IT2020 - Software Engineering
Year 2, Semester I, 2024
Group Assignment

Online School Information Management System

Group Details

Batch: Matara Center
SE/OOP Group Number: MTR_Y2S1_G3

	Student Registration Number	Student Name
1	IT22371768	Ranasinghe S.I
2	IT22303684	Abeygunasekara D.T
3	IT22182678	Rashani K.G.M
4	IT22251114	Jinad Induwithwa A.G
5	IT22190048	Masakorala A.H

Introduction

Online School Information Management System is a comprehensive platform designed to streamline and improve the administrative and academic activities of educational institutions. It should be user friendly software. This innovative system serves as a central hub for managing all aspects of school data, from student records and enrollment information to teacher schedules and financial data. Also the data is maintained in the database of students' record book. A registered student is assigned a username and password by the system. Accordingly, the system provides students with semester and user information as well as payment details.

Controlling the learning and teaching process is a primary objective. Chief administrator, staff members will control this system. The data and information of the teachers are stored by the system and the system also stores the salary details as well as the administrative details.

When teachers register with the system, they have to log into the system through a username and password and upload the activities of the students' accounts as well as the activities belonging to the academic processes and display the relevant results. This contributes to the success of the online learning and teaching process. The results of this are surveyed and approved by the principal and displayed by the system.
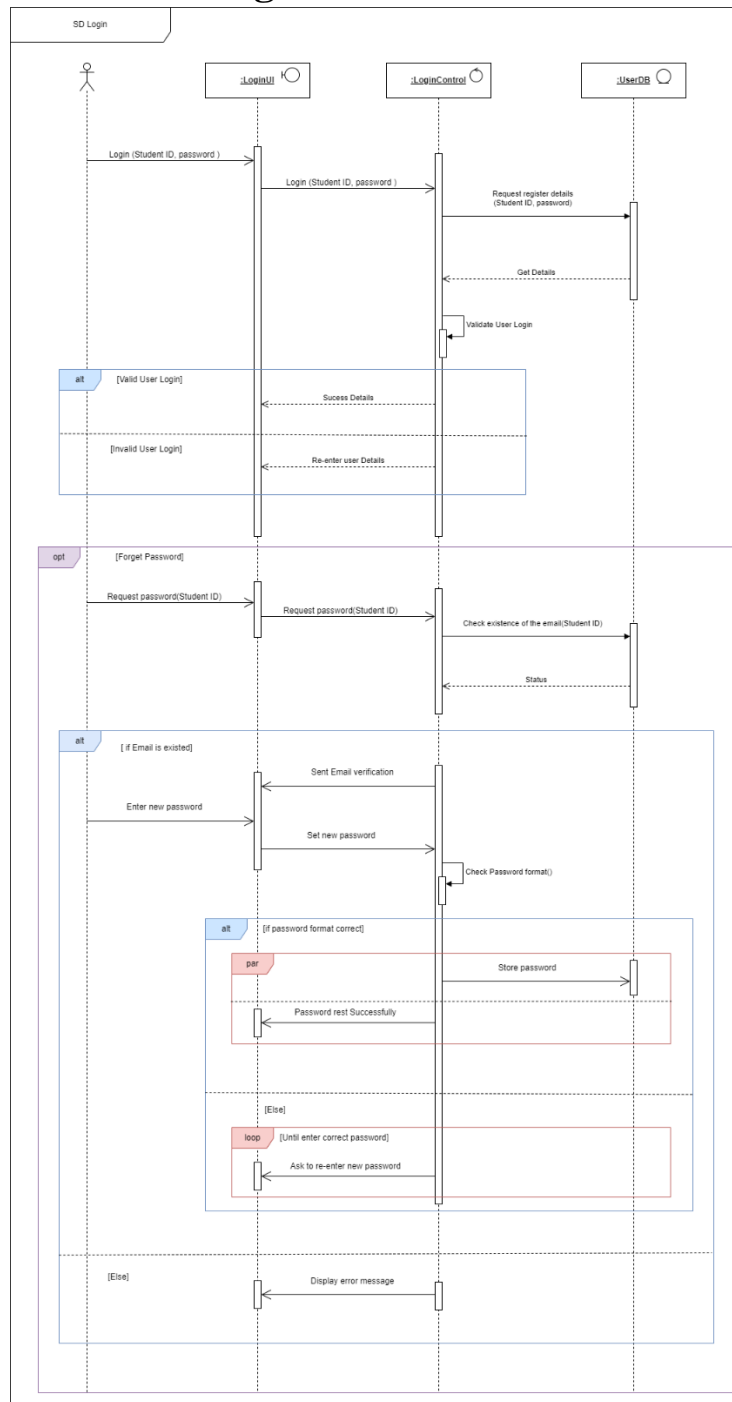
A report is prepared through management based on the approval of the principal and the development of student study methods and feedback. Feedback related to teachers' teaching process is also included. This enables the management to identify weaknesses and errors in the system and correct them. The administrator controls all the functions of the system. Reports are available for actions taken by this system. (Attendence Report, leaving Report, Feedback Report). Also, all the accounts here are controlled by the administrator.

Online school information management system empowers educational institutions to streamline their administrative processes, improve communication and increase overall efficiency. This is an opportunity to use the power of technology beneficially. This allows schools to focus more on the core mission of education. It can provide a better learning experience for students, teachers and parents.

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Use Case Diagram

Sequence Diagram - User Login

Login.jpg

IT22371768 | Ranasinghe S.I

Use Case Scenario – Generate Reports

Use Case ID	01
Use Case Name	Generate Report
Priority	03
Summary	This use case allows the admin to generate a report in the Online School Information Management System
Pre-Condition	The admin must be logged into the system and have appropriate access rights to generate reports.
Post-Condition	A report is generated based on the selected criteria and saved in the system.
Primary Actor	Admin
Trigger	Admin wants to Generate Report

Main Success Scenario	Step	Action
	01.	The admin selects the "Generate Report" option from the system's menu
	02.	The system displays a list of available report options.
	03.	The admin selects the desired report option (Eg: Leave Report, Feedback Report, Attendance Report(student or staff))
	04.	The system prompts the admin to select the criteria for the report (e.g., date range, specific users, qualifications).
	05.	admin enters the necessary criteria for the report
	06.	The system generates the report based on the selected criteria.
	07.	saves the generated report in the report database

	08.	The system displays a success message indicating that the report has been generated and saved.
	09.	The admin can choose to generate another report or exit the report generation process.
	10.	Finally, generate reports view & Download
Extensions	**Step**	**Action**
	05.a	if the admin enters invalid criteria (e.g., an invalid date range)
	05.b	the system displays an error message and prompts the admin to enter valid criteria
	09.a	if the admin chooses to generate another report, the use case returns to step 2 and repeats the process
	09.b	If the admin chooses to exit, the use case ends.

Sequence Diagram - Generate Report
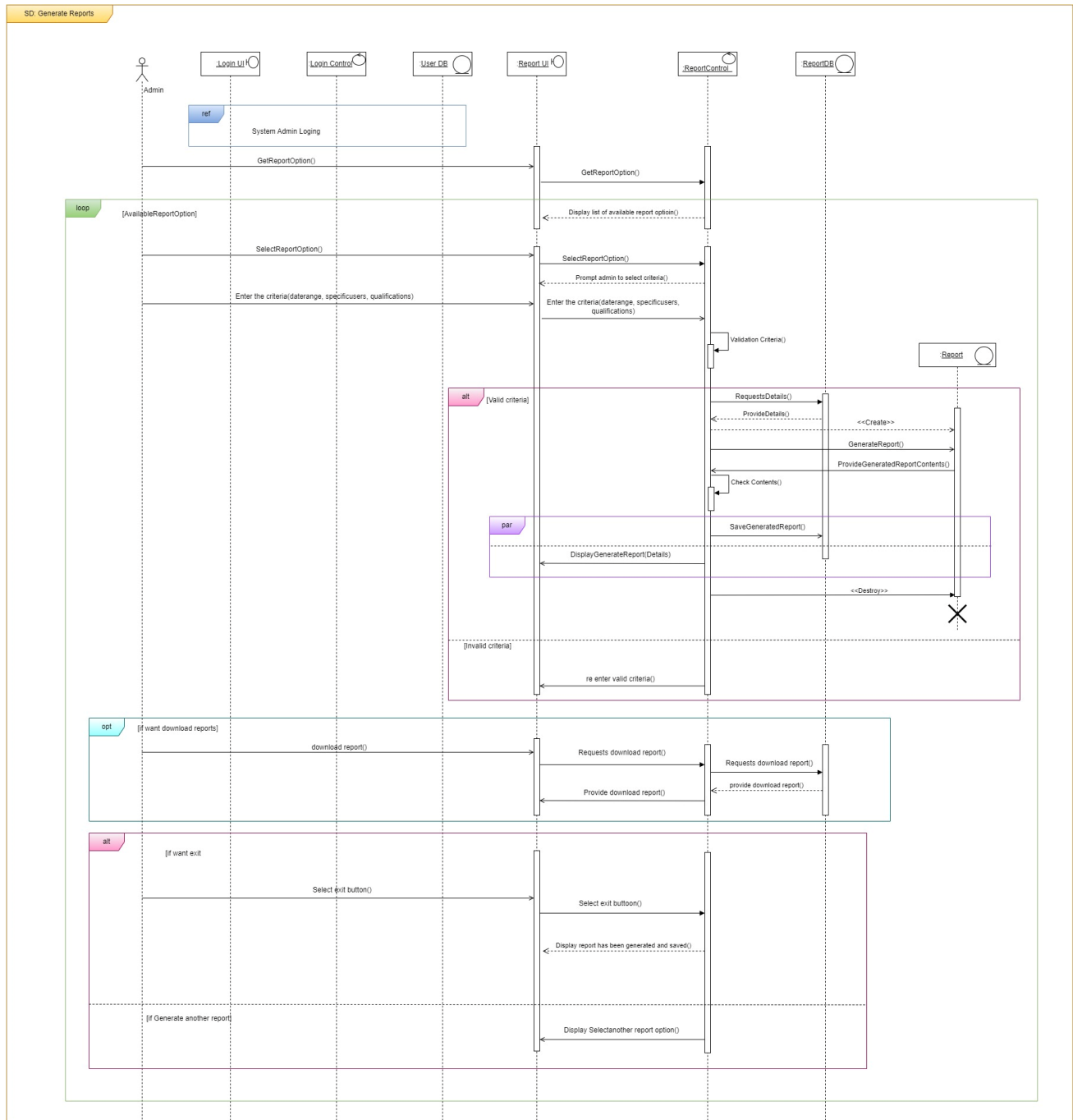
Sequence-Shani.jpg

# Communication Diagram - Generate Report
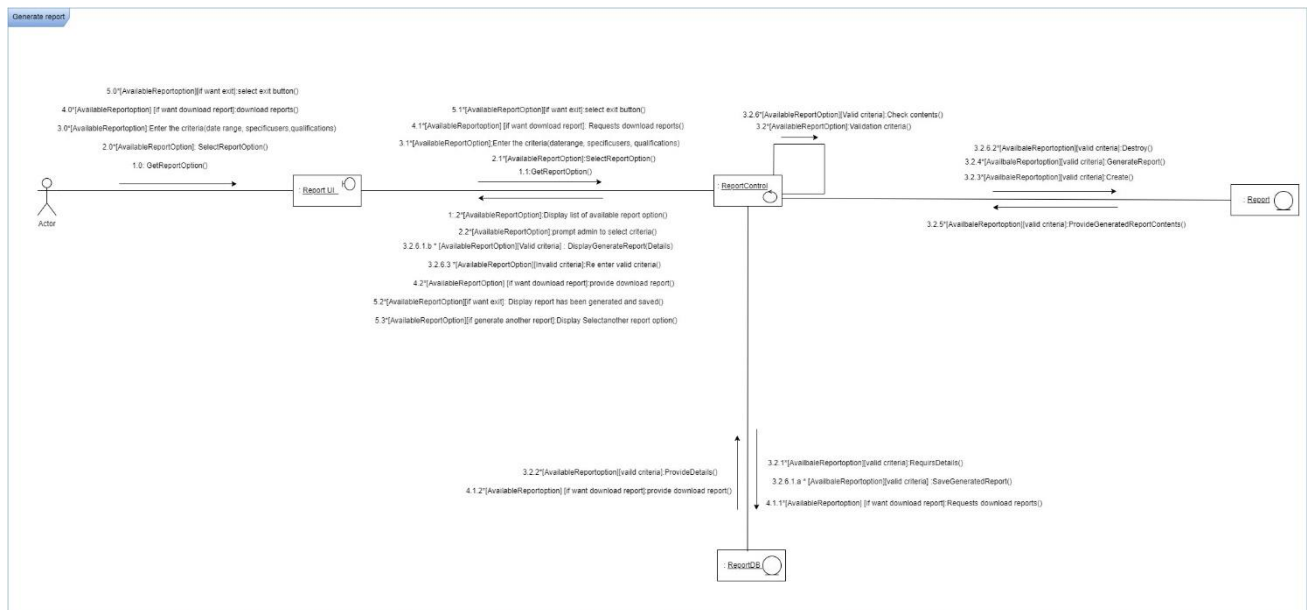
Communiction-Shani.jpg

IT22303684 | Abeygunasekara D.T

Use Case Scenario – View & Upload Assignment

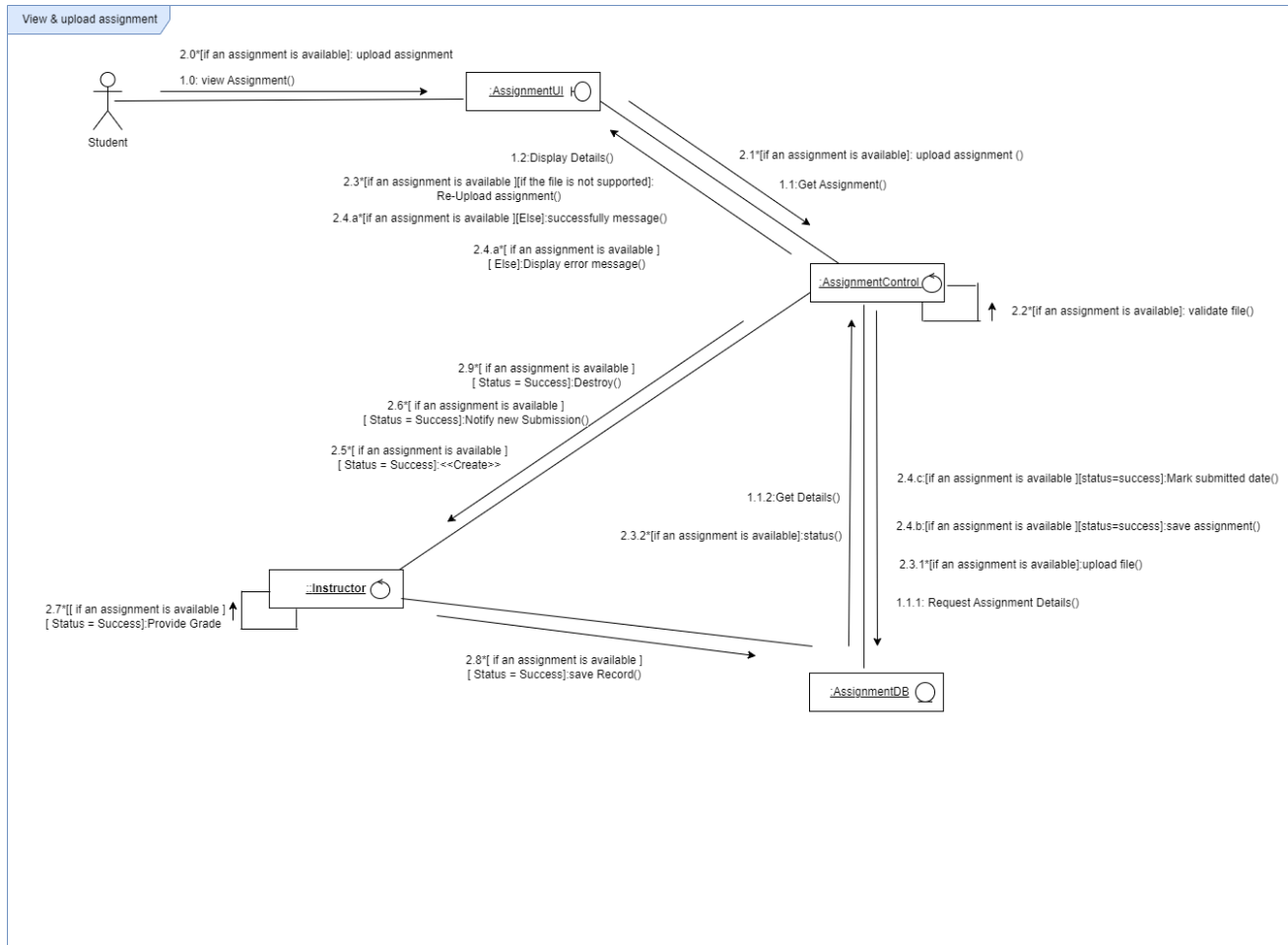| Use Case ID	02	
Use Case Name	View & Upload Assignment	
Priority	01	
Summary	This use case describes the interaction between a student (the primary actor) and a learning management system. The student views available assignments and uploads an assignment as part of their coursework.	
Pre-Condition	Student is logged into the system, has navigated to the assignment section, and instructors have published assignments.	
Post-Condition	If applicable, the instructor may review and grade the assignment.	
Primary Actor	Student	
Trigger	The student selects the "View & Upload Assignment" option from their course dashboard or menu.	
Main Success Scenario	**Step**	**Action**
	01.	The student accesses the online school management system by providing their username and password.
	02.	After successfully logging in, the student navigates to the section of the system dedicated to assignments, typically labeled as "Assignments" or similar.
	03.	The system displays a list of available assignments, showing titles, deadlines, and any provided instructions.
	04.	The student selects a specific assignment from the list by clicking on its title.
	05.	The system presents detailed information about the selected assignment, including the assignment description, due date, and any attached files or resources.
	06.	The student prepares their assignment according to the provided instructions.
	07.	If required, the student selects the file from their device and uploads it to the system.
	08.	After completing the assignment, the student submits it by clicking a "Submit" or "Upload" button within the assignment interface.

	09.	The system records the submission, associating it with the student's account and the specific assignment.
	10.	If necessary, the instructor may log into the system and navigate to the assignment section.
	11.	The system may send a notification to the student, confirming submission and including any feedback or grades
Extensions	**Step**	**Action**
	08.a	If the student encounters an error while uploading the assignment, they receive an error message and are prompted to retry.
	08.b	If the student attempts to submit after the assignment deadline, they receive a notification indicating that the submission is late.
	11.a	In case the instructor encounters delays in reviewing assignments or 5 providing feedback, the student may not receive timely notifications of grades or feedback.

Sequence Diagram - View & Upload Assignment
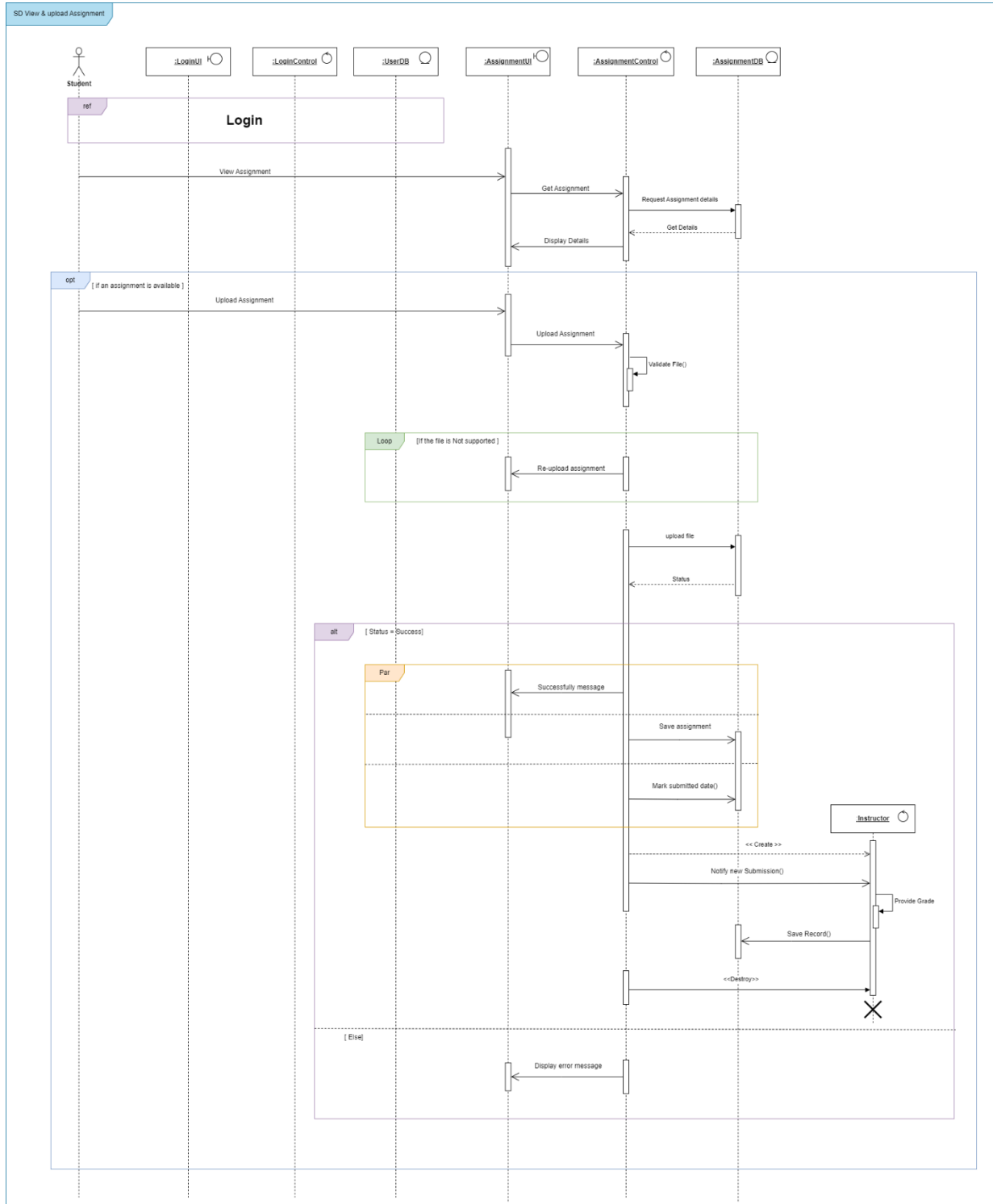
Sequence-Dasun.jpg

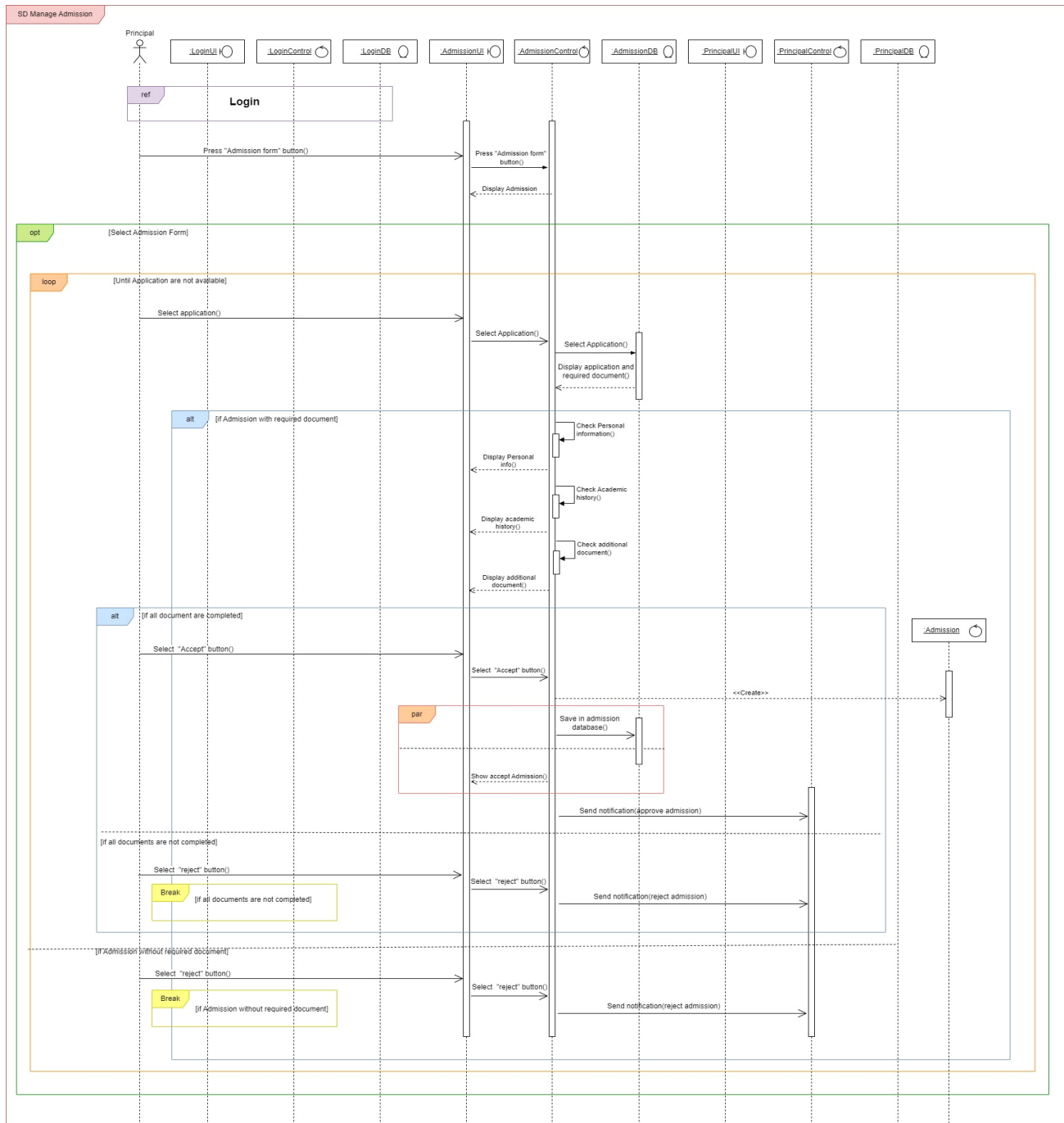# Communication Diagram - View & Upload Assignment

Communication-Dasun.jpg

IT22182678 | Rashani K.G.M

Use Case Scenario – Manage Admission & enrollment

| Use Case ID	03	
Use Case Name	Manage Admission & Enrollment	
Priority	02	
Summary	Approve submitted student admission forms and required documents through the system.	
Pre-Condition	Principal have submitted student's application forms and required documents through the system.	
Post-Condition	Admit or reject student's application successfully.	
Primary Actor	Principal	
Trigger	Start the school's admission cycle for the upcoming academic year.	
Main Success Scenario	**Step**	**Action**
	01.	Principal log into the system by using authorized credentials.
	02.	System display Admission UI
	03	Principal selects "Admission form" button.
	04.	The system displays a list of available Admission forms for the upcoming academic year.
	05.	Principle selects an application for review.
	06.	System display accept and reject button relevant application.
	07.	Principle reviews the applicant's information, including personal details, academic history, and any additional documents submitted.
	08.	The principle selects the admission decision for the applicant. (eg : Accept, Reject)

	09.	Principle selects "Accept" button and system display list of available admission.
Extensions	**Step**	**Action**
	01.a	If system notifies login details are incorrect, display an error massage and reenter the login details.
	05.a	If required document not completed principle click "reject" button.
	08.a	If the principal decision is acceptance, the system sends an automated notification to the supportive staff, informing them of the admission offer.
	08.b	If the principal decision is rejected, the system sends an automated notification to the supportive staff, informing them of the rejected letter.
	09.a	Admission save in admission database and show in accept admission folder.

Sequence Diagram- Manage Admission & enrollment)

Sequence-Maleesha.jpg

Communication Diagram - Manage Admission & enrollment
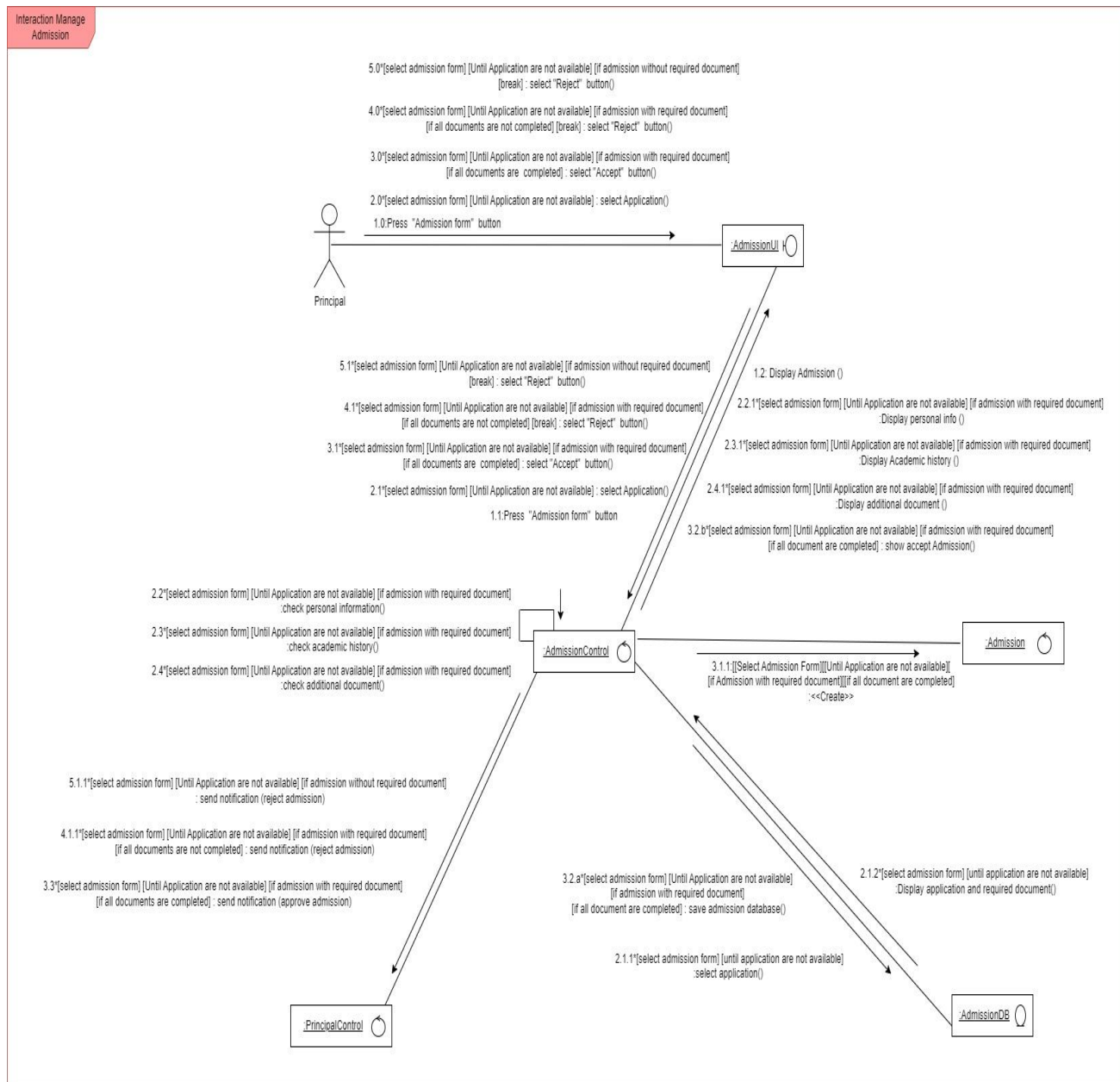
Communication-Maleesha.jpg

IT22251114 | JINAD INDUWITHWA A.G

Use Case Scenario – Manage Assignments and results

Use Case ID	04
Use Case Name	Manage Assignments and results
Priority	03
Summary	The teacher aims to efficiently manage assignments, distribute them to students, collect submissions, assess them, and provide feedback along with grades.
Pre-Condition	• The teacher must have valid user credentials. • The teacher must have access to the class for which they want to manage assignments.
Post-Condition	Teachers can access the assignments that have been made, assigned to them, graded, and the results.
Primary Actor	Teacher

Main Success Scenario	Step	Action
	01.	Teacher navigates to teacher's assignment UI
	02.	Teacher creates a new assignment with necessary content
	03.	Sets due date and additional instructions.
	04.	teacher customizes grading criteria based on assignment requirements
	05.	upload the created assignment and grading criteria to the specific class
	06.	Receive the submitted student assignment
	07.	reviews submitted assignments
	08.	Provide mark for assignment
	09.	Calculate grade for each assignment
	10.	Submit grade for each assignment

Extensions	Step	Action

|	03.a	If due date does not match current date
	03.a1	Provide error message
	03.a2	Request due date until due date is match
	03.b	If due date match to current date
	03.b1	System notifies successful message
	03.b2	Request grading criteria
	05.a	If the assignment is successfully uploaded,
	05.a1	System notifies successful upload message.

Sequence Diagram - Manage Assignments and results

Sequence-Jinad.jpg

Communication Diagram - Manage Assignments and results

Communication-Jinad.jpg

IT22190048 | Masakorala A.H

Use Case Scenario – Calculate the Salary

Use Case ID	05
Use Case Name	Calculate the salary
Priority	03
Summary	Calculate the salary for Teachers, non-academic members, and principal.
Pre-Condition	Member wants to show his salary
Post-Condition	Generate a salary report
Primary Actor	Support staff
Trigger	Member wants to see a salary increase.

Main Success Scenario	Step	Action
	01.	Log in to the System.
	02.	Access the payroll module
	03.	Input attendance data.
	04.	Validate attendance records.
	05.	Calculate salaries based on attendance and any additional parameters.
	06.	Validate calculated salaries for accuracy.
	07.	Create a salary statement.
	08.	Repeat this for each staff member.
	09.	Generate salary reports.
	10.	Distribute the summary of salaries.

Extensions	Step	Action
	01.a	If system notifies login details are incorrect, display an error massage and re-enter the login details.
	08.a	If an error happens do not give salary statements.

Sequence Diagram - Calculate the Salary

Sequence-Anurangi.jpg
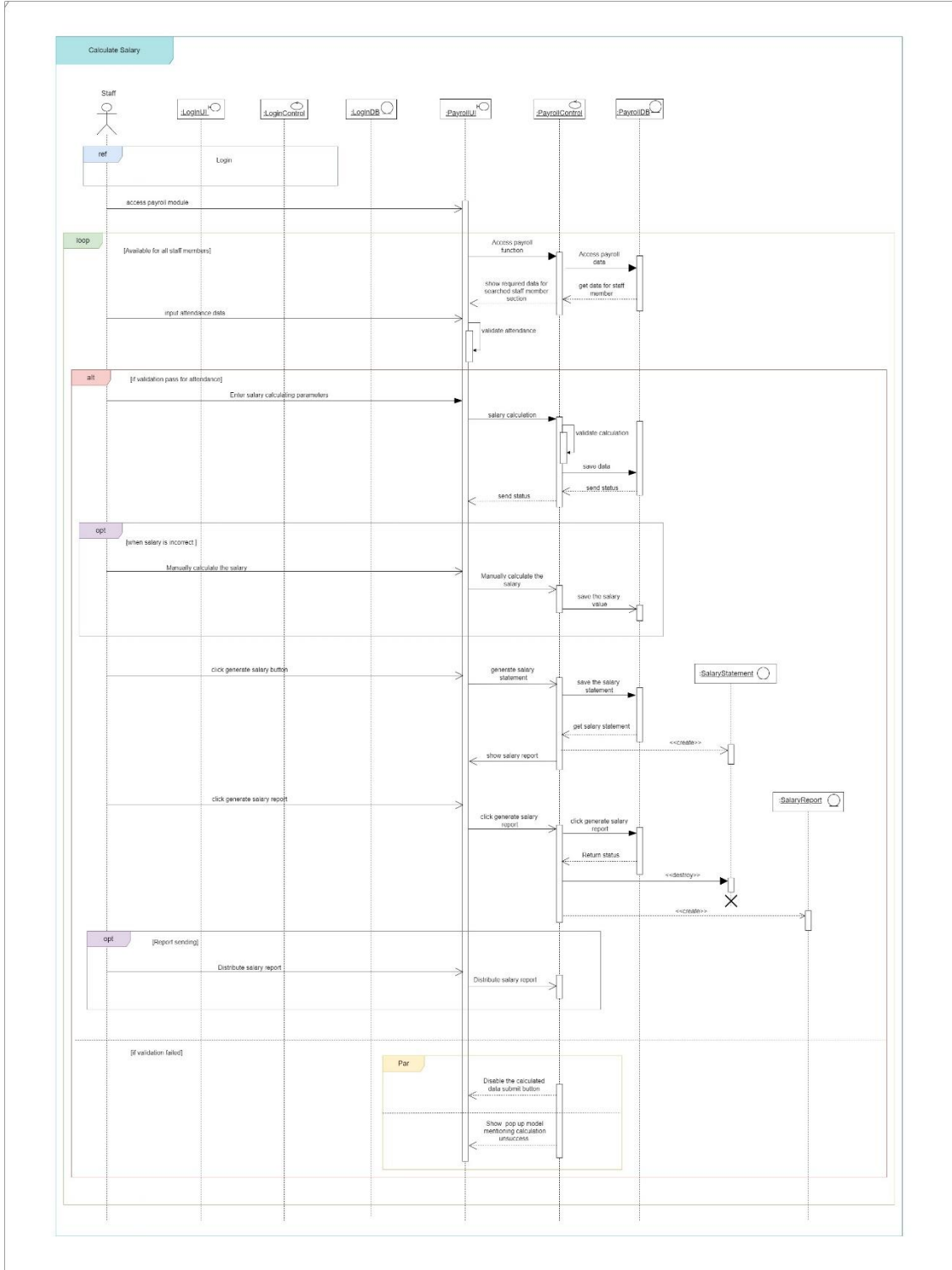
Communication Diagram - Calculate the Salary
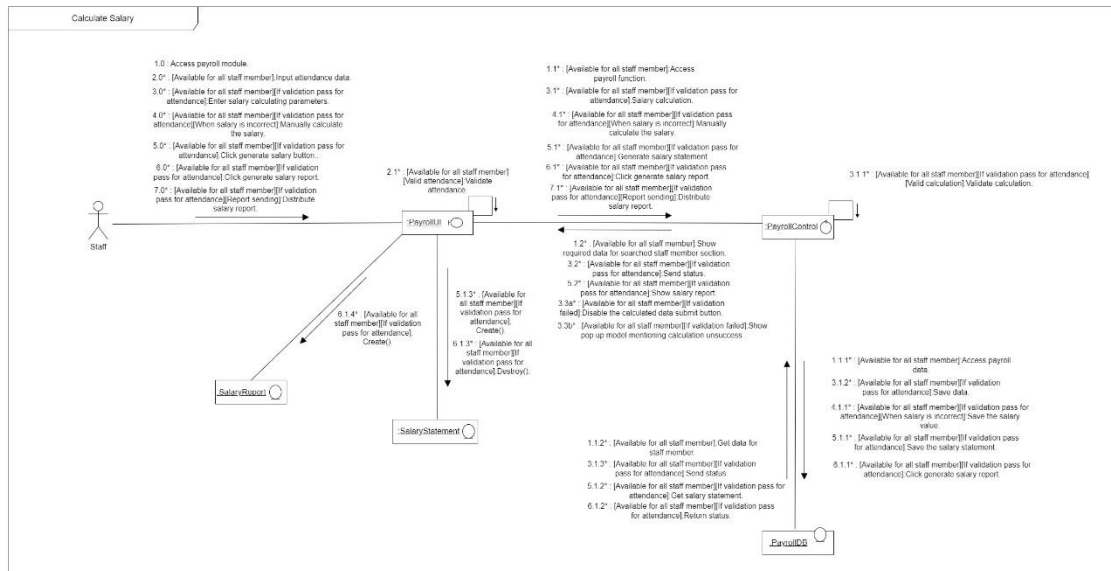
Communication-Anurangi.jpg

Individual Contribution

	Student Registration Number	Student Name	Contribution
01.	IT22371768	Ranasinghe S.I	-Sequence diagram and communication diagram for use case scenario "Generate Report" -use case diagram "Admin"
02.	IT22303684	Abeygunasekara D.T	-Sequence diagram and communication diagram for use case scenario "User login with View Assignment & Upload" -use case diagram "Student"
03.	IT22182678	Rashani K.G.M	-Sequence diagram and communication diagram for use case scenario "Manage Admission & enrollment" -use case diagram "Principle"
04.	IT22251114	Jinad Induwithwa A.G	-Sequence diagram and communication diagram for use case scenario "Manage Assignments and results" -use case diagram "Teacher"
05	IT22190048	Masakorala A.H	-Sequence diagram and communication diagram for use case scenario "Calculate the Salary" -use case diagram "Support Staff"