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BSc (Hons) in Information Technology
Assignment

IT2020 – Software Engineering | Year 2, Semester I, 2020

Online Employee Management System

Group Number: SE/OOP/B10/G12

Batch: Y2.S1.10.1

Group Details:

	Student Registration Number	Student Name
1	Sanduni Madara P.G	IT19392172
2	Nimsara S.J.J.C	IT19365374
3	Alaharuwan S.S	IT19754826

Individual contribution: -

	Student Registration Number	Student Name	Individual contribution
1	Sanduni Madara P.G	IT19392172	
2	Nimsara S.J.J.C	IT19365374	
3	Alaharuwan S.S	IT19754826	

Nimsara S.J.J.C - IT19365374

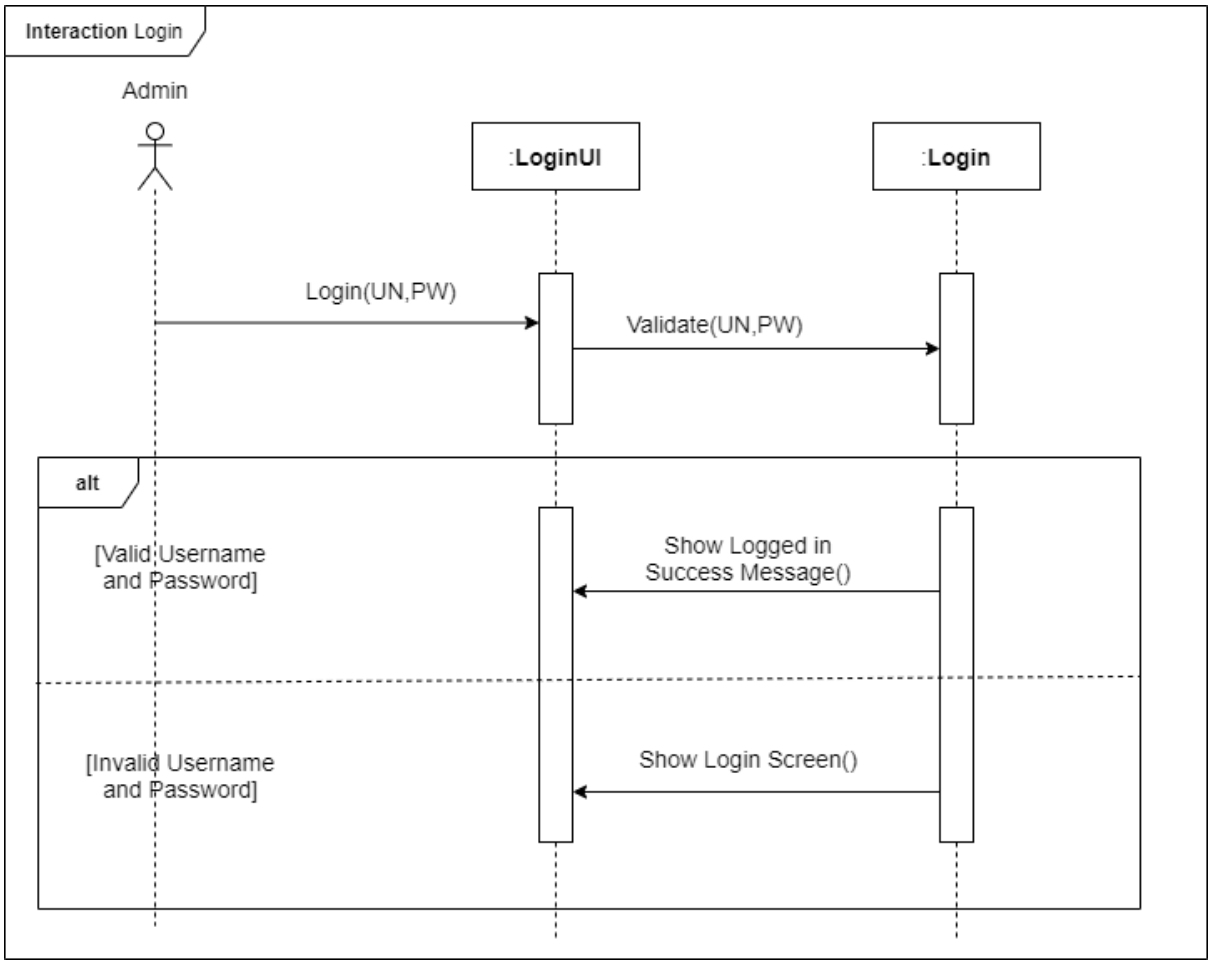
Use case scenario: -

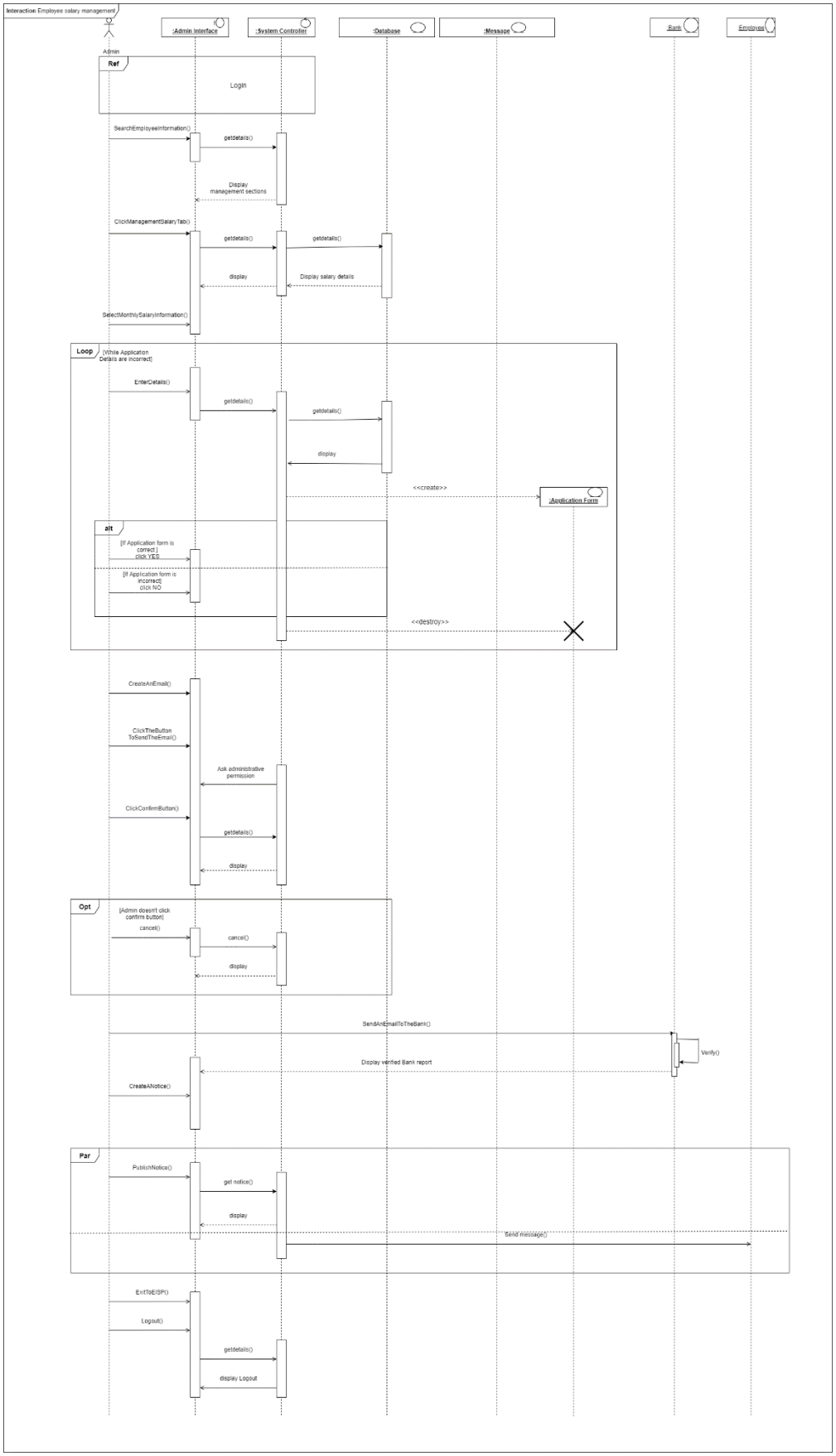
Use case ID	UC001	
Name	Manage Employee Salaries	
Priority	5	
Primary Actor(s)	Admin	
Pre-Conditions	• Admin should be logged into the system. • Employee details should be added to the main system.	
Post-Conditions	• Employees can be able to get their salary with a secured system.	
Secondary Actor(s)	Bank, Employee	
Main Success Scenario	**Step**	**Action**
	1	Admin enters login credentials to the system.
	2	System validate login credentials.
	3	Enter to the Admin Section and Click Manage Employee Information tab.

	4	System shows Employee Information Section Page (EISP).
	5	Go to the Salary Management tab.
	6	Create the Monthly Salary Application form by using Employee details and The Attendance report.
	7	System generates a re-check option to check the Salary Application
	8	System asks Administrative permissions to confirm for sending email.
	9	Send an email with the attachment of Monthly Salary Application to the Bank.
	10	Verified Bank Report submit to the system.
	11	Create a notice about Salary Application form and the Bank report.
	12	Publish it on the Employee user account notices section.
	13	Admin exit to the EISP and logged out from the system.
	14	System display “Logged out” message.
Extensions	1.a	If Admin enters incorrect username or password system shows error message and prompt re-enter credentials.
	7.a	If Application is correct, system will move on to the confirmation process.

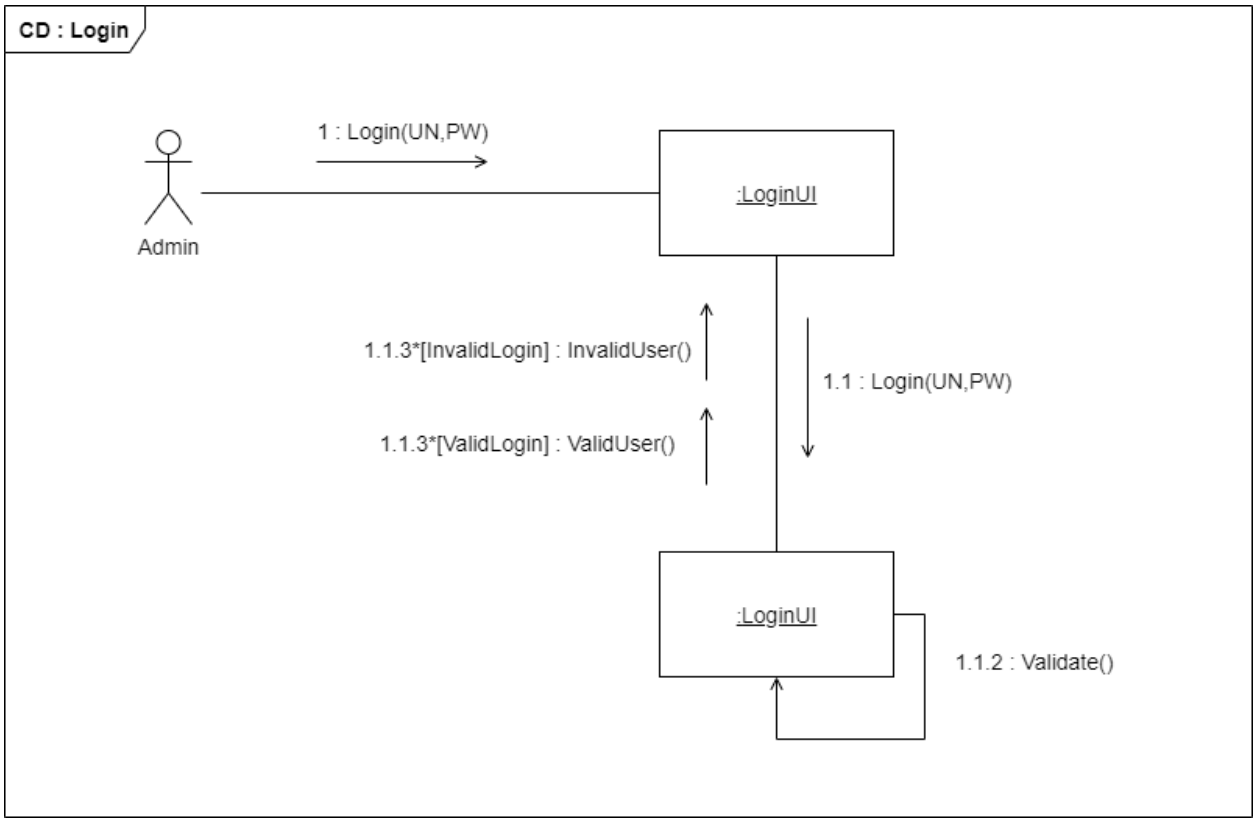
	7.b	If Application is incorrect, System destroy the application and need to provide details again.
	8.a	If admin did not confirm the email as an administrative permission, System will cancel the process. (Bank report is a sensitive and secured content)
	8.b	System shows the Salary Application in the Admin Interface.
	10.a	Bank verify the Salary Application.
	10.b	Verified Bank report send to the admin.
	12.a	System will send a message to all employees to inform about notice.

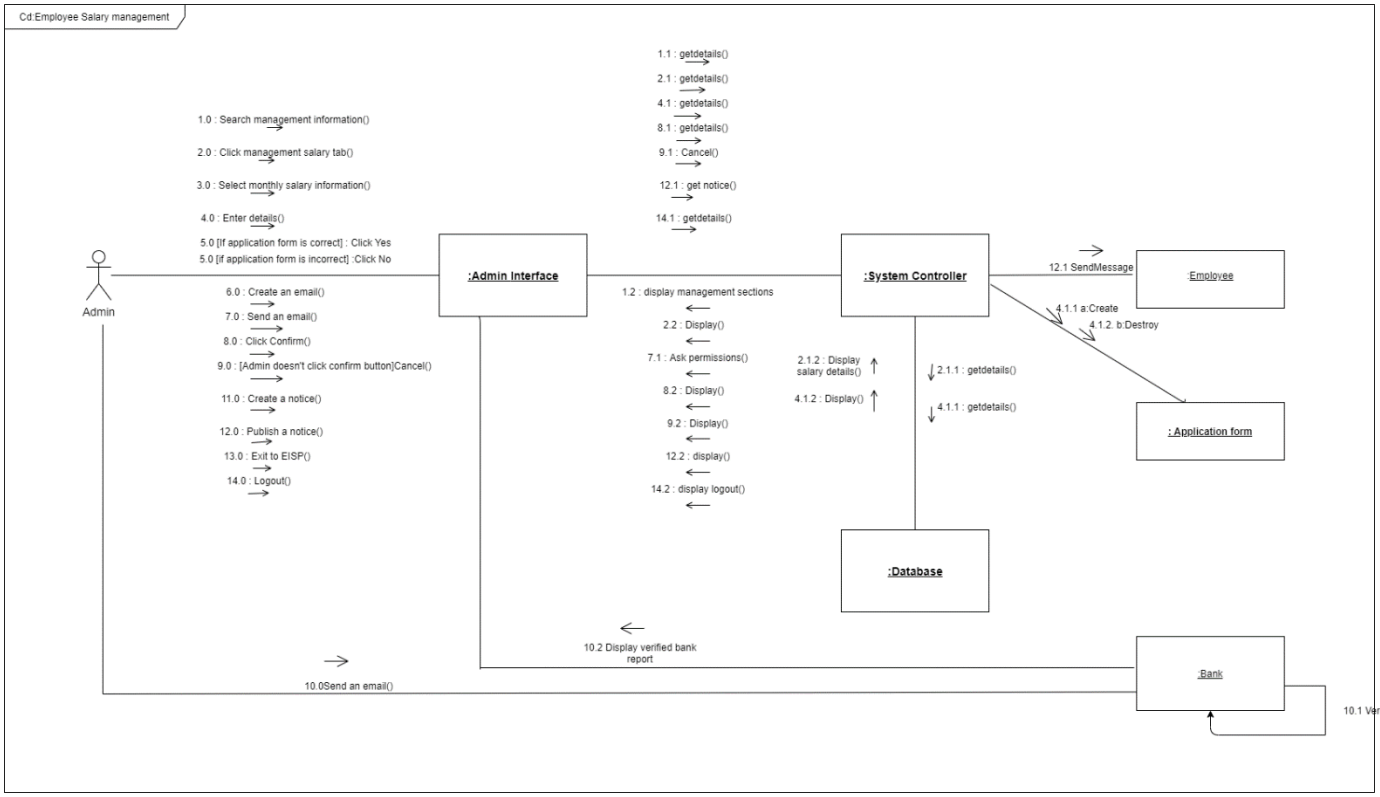
Sequence diagram: -




Interaction Employee salary management
Admin
:Admin Interface
:System Controller
:Database
:Message
Bank
Employee
Ref
Login
SearchEmployeeInformation()
getdetails()
Display management sections
ClickManagementSalaryTab()
getdetails()
getdetails()
display
Display salary details
SelectMonthlySalaryInformation()
Loop
[While Application Details are incorrect]
EnterDetails()
getdetails()
getdetails()
display
<<create>>
:Application Form
alt
[If Application form is correct] click YES
[If Application form is incorrect] click NO
<<destroy>>
CreateAnEmail()
ClickTheButton ToSendTheEmail()
Ask administrative permission
ClickConfirmButton()
getdetails()
display
Opt
[Admin doesn't click confirm button]
cancel()
cancel()
display
SendAnEmailToTheBank()
Verify()
Display verified Bank report
CreateANotice()
Par
PublishNotice()
get notice()
display
Send message()
ExitToEISP()
Logout()
getdetails()
display Logout

Communication diagram: -



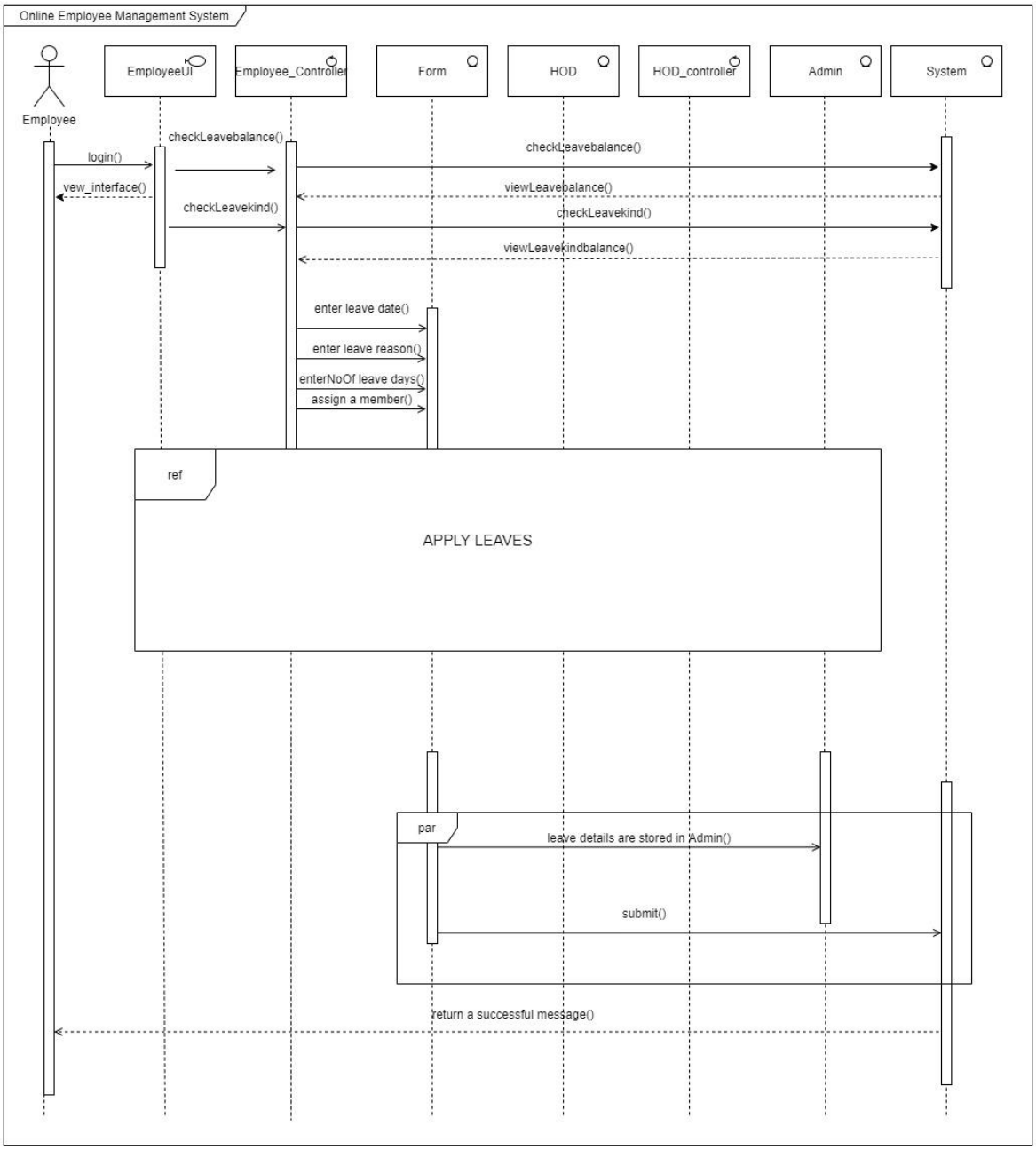

Cd:Employee Salary management
1.1 : getdetails()
2.1 : getdetails()
4.1 : getdetails()
8.1 : getdetails()
9.1 : Cancel()
12.1 : get notice()
14.1 : getdetails()
1.0 : Search management information()
2.0 : Click management salary tab()
3.0 : Select monthly salary information()
4.0 : Enter details()
5.0 [if application form is correct] : Click Yes
5.0 [if application form is incorrect] :Click No
Admin
:Admin Interface
:System Controller
Employee
12.1 SendMessage
4.1.1 a:Create
4.1.2. b:Destroy
: Application form
6.0 : Create an email()
7.0 : Send an email()
8.0 : Click Confirm()
9.0 : [Admin doesn't click confirm button]Cancel()
11.0 : Create a notice()
12.0 : Publish a notice()
13.0 : Exit to EISP()
14.0 : Logout()
1.2 : display management sections
2.2 : Display()
7.1 : Ask permissions()
8.2 : Display()
9.2 : Display()
12.2 : display()
14.2 : display logout()
2.1.2 : Display salary details()
4.1.2 : Display()
2.1.1 : getdetails()
4.1.1 : getdetails()
:Database
10.2 Display verified bank report
10.0Send an email()
:Bank
10.1 Verification

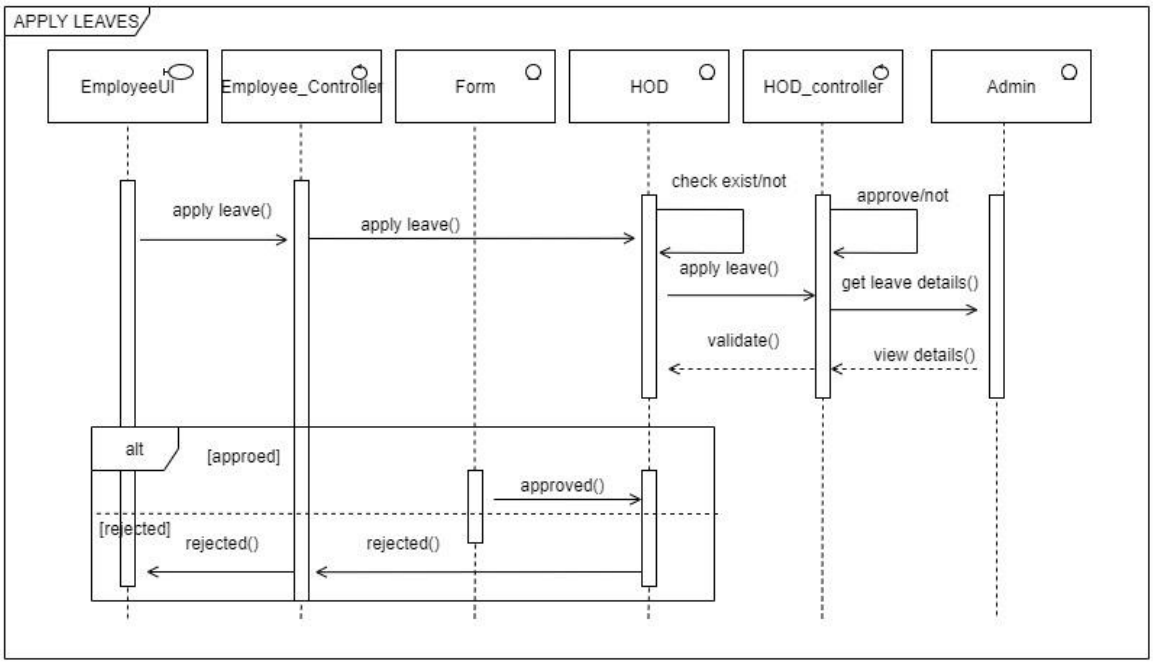
Sanduni Madara P.G - IT19392172

Use case scenario: -

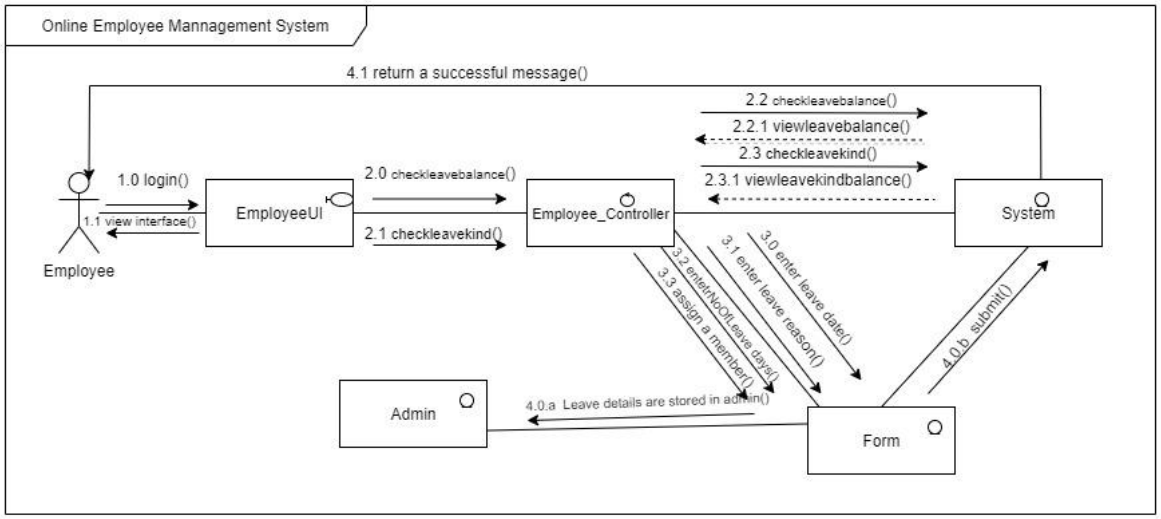
Use case ID:	02
Use case Name:	Apply leave
Summary	Employee gives a leave request
Actors:	Employee
Priority	
Pre-conditions	The employee must be a member and must be logged in to the system.
Post condition	The leave request is recorded in the database.
Main Scenario	1. Employee logged in to the employee interface. 2. System displays the employee interface. 3. The leave request menu displayed on the system. 4. Checks the available leave details. 5. Checks the kinds of leave details. 6. The employee applies for leave and the form is displayed. 7. The employee first enters the leave apply date. 8. Then the reason for the leave will be entered. 9. The number of leave days are also being entered. 10. Then the employee assigns a member to his/her duty on that day. 11. Employee asks for the approval of the leave from the Head of the Department (HOD). 12. Click send button. 13. The leave request is sent successfully message is displayed.
Extensions	4a) Employee must exist in the system. 6a) If the employee has already taken all the leaves for a month, the system informs that he/she can't take a leave. 8a) If the HOD has not given the leave approval, leave is cancelled. 9a) If the employee does not fill the correct information in the form, an error message is displayed.

Sequence diagram: -

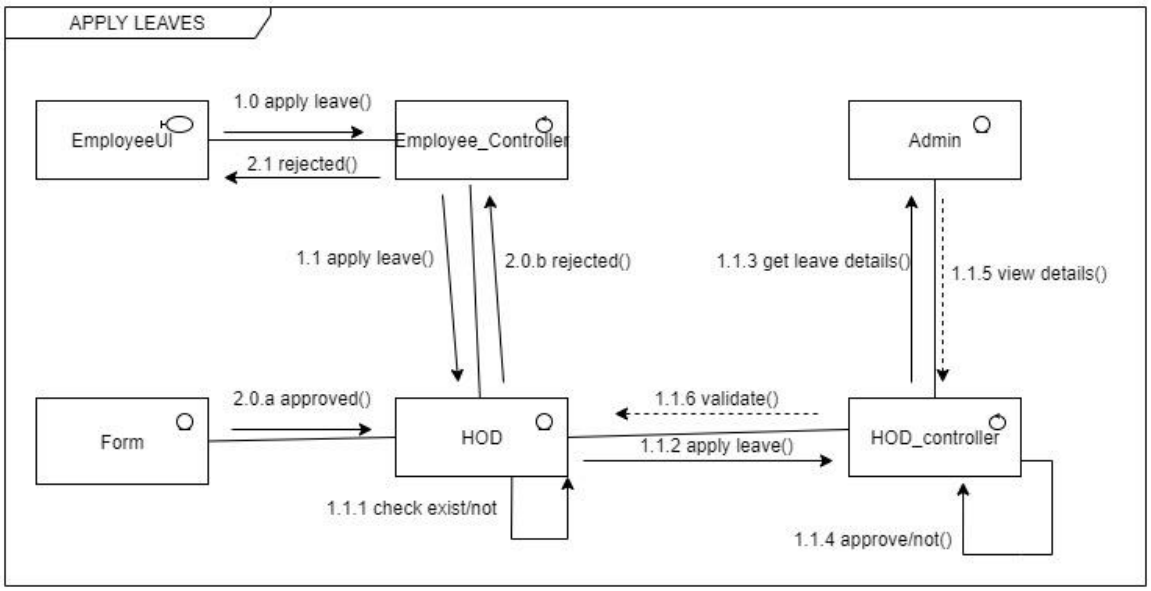



APPLY LEAVES
EmployeeUI
Employee_Controller
Form
HOD
HOD_controller
Admin
apply leave()
apply leave()
check exist/not
approve/not
apply leave()
get leave details()
validate()
view details()
alt
[approed]
approved()
[rejected]
rejected()
rejected()

Communication diagram: -



Note: the ref part communication diagram is below

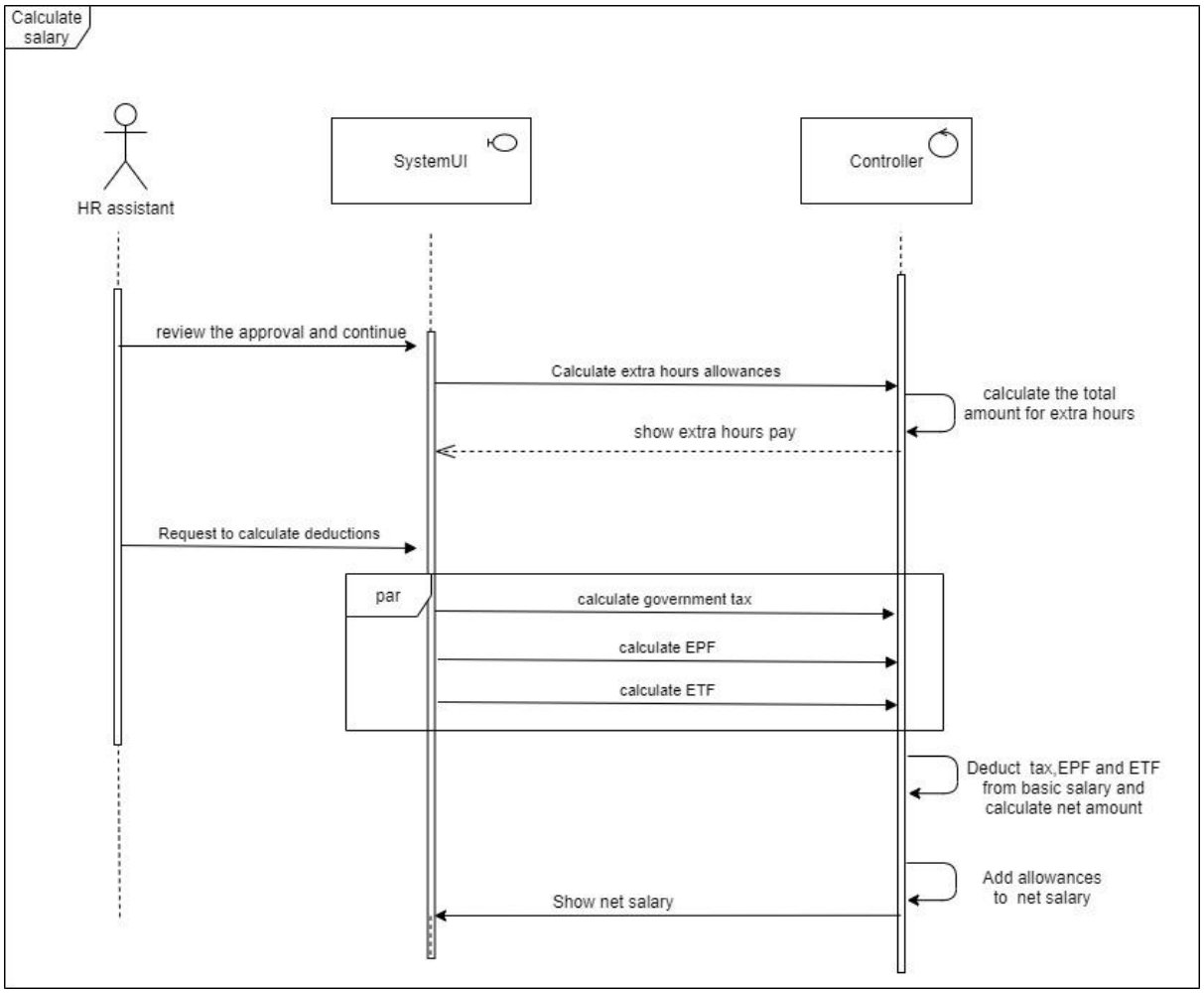


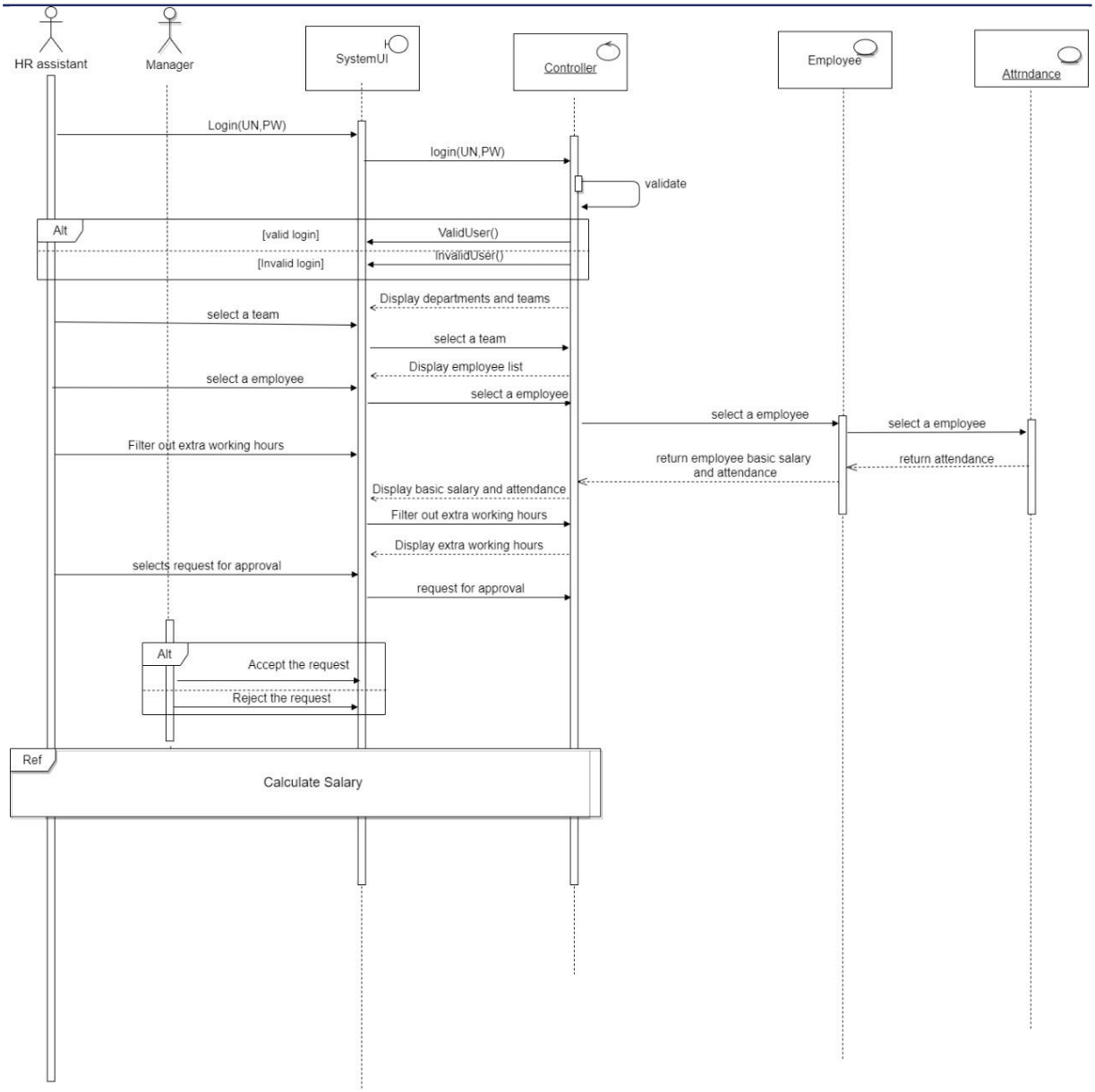
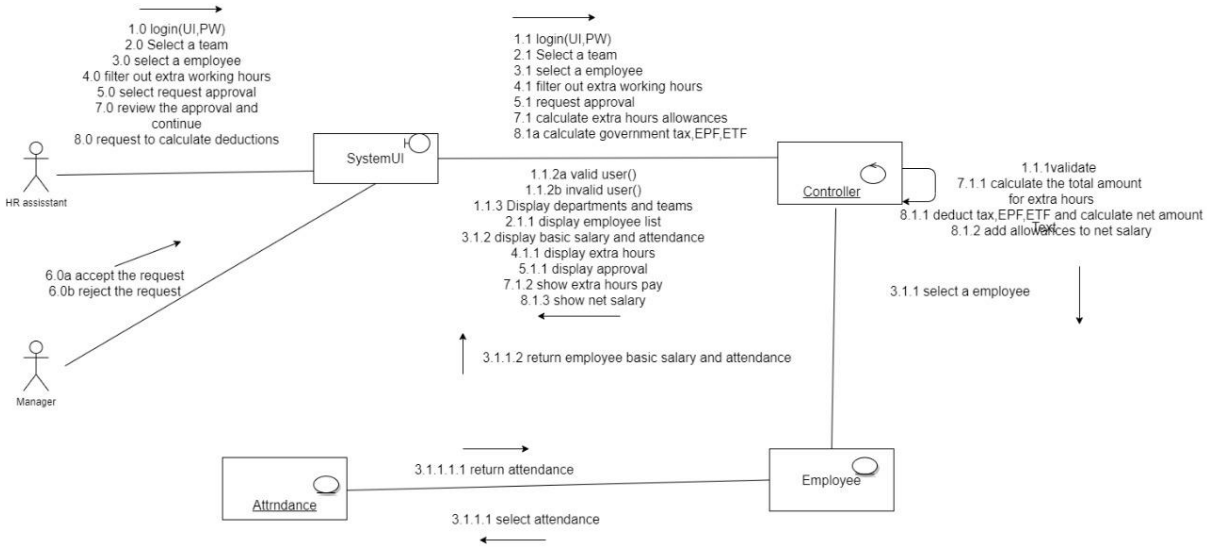
Alaharuwan S.S - IT19754826

Use case scenario: -

Usecase ID	03
Name	Calculate salary
Primary Actor	HR Assistant
Pre-Condition	Must have a user account and Privilege level access
Main Success Scenario	1. Login to the system. 2. System show the departments. 3. Select the department. 4. System shows the all the teams under that department. 5. Select a specific team. 6. System shows the all employees in that team. 7. Select the specific employee. 8. System shows the basic salary and attendance details of that employee. 9. Filter out the extra working hours. 10. Request approval for extra working hours form reporting manager of specific employee. 11. Manager approves the extra working hours. 12. Calculate the payments for extra working hours and add that to salary. 13. Deduct the Government taxes. 14. Deduct EPF AND ETF from the salary. 15. Calculate net salary.
Extension	9a. Manger decline the request.

Sequence diagram: -




HR assistant
Manager
SystemUI
Controller
Employee
Attrndance
Login(UN,PW)
login(UN,PW)
validate
Alt
[valid login]
ValidUser()
[Invalid login]
InvalidUser()
Display departments and teams
select a team
select a team
Display employee list
select a employee
select a employee
select a employee
select a employee
Filter out extra working hours
return employee basic salary and attendance
return attendance
Display basic salary and attendance
Filter out extra working hours
Display extra working hours
selects request for approval
request for approval
Alt
Accept the request
Reject the request
Ref
Calculate Salary

Communication diagram: -