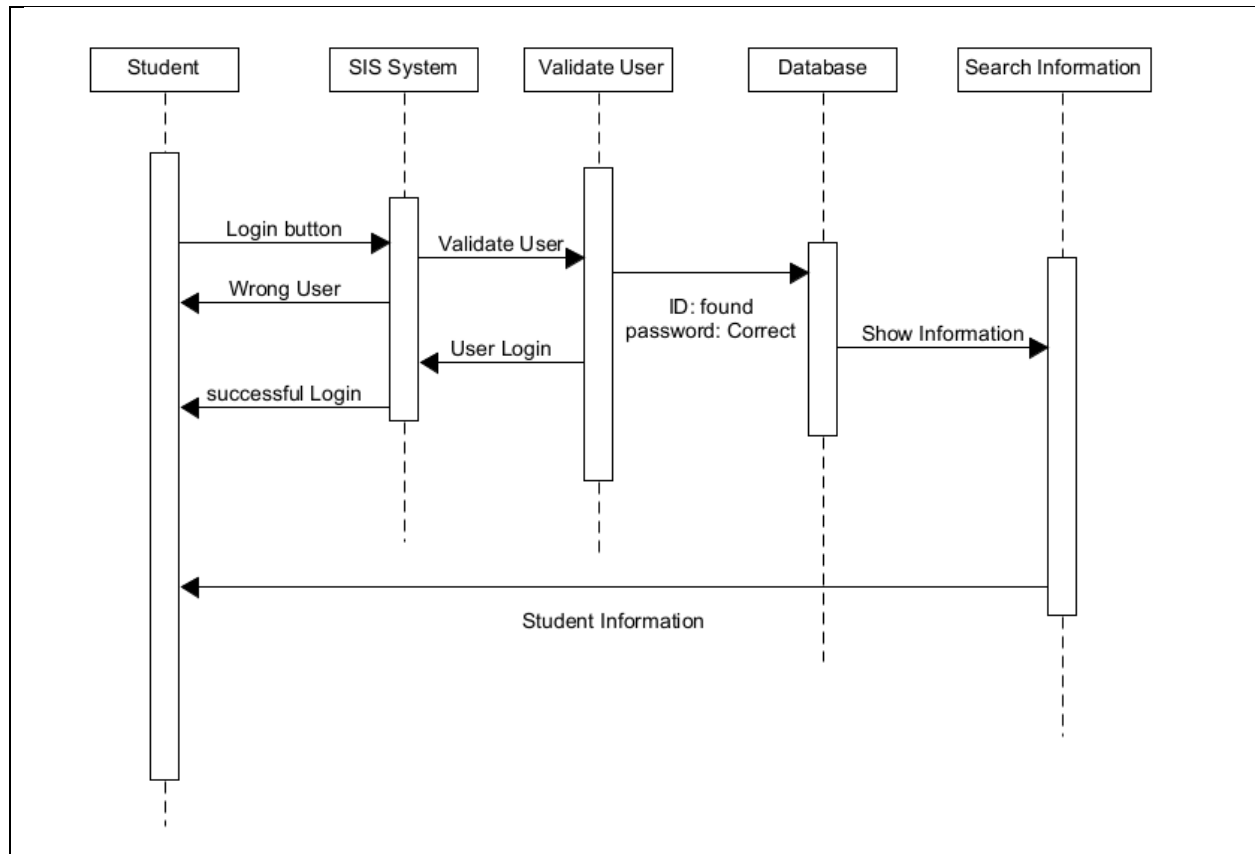Project team shall insert design diagrams in this section.

3.1 Context diagram

3.2 Class diagram

3.3 Activity diagrams

Student

complete
applaction

↓

Applaction

↓

Check Course
Availabilty ← Courses

Applaction

Check Applaction
Qualification

Accept ←

Students
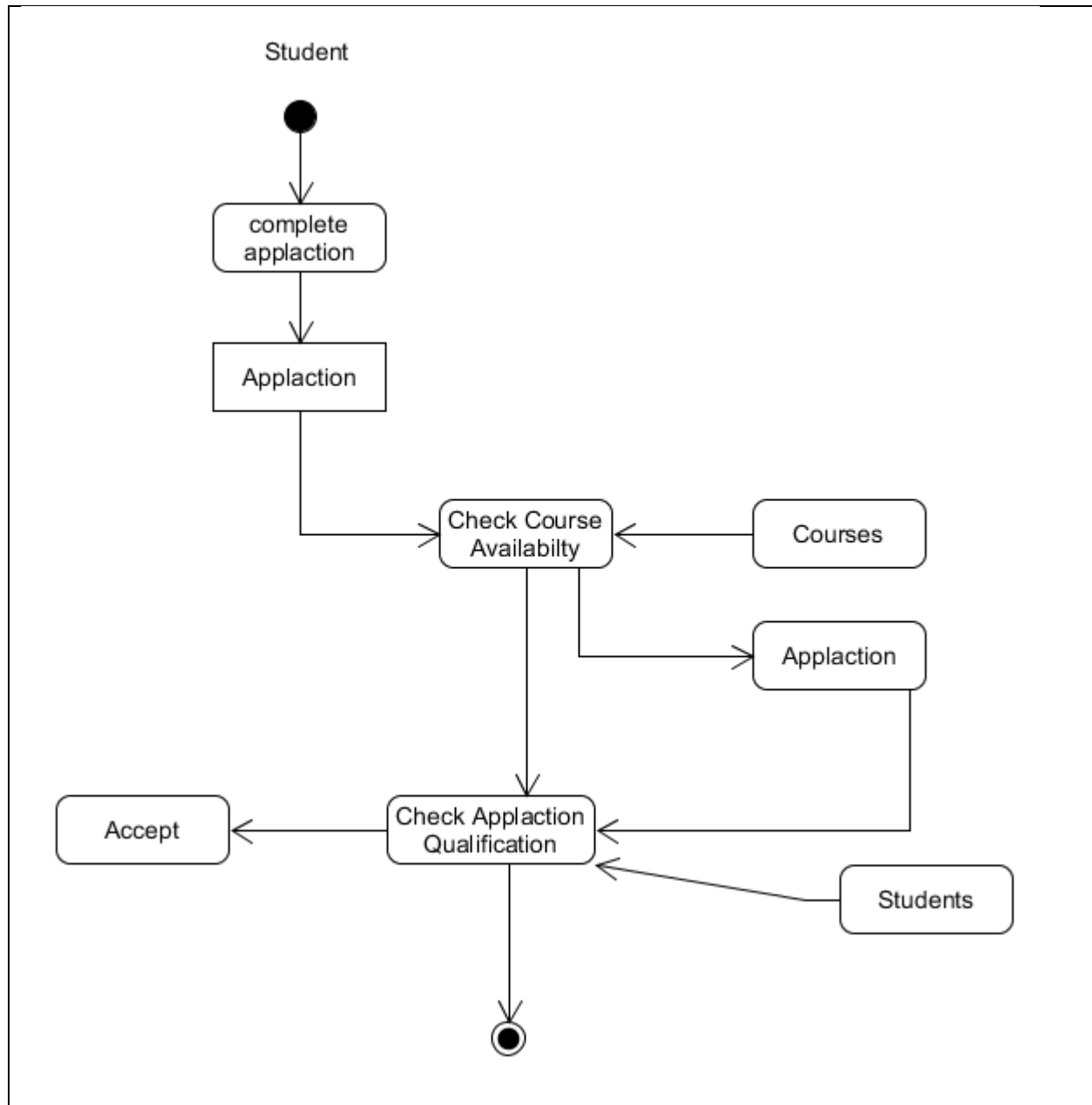
3.4 Sequence diagrams

3.5 State Machine diagrams