BACHELOR OF COMPUTER SCIENCE
SCHOOL OF COMPUTER SCIENCE
BINA NUSANTARA UNIVERSITY
JAKARTA

ASSESSMENT FORM

Course: COMP6798 - Program Design Methods

Method of Assessment: Case Study and Project

Semester/Academic Year : 1/2022-2023

Name of Lecturer	**: Brilly Andro Makalew, S.Kom, M.T.I.**
Date	**: 2023, January 5th**
Class	**: LA01**
Topic	**: Input-Process-Output, Analysis Modeling, Business Process and Functional Modeling**

Group 5 Members :	1. 2602058573- Pradah Widjaksono Suherli 2. 2602057620- Yonathan Yonaz Harijono 3. 2602051106- Jonathan Calvin Sutrisna 4. 2602054764- Bryan Mulia 5. 2602062210- Gianina Cheryl Gosal 6. 2602050601- Louis Garrick Setiadi

Student Outcomes:
(SO 2) Mampu merancang, mengimplementasikan, dan mengevaluasi solusi berbasis komputasi untuk memenuhi serangkaian persyaratan komputasi dalam konteks ilmu computer
Able to design, implement, and evaluate a computing-based solution to meet a given set of computing requirements in the context of computer science.

Learning Objectives:
(LObj 2.1) Mampu merancang solusi berbasis komputasi untuk memenuhi serangkaian persyaratan komputasi tertentu dalam konteks ilmu komputer
Able to design a computing-based solution to meet a given set of computing requirements in the context of computer science.

No	Assessment criteria	Weight	Excellent (85 - 100)	Showod (75-84)	Average (65-74)	Poor (0 - 64)	Score	(Score x Weight)
1	Ability to identify requirements for programs	**25%**	Able to identify the input, process, and output of a program completely and correctly	Able to identify the input, process, and output of a program in less-completely and less-correctly	Able to identify the input, process, and output of a program in half-completely and half-correctly	Identify the input, process, and output of a program incompletely and incorrectly		
2	Ability to apply pseudocode	**25%**	The pseudocode written solves at least 90% of the programming problem	The pseudocode written solves at least 75% of the programming problem	The pseudocode written solves at least 60% of the programming problem	The pseudocode written solves less than 60% of the programming problem		
3	Ability to collect the requirements for a system	**25%**	All the necessary requirement of a system is collected	Some of the requirement of a system is collected	A few of the requirement of a system is collected	The requirement of a system is not collected		
4	Ability to design a system using UML	**25%**	Able to design at least 90% correct using UML	Able to design at least 75% correct using UML	Able to design at least 60% correct using UML	Able to design less than 60% correct using UML		
	Total Score: ∑(Score x Weight)							

Remarks:

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ASSESSMENT METHOD

Instructions

- This assignment is a group work consisting of 5 – 7 students.
- Given a case study, students are required to:
    - Identify program requirements using IPO charts.
    - Develop the alShowrithm using pseudocode.
- Conduct an interview or observation on any Binusian in the campus to learn more about their daily tasks in the system unit where they are positioned, then:
    - Gather the functional and non-functional requirements of the system.
    - Draw a UML diagram(s) to describe the process.
- The assignment is documented in a single .pdf report which then submitted to binusmaya.

Note for Lecturers:

- Notify students to form a group at the first meeting so they can start working on the assignment as soon as possible
- Lecturers may create the groups in the binusmaya so that students are able to submit the report.
- Report is submitted before the final exam (a week before is preferable) by one student only as the representation of each group.

QUESTIONS

1. **Case Study (50%)**

Since the COVID-19 pandemic, Binus University has implemented health protocols in its campus environment. One of them is by monitoring the body temperature of visitors before entering the campus building. In this process, security staffs monitor body temperature sensors at every building entrance. If the visitor's body temperature is less than or equal to 37.1 degrees Celsius then the visitor has a normal body temperature, so they are welcome to enter the building. However, if a visitor is indicated to have Covid, namely with a body temperature exceeding 37.1 degrees Celsius, the security staff will carry out a quarantine protocol by conducting an on-site antigen test. At the end of the day, the data record of body temperature for each visitor will be stored in a file called **Todaysvisitors.dat**.

As a developer, you are asked to create a pseudocode for an alShowrithm that calculates the total number for visitors with a normal body temperature and a body temperature suspected for Covid. The total number of visitors can be calculated based on the data record from **Todaysvisitors.dat** file as shown in the following Table 1.

Briella	36.9
Ivory	37.3
Nadia	36.9
Uriel	37.1
Sebastian	36.8
Ivan	37.2
Abigail	37.0
Nathanael	37.1
Thalia	36.9
Wynter	36.8
Eric	37.3
Nina	36.9
Tiffany	37.2
Yara	36.9
Samuel	37.2
Ingrid	36.9
Xavier	37.0

Table 1: **Todaysvisitors.dat** file containing visitors' name and their body temperature.

Your tasks are:

a. Define the requirements of the program with the IPO Chart. You may refer to IPO Chart definition in *Tony Gaddis. (2019). Starting Out with Programming Logic and Design. 5th Edition. Chapter 2.2 Output, Input, and Variables.*

Input	Process	Output
Name from Todaysvisitors.dat	Read temperature until EOF	Normal Body Temperature
Temperature from Todaysvisitors.dat	if temperature is more than 37.1 then increase suspects by 1,	Number of suspected temperature visitors
	else increase normals by 1	Number of normal temperature visitors
	Calculate the sum of totalvisitors by adding suspects with normals	Total visitors

b. Write a pseudocode for a program that can calculate the total number of visitors based on body temperature using the **Todaysvisitors.dat** file. The pseudocode should display the following output:

```
Today's Visitor Count by Body Temperature:

Normal Body Temperature: __
Body temperature suspected for covid: __
Total visitors: __
```

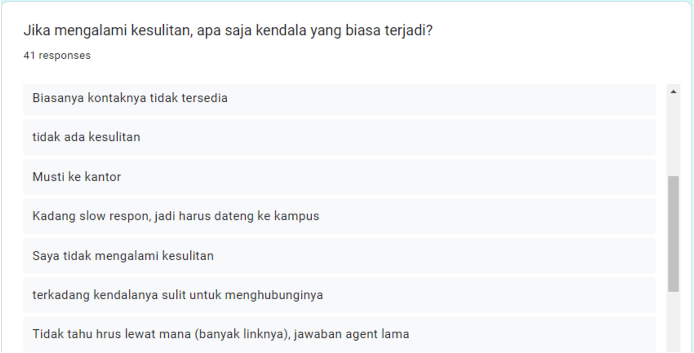
```
structure person
declare string array_name
declare real array_temperature
end structure

Module main()
Declare integer Total_visitors
Declare integer Normals
Declare integer Suspects
Declare person p[20]
Declare integer i

Set Total_visitors = 0
Set Normals = 0
Set Suspects = 0

declare integer n
set n =0

Declare inputfile TempFile
Open TempFile “visitors.dat” for read

while not EOF (visitors.dat)
read TempFile p.array_name
read TempFile p.array_temperature
Set n += 1
end while

for i =0 to n
        if person.array_temperature[i] > 37.1
                Set suspects +=1
        else
                Set Normals +=1
        end if
End for
Set Total_visitors = Normals + Suspects

Display “Today's Visitor Count by Body Temperature:\n”
Display ” ”
Display “Normal Body Temperature: “+ Normals “\n”
Display “Body Temperature Suspect For Covid “;+Suspects “\n”
Display “Total Visitors: “+Total_visitors “\n”

Close TempFile “visitors.dat”
end module
```

2. **Project (50%)**

a. Conduct an interview or an observation on any Binusian (e.g., students, lecturer, employee) to learn more about the daily tasks and the process it takes to complete the tasks. You may ask about what they do and analyze how they collaborate with others in the system where they are positioned.

As a group of programmers, you are interested in developing an application that automates their tasks and processes. Before developing the application, you are required to gather requirements that the application may need. Define **five functional** and **two non-functional requirements** of the system for the application.

The reason we chose this concept as our application development, based on a survey we have conducted stated that until now there are still many students who have difficulty contacting lecturers, LSC, and SSC. With that, we provide innovation in the form of the Binus Contact application which will provide features to contact the parties mentioned earlier. Obstacles such as difficulty contacting and getting information will be resolved with this application.



Jika mengalami kesulitan, apa saja kendala yang biasa terjadi?

41 responses

Biasanya kontaknya tidak tersedia

tidak ada kesulitan

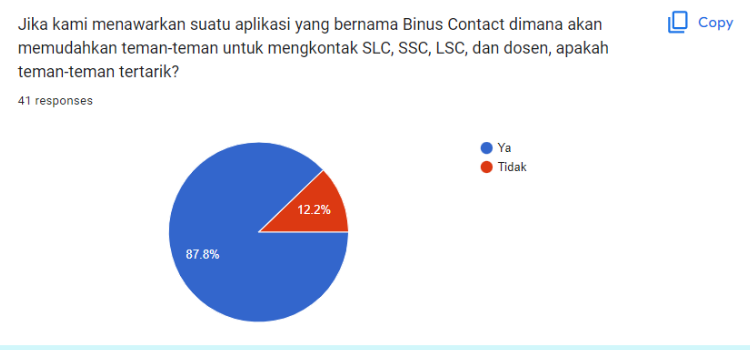
Musti ke kantor

Kadang slow respon, jadi harus dateng ke kampus

Saya tidak mengalami kesulitan

terkadang kendalanya sulit untuk menghubunginya

Tidak tahu hrus lewat mana (banyak linknya), jawaban agent lama



Jika kami menawarkan suatu aplikasi yang bernama Binus Contact dimana akan memudahkan teman-teman untuk mengkontak SLC, SSC, LSC, dan dosen, apakah teman-teman tertarik?

41 responses

b. Identify the actor(s), scenario(s), and use cases (processes) and draw a use case diagram that describes the requirements specified in Question 2.a. If you use either **<<extend>> or <<include>>**, please provide a detailed explanation(s) about the reason. As a guidance in creating a use case diagram, you may refer to *Alan Dennis, Barbara Haley Wixom, David Tegarden. (2015). Systems Analysis and Design An Object Oriented Approach with UML. 5th Edition. Chapter 4 Business Process and Functional Modeling. Page 126-127*.

a. Functional :

- Students can contact the lecturers with ease and efficiency
- There are features that can filter a lot of contacts to the contacts we need by(region and course)
- Providing AI to assist students' needs in contacting LSC and SSC
- Show availability of LSC, SSC, lectures, etc.
- Provide a complete description of the uses of each subdivision
- Provide duration of time to discuss about solving the problem
- Provide fill in the suggestion box
- Provide change the language as desired by the user
- Provide make an appointment with related parties according to the desired schedule
- Provides a feature that can view contacts that have been contacted before
- Provides a feature that can select lecturers with the desired subject
- Provides a feature that pins contacts that you want to prioritize
- Provide a feature to Show menu settings
- Provide to view detail of my profile
- Provide to filter notification as we want.
- Provide a feature that can select LSC/SSC

● Non-Functional :

- Maintainability

- Security check with login
- Portability
- Compatability

b. Actors:
    - System
    - Dosen
    - Mahasiswa
    - Technician

Use cases;

- Check compatibility
- Check portability
- Register
- open menu Login
- Verify
- Show menu
- view history contact
- pin contact
- Show menu settings
- View my profile
- Setting notification
- change language
- Show availability
- show description
- choose contact
- choose lecturers
- Choose LSC/SSC
- Show AI menu
- Connect to Contact
- Show timer
- make an onsite appointment
- Fill the suggestion box

- Log out

-Server Maintenance

Descriptions:

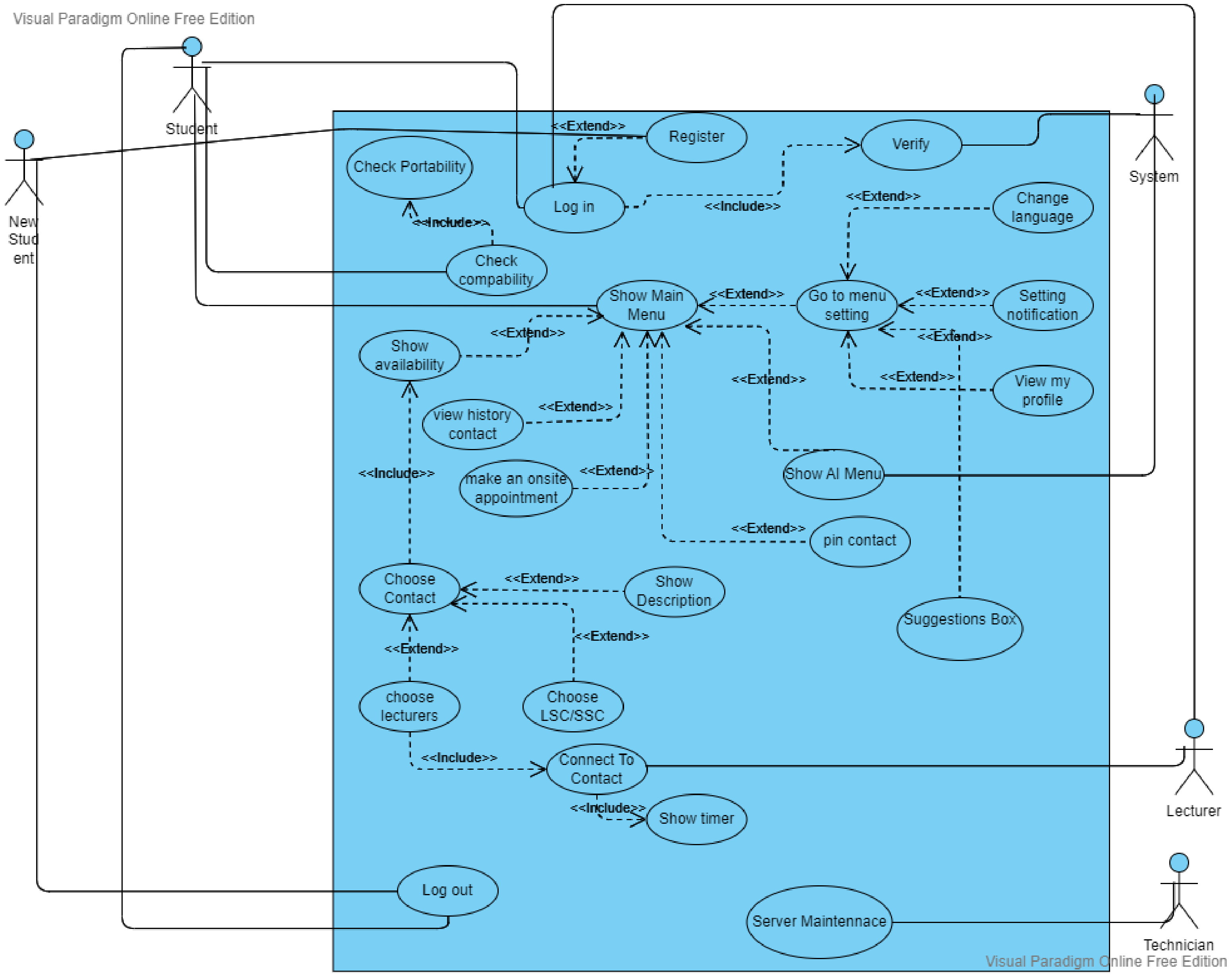
Student	**System**
Portability to open app multi device	
Check compatibility	
Show menu setting	
View my profile	
Setting notification	
Register	
Login account	
Fill the suggestion box	
	Execute security verification protocol
	Show main menu
	Show availability of contacts
	Show description
Choose Contact to communicate with	
Make an onsite appointment	
View history contact	
Choose lecturers	
Choose LSC/SSC	

Pin contact	
	Connect to AI
Log out	
Lecturer	
Gets connected to AI and prepare to communicate with student	
	Show timer to allow student to be able to respond to contact
	Technician
	Proceeds with server maintenance to maintain application longevity

Include Reasons:

- ○ Check compatibility includes Check portability because when checking compatibility, you must first check portability to ensure that the application opens on all devices.
- ○ Log in includes Verify because if they want to log in, they must first verify whether they are a student.
- ○ Show Main Menu includes Show availability because when the Main Menu appears the status (lecturer, LSC, et al) is availale or not.
- ○ Show Main Menu includes Connect to AI because before we connect to AI, we have to display the Main Menu first.
- ○ Show availability includes choose contact because before we can choose a contact, we must know the availability of the contact we want to contact.
- ○ choose contact includes connect to contact because before we can connect to a contact, we have to choose a contact first.
- ○ Connect to Contact includes Show Timer because when it is connected to contact there will be a timer to reply to messages from contacts and when the timer is 0 it will return to AI.

Extend Reasons:
-Register extend Open menu login: because to enter the login menu if you have registered, you don't need to re-register
-Choose Contact extend Show Description since it is not necessary to show the description of each sub-division only when necessary, show description is optional.
- Show main menu-pin contact because it is optional to pin the contacts that you want to prioritize through the main menu.
-Show Main Menu extend view history contact because it is optional to view contact history through the main menu.
-Show Main Menu extend make an onsite appointment because it is optional to make an onsite appointment through the main menu.
-Show Main menu extend Show menu setting because it is optional to Show menu setting through the main menu.
-choose contact extend choose lecturers because it is optional to choose lectures through choose contact.
-choose contact extend choose LSC/SSC because it is optional to choose LSC/SSC through choose contact.
-Show Menu Setting extend Change language because it is optional to change language via the main menu.
-Show Menu Setting extend Setting notification because it is optional to set the notification via the main menu.
-Show Menu Setting extend view my profile because it is optional to view my profile through the main menu.
-Show Menu Setting extend fill the suggestion because it is optional to fill the suggestion through the main menu.



USE CASE DESCRIPTIONS

1. Use Case Name: Login	ID: UC1	Importance Level: High
Primary Actor: Student,Lecture		Use Case Type: Real
Stakeholder & Interest: 1. System: To compile data to be verified by system.		
Brief Description: This use case allows Actor to login into the application		
Trigger: Actor inputs their Credentials Type: External		
Relationship: Association: Student, Lecture Include: - Extend: - Generalization: -		
Normal Flow Of Events: 1. Student/user inputs credentials 2. System accepts credentials and verifies in the next case		
Subflows:-		
Alternate/Exceptional Flows: 1A.Wrong credentials inputted 1. The system prompts for user email and password 2. The use case resumes at main flow step 1B. Maximum 3 attempts exceeded 1. The system display “Maximum attempts exceeded.” 2. The use case ends		

Scenario: The trigger for login is when the Actor has finished inputting the username and password. This case explains how Actor input their credentials to be able to be verified by the system in order to use the app.

2. Use Case Name: Verify	ID: UC5	Importance Level: High
Primary Actor: Student, lecture		Use Case Type: Real
Stakeholder & Interest: Student, Lecture → to be able to use the apps after verified by the system System → to verify the binusian email		
Brief Description: This case explains how the system verifies student or lecture email.		
Trigger: When login or register fulfilled Type: External		
Relationship: Association: Student, Lecture Include: Log in Extend: - Generalization: -		
Normal Flow Of Events: 1. System compose data and verify. 2. System will send response whether successful or failed		
Subflows: -		

Alternate/Exceptional Flows: 1A. Wrong input System Display”wrong input, try again” System prompts input
Scenario: This case explains how the system verifies a student’s or lecture’s email after filing login data.

3. Use Case Name: Show Availability	ID: UC13	Importance Level: High
Primary Actor: System		Use Case Type: Essentials
Stakeholder & Interest: 1. Student → to see the lecture availability 2. Lecture,LSC,SSC → to show the availability		
Brief Description: This case explains how to see the availability of the lecture, LSC, and SSC.		
Trigger: When LSC,SSC,and Lecturer updates availability status Type: Temporal		
Relationship: Association: Student, Lecture, System Include: - Extend: Go to Menu Generalization: -		
Normal Flow Of Events: 1. Scrolling lecture,LSC, or SSC that users are looking for		

2. System will show the availability of LSC,SSC, and lecturers
Subflows:-
Alternate/Exceptional Flows: 1A. Lecture not found 1.system display “This person is not available right now”
Scenario: This case explains how the user is able to check the availability of contacts depending on if the contact is online or offline at the time of opening the application

4. Use Case Name: Show Menu	ID: UC6	Importance Level: High
Primary Actor: Student, Lecture, system		Use Case Type: Real
Stakeholder & Interest: 1. Student & Lecturers: to access the features of the app		
Brief Description: This use case explains how system sends user to main menu		
Trigger: When verification is successful Type: External		
Relationship: Association: Student Include: - Extend: - Generalization: -		
Normal Flow Of Events:		

1. The system display the actor’s homepage
Subflows:-
Alternate/Exceptional Flows:
Scenario: This case explains how use case is able to send the user to main menu when verification is successful to be able to use all application features

5. Use Case Name: Choose Contact	ID: UC15	Importance Level: High
Primary Actor: Student,System		Use Case Type: Details
Stakeholder & Interest: 1. Student: To be able to pick which contact to contact with		
Brief Description: This case explains how students are able to see contacts that they can choose and choose to communicate with.		
Trigger: The actor select available contact Type: External		
Relationship: Association: Student Include: Show Availability Extend: - Generalization: -		
Normal Flow Of Events: 1. Actor select the option displayed in the screen		
Subflows:-		
Alternate/Exceptional Flows:		

Scenario:
This case explains how Actor are able to see contacts such that they can choose to communicate with. The trigger for the chosen contact is when the user has finished selecting a contact between LSC, SSC or lecturer.

6. Use Case Name: Show Description	ID: UC14	Importance Level: Detail
Primary Actor: Student, system		Use Case Type: External

Stakeholder & Interest:
Student: to be able to see the description of the contact
System: automatically show the descriptions.

Brief Description:
This case explains the process of a description of the contact is being shown

Trigger: When user clicks show description on a contact

Type: External

Relationship:

Association: Student
Include: -

Extend: Choose Contact
Generalization: -

Normal Flow Of Events:
1. Actor clicks show description
2. Description is shown
3. User closes description

Subflows:-

Alternate/Exceptional Flows:

Scenario: This use case explains how Actor is able to see all the details of the contact whilst the system being able to show the description of the contact Actor wants to see.

7. Use Case Name: Show AI Menu	ID: UC18	Importance Level: High
Primary Actor: System		Use Case Type: Real
Stakeholder & Interest: System → to generate responses based on their input. Student → to choose the option given by AI		
Brief Description: This case explains how students connect to AI.		
Trigger: When students open the AI menu. Type: External		
Relationship: Association: System Include: - Extend: Show Main Menu Generalization: -		
Normal Flow Of Events: 1. Students select AI menu 2. Students Connected with AI 3. Students input the given option		
Subflows: -		
Alternate/Exceptional Flows: 1A. Unknown input		

1. AI prompts option 1B 1. AI times out Actor for 1 minute allowing system to reset chat and stop spamming
Scenario: This case explains how actors connect to AI and input the given input. The trigger for connect to AI is when the user selects the connect to AI menu and then the system will automatically run.

8. Use Case Name: Connect to Contact	ID: UC19	Importance Level: High
Primary Actor: Student, lecture		Use Case Type: Real
Stakeholder & Interest: Student,Lecture: To be able to communicate with each other System: to connect student with LSC/SSC/lecture		
Brief Description: This case explains how both parties are able to connect and communicate with each other		
Trigger: Student choose contact that student wants to communicate with Type: External		
Relationship: Association: Lecturer Include: Show timer Extend: - Generalization: -		
Normal Flow Of Events: 1. Student choose contact 2. System connect student with LSC/SSC/lecture		
Subflows: -		

Alternate/Exceptional Flows:
Scenario: Use case explains how user is able to connect to the contact to be able to communicate with them via choosing and confirming the contact they want to communicate with

9. Use Case Name: Show Timer	ID: UC20	Importance Level: Medium
Primary Actor: Student, Lecture		Use Case Type: Essential
Stakeholder & Interest: 1. Student, Lecture: to see the remaining time 2. System: to show the timer		
Brief Description: There is a discussion duration time limit while discussing each other		
Trigger: Connect To Contact Type: External		
Relationship: Association: Student, Lecture Include: - Extend: - Generalization: -		
Normal Flow Of Events: 1. Both parties are connected 2. Show the time left to chat		
Subflows:-		
Alternate/Exceptional Flows:		

Scenario: This case explains how the duration of the timer starts counting down when Student connects to contact.

10. Use Case Name: Server Maintenance	ID: UC24	Importance Level: High
Primary Actor: Technician		Use Case Type: Real
Stakeholder & Interest: Student, Lecture → to be able to use the application without any problems System → so system can function without any problems		
Brief Description: This case explains the process of the server being maintained		
Trigger: When it’s Sunday, 1 PM - 6 PM Type: Temporal		
Relationship: Association:Technician Extend: - Generalization: -		
Normal Flow Of Events: 1. Server proceeds with maintenance 2. Maintenance ends		
Subflows: -		
Alternate/Exceptional Flows:		
Scenario: This case explains the process of the server being maintained by technician. The trigger for server maintenance is when the technician runs the		

server maintenance mode which can only be accessed by technicians.

11. Use Case Name: View Contact History	ID: UC7	Importance Level: Medium
Primary Actor: Student, lecture		Use Case Type: Details, Overview
Stakeholder & Interest: Student, Lecture → to be able to see previous contacted contacts		
Brief Description: This case explains how system shows contact history to user		
Trigger: Actor selects contact history Type: External		
Relationship: Association: Association Include: - Extend: Go to Main Menu Generalization: -		
Normal Flow Of Events: 1. Student select contact history 2. System show contact history		
Subflows: -		
Alternate/Exceptional Flows: -		
Scenario: Use case explains how user is able to view user’s contact history via clicking the history button		

12. Use Case Name: Make an onsite	ID: UC21	Importance Level: Medium

appointment		
Primary Actor: Student, lecture, msystem		Use Case Type: Essentials
Stakeholder & Interest: Student, Lecture → To be able to make an appointment System → System is able to save appointment schedule and remind both parties		
Brief Description: This case explains how the system can make appointments and remind parties of appointment		
Trigger: When both parties want to make an appointment Type: External		
Relationship: Association: Student, Lecture Include: - Extend: Go to Main Menu Generalization: -		
Normal Flow Of Events: 1. User propose an appointment with contact 2. Both parties agree to appointment 3. System saves appointment time to notify both parties		
Subflows: -		
Alternate/Exceptional Flows:		
Scenario: This case explains how the system can schedule appointments and remind parties of appointment. The trigger for making an onsite appointment is when you enter the onsite appointment menu and then set the appointment schedule.		

13. Use Case Name: Change Language	ID: UC12	Importance Level: Low
Primary Actor: Student,Lecture,System		Use Case Type: Details

Stakeholder & Interest: Student, Lecture → to choose the application language System → to change the application language from students chosen option
Brief Description: This case explains how to change application language
Trigger: When student or lecture choose language that is not currently in use Type: External
Relationship: Association: System Include: - Extend: Go to menu Setting Generalization: -
Normal Flow Of Events: 1. Student or lecture select change language option 2. Application language changed
Subflows: -
Alternate/Exceptional Flows:
Scenario: This case explains how Students or Lectures change the language that is not currently in use from the language settings.

14. Use Case Name: Pin Contact	ID: UC8	Importance Level: Low
Primary Actor: Student, Lecture		Use Case Type: Essential, Details
Stakeholder & Interest: Student, Lecture → to pin a specific contact		

Brief Description: This case is useful for providing pins or markers on a contact
Trigger: When student or lecture wants to give a mark on a contact or pin a contact to the top Type: External
Relationship: Association: Student, Lecture Include: - Extend: Go To Main Menu Generalization: -
Normal Flow Of Events: 1. Select on the person's contact 2. Pin Contact
Subflows: -
Alternate/Exceptional Flows: -
Scenario: Use case explains how the user is able to subsequently pin specific contacts that they want to pin via clicking on pin contact to pin contact to the top.

15. Use Case Name: Show Menu Settings	ID: UC9	Importance Level: Medium
Primary Actor: Student, Lecture		Use Case Type: Essential, Details
Stakeholder & Interest: Student, Lecture → to change application settings to suit user's comfortability		
Brief Description: This case explains the feature that is able to change application settings		

Trigger: When user wants to change their settings Type: External
Relationship: Association: Student, Lecture Include: - Extend: Go to Main Menu Generalization: -
Normal Flow Of Events: 1. User select settings menu 2. User changes settings 3. System changes settings according to user input
Subflows: -
Alternate/Exceptional Flows:
Scenario: This case explains the feature that is able to change application settings. The trigger for go to the settings menu is when the user has clicked on the settings menu.

16. Use Case Name: View My Profile	ID: UC10	Importance Level: Medium
Primary Actor: Student, Lecture		Use Case Type: Details, Overview
Stakeholder & Interest: Student, Lecture → To be able to view user’s profile details.		
Brief Description: This case is useful for viewing user’s profile details.		

Trigger: When user wants to see user’s profile in the application. Type: External
Relationship: Association: Student, Lecture Include: - Extend: Go to menu setting Generalization: -
Normal Flow Of Events: 1. User enters profile menu 2. Show view profile detail
Subflows: -
Alternate/Exceptional Flows:
Scenario: This use case explains how users are able to look at their profile details via clicking view profile if they want to see their profile details.

<table>
<tr><td>17. Use Case Name:
Setting Notification</td><td>ID: UC11</td><td>Importance Level: Low</td></tr>
<tr><td colspan="2">Primary Actor: Student, Lecture</td><td>Use Case Type: Essential, Details</td></tr>
<tr><td colspan="3">Stakeholder & Interest:
Student, Lecture → to filter specific notifications</td></tr>
<tr><td colspan="3">Brief Description:
Case is useful to filter notifications</td></tr>
<tr><td colspan="3">Trigger: When student or lecture wants to filter notifications</td></tr>
</table>

Type: External
Relationship: Association: Student, Lecture Include: - Extend: Go to Menu Settings Generalization: -
Normal Flow Of Events: 1. User enters setting notification 2. User changes notification settings
Subflows: -
Alternate/Exceptional Flows:
Scenario: This case explains how students or lectures want to change the notification filter in settings menu via clicking the menu notification.

18. Use Case Name: Fill the suggestion box	ID: UC22	Importance Level: Low
Primary Actor: Student, Lecture		Use Case Type: details, essential
Stakeholder & Interest: Student, Lecture → To be able to send suggestions towards the app makers Technician: To be able to process the suggestions as advice to upgrade the app further System: To be able to collate all the suggestions into one.		
Brief Description: This case is useful for providing users a way to submit suggestions to make the application better.		
Trigger: When student or lecture wants to give a suggestion for the application		

Type: External
Relationship: Association: Student, Lecture Include: - Extend: Go to menu setting Generalization: -
Normal Flow Of Events: 1. Actor enter the suggestion box 2.
Subflows: -
Alternate/Exceptional Flows: 1. When the suggestion box is not filled
Scenario: This case is useful for providing users a way to submit suggestion to make the application better via click menu suggestion, fill the suggestion fully, and click submit button.

19. Use Case Name: Choose Lecturers	ID: UC16	Importance Level: High
Primary Actor: Student		Use Case Type: Essential
Stakeholder & Interest: Student → To be able to choose the lecture that they wanted to contact		
Brief Description: This case is useful for providing students to contact with lecturers		

Trigger: When student choose lecturer’s contact. Type: External
Relationship: Association: Student Include: - Extend: Choose Contact Generalization: -
Normal Flow Of Events: 1. Student choose contact to communicate with
Subflows: -
Alternate/Exceptional Flows:
Scenario: This case explains how Students can choose the lecturer they want to contact.

20. Use Case Name: Check Compatibility	ID: UC1	Importance Level: High
Primary Actor: System		Use Case Type: Real
Stakeholder & Interest: Student, Lecture → to be able to access applications		
Brief Description: This case is useful to check user’s device version compatibility		
Trigger: When student wants to access application		

Type: External
Relationship: Association: Student, Lecture Include: Device Portability Extend: - Generalization: -
Normal Flow Of Events: 1. Student starts application 2. System checks device compatibility 3. System gives approval
Subflows: -
Alternate/Exceptional Flows: E1 System checks device compatibility E2 System rejects device E3 System boots user out of application
Scenario: This case explains how the system checks the version of the device owned by the user whether it is compatible or not to access the application.

21. Use Case Name: Log Out	ID: UC23	Importance Level: Medium
Primary Actor: Student, Lecture		Use Case Type: Essential,
Stakeholder & Interest: Student, Lecture → to be able to exit app		
Brief Description: This case is useful for allowing user to exit app		

Trigger: When student or lecture wants to exit app Type: External
Relationship: Association: Student, Lecture Include: - Extend: - Generalization: -
Normal Flow Of Events: 1. Student select to exit app 2. Student hits log out button 3. Student exits app
Subflows: -
Alternate/Exceptional Flows:
Scenario: Use case explains how user is able to exit the application at will by clicking log out button

22. Use Case Name: Choose LSC/SSC	ID: UC17	Importance Level: Medium
Primary Actor: Student, Lecture		Use Case Type: Essential
Stakeholder & Interest: Student, Lecture → to be able to contact LSC or SSC		
Brief Description: This case serves to help students or lecturers to contact LSC or SSC		

Trigger: When student or lecture wants to contact LSC/SSC Type: External
Relationship: Association: Student, Lecture Include: - Extend: Choose Contact Generalization: -
Normal Flow Of Events: 1. Student or lecture select to contact LSC/SSC 2. Unable to connect to LSC and SSC
Subflows: -
Alternate/Exceptional Flows:
Scenario: This case serves to help students or lecturers to contact LSC or SSC via selecting menu contact and selecting LSC or SSC to contact.

<table>
<tr><td>23. Use Case Name:
Check Portability</td><td>ID: UC2</td><td>Importance Level: High</td></tr>
<tr><td colspan="2">Primary Actor: System</td><td>Use Case Type: Real</td></tr>
<tr><td colspan="3">Stakeholder & Interest:
Student, Lecture →To be able to access app in any devices</td></tr>
<tr><td colspan="3">Brief Description:
This case is useful for allowing user to be able to access app in different devices</td></tr>
<tr><td colspan="3">Trigger: When student or lecture wants to access app in another device</td></tr>
</table>

Type: External
Relationship: Association: Student, Lecture Include: - Extend: - Generalization: -
Normal Flow Of Events: 1. User wants to access app in a different device Ex(PC to Phone) 2. User accesses app from phone 3. App adjusts system to be able to make the user comfortable using app in the different device
Subflows: -
Alternate/Exceptional Flows:
Scenario: This case explains how user is able to access the application on all devices ensuring 100% comfortability when using application by accessing application in a different device type

24. Use Case Name: Register	ID: UC3	Importance Level: High
Primary Actor: New Student, System		Use Case Type: Essential,
Stakeholder & Interest: New student → to be able to access the app by registering themselves up to access the app System: to be able to store user’s account after registering		
Brief Description: This case is useful for allowing new users to access the application		
Trigger: When a new student wants to sign up to access the application		

Type: External

Relationship:

Association: New Student
Include: -
Extend: -
Generalization: -

Normal Flow Of Events:

1. The actor wants to sign up for the application
2. Actor fills the registration form
3. System stores Actor data within the system to be able to let the Actor login into the application again
4. Actor gets access to the application

Subflows: -

Alternate/Exceptional Flows:

A1. Password Confirmation Failure
Actor fails to confirm password
System tells Actor to reconfirm the password

Scenario:
This case explains how new Students wants to create an account to access the application by signing up for the application and filling a registration form.

-- Good luck --