VIT®

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(Deemed to be University under section 3 of UGC Act, 1956)

NAME: P.NITYASREE

REGNO: 17MIS1007

SLOT: L37 + L38

DURATION: 1 hr 30 mins

SEMESTER: Winter 2019-20

COURSE: Object Oriented Analysis and Design Lab

COURSE CODE: SWE 2018

CLASS NBR: CH2019205000924

FACULTY : Prof .ILAKIYASELVAN N

DATE OF SUBMISSION : 04-06-2020

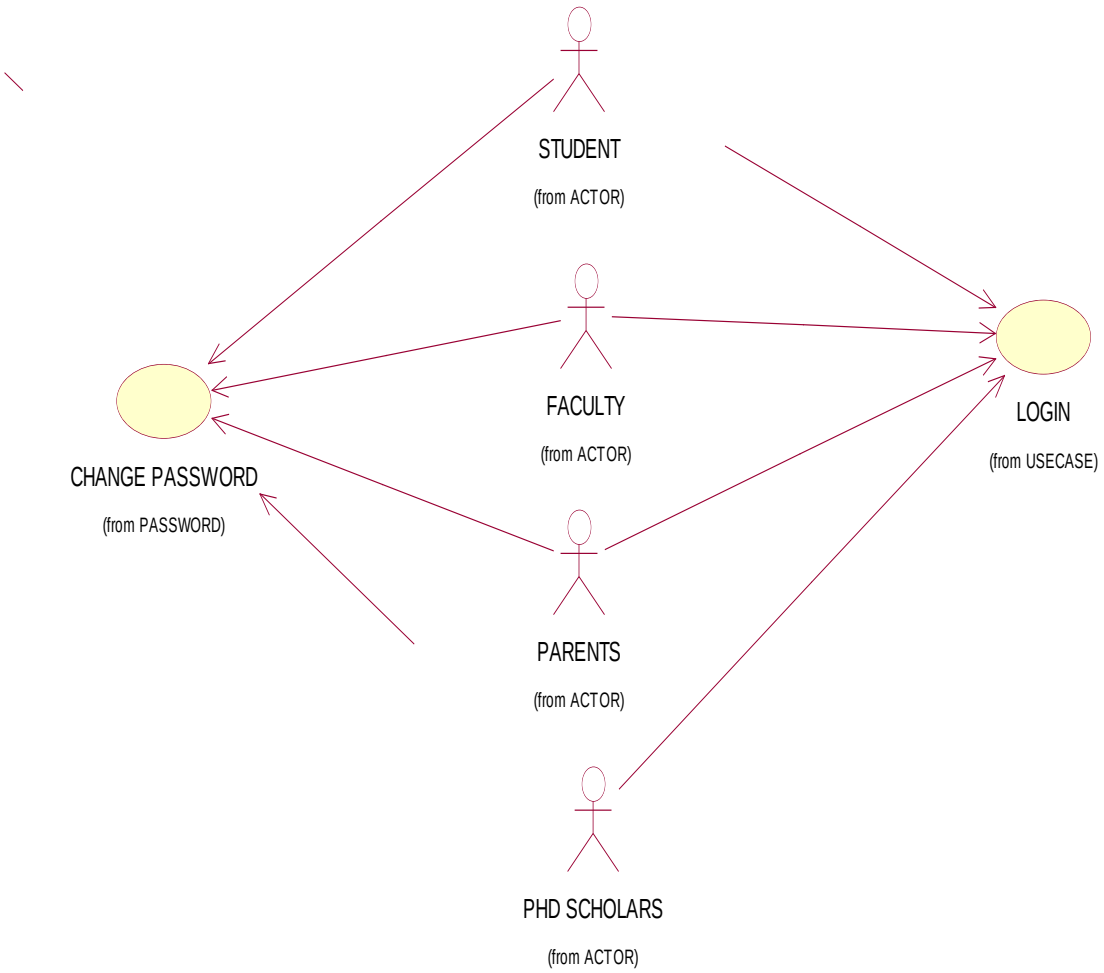
ALL LAB EXERCISES FROM 10-12-2019 TO 02-06-2020

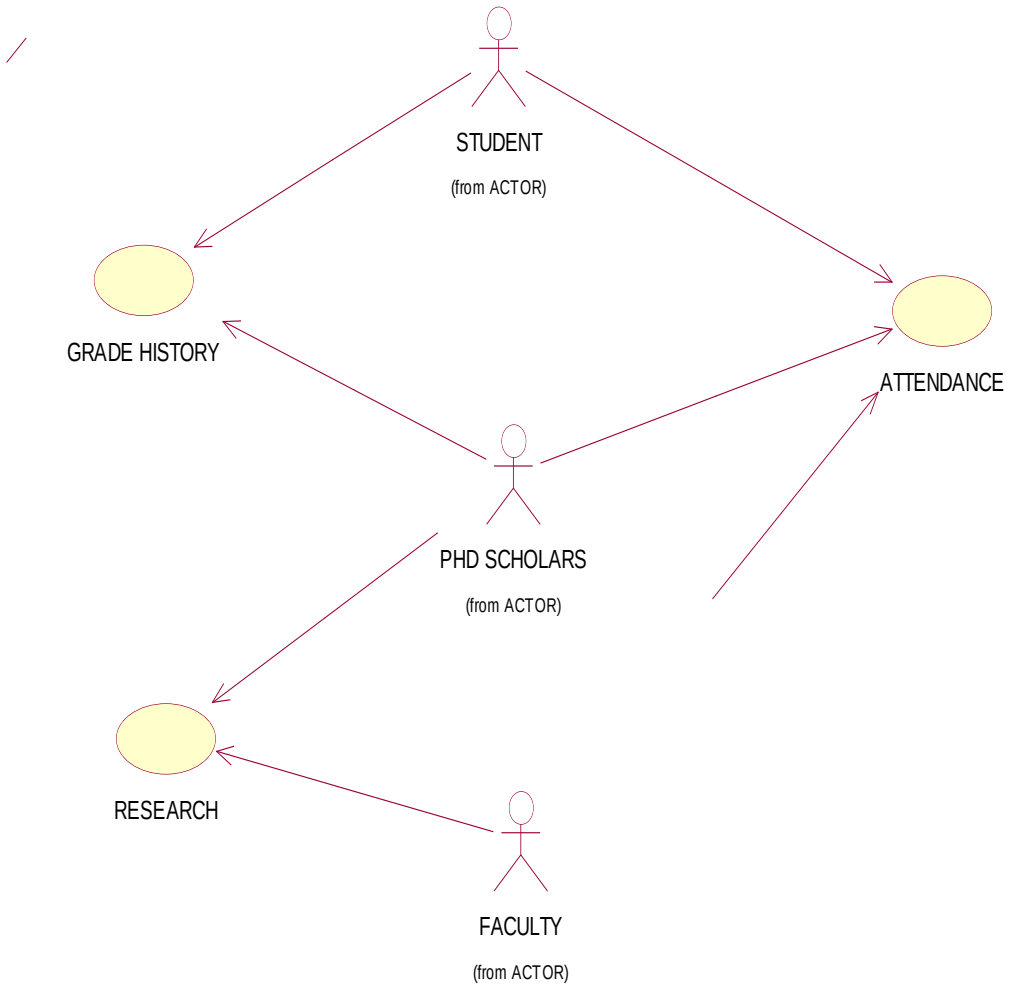
LAB SNO	TOPIC	DATE
LAB1:	INTRODUCTION TO UML DIAGRAMS PPTS	10-12-19
LAB2:	RAILWAY RESERVATION SYSTEM	17-12-19
LAB3:	FFCS CLASS DIAGRAM	7-1-20
LAB4:	CLASS DIAGRAM FOR RAILWAY RESERVATION SYSTEM	14-1-20
LAB5:	SEQUENCE ,COLLABARTION DIAGRAM OF TRAVEL SYSTEM	28-1-20
LAB6:	INTERACTION DIAGRAMS	4-2-20
LAB7 :	STATE CHART DIAGRAM ATM SYSTEM	11-2-20
LAB8:	STATE CHART DIAGRAM FOR FFCS, QUIZ SYSTEM	18-2-20
LAB9:	ALL UML DIAGRAMS FOR HOTEL MANAGEMENT	25-2-20

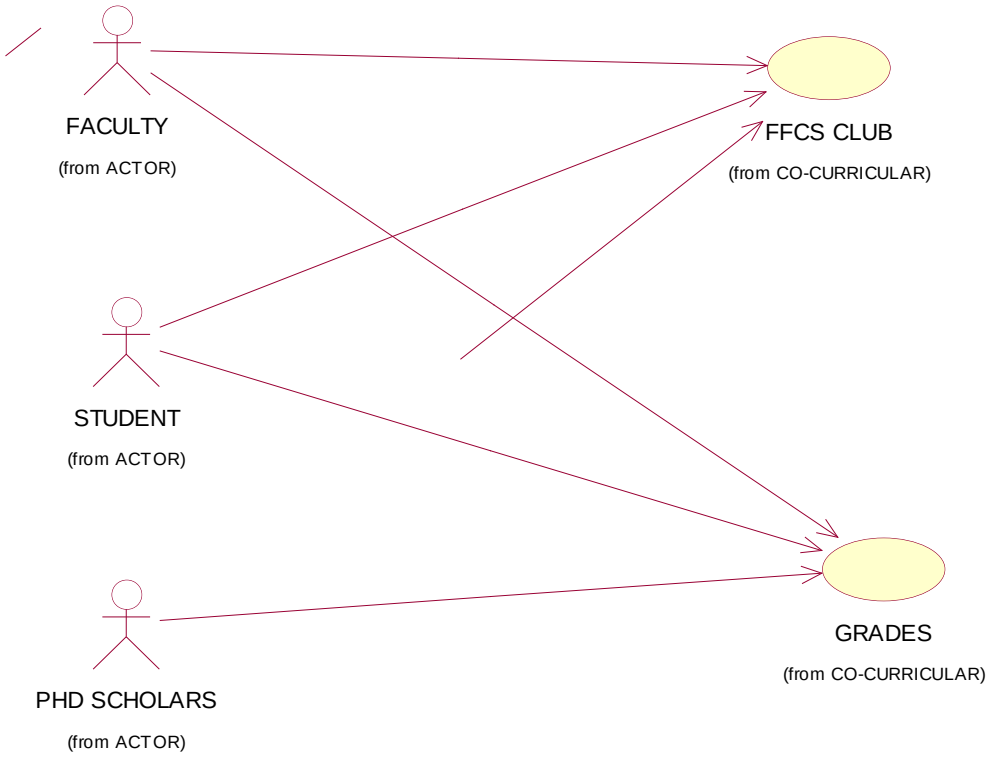
	SYSTEM	
LAB10:	**ALL UML DIAGRAMS FOR COURSE REGISTRATION**	**3-3-20**
LAB11:	**ALL UML DIAGRAMS STUDENT MARK ANALYSIS SYSTEM**	**2-6-20**

LAB EXERCISE 1

INTRODUCTION TO UML DIAGRAMS PPTS


STUDENT
(from ACTOR)
FACULTY
(from ACTOR)
PARENTS
(from ACTOR)
PHD SCHOLARS
(from ACTOR)
CHANGE PASSWORD
(from PASSWORD)
LOGIN
(from USECASE)


STUDENT
(from ACTOR)
GRADE HISTORY
ATTENDANCE
PHD SCHOLARS
(from ACTOR)
RESEARCH
FACULTY
(from ACTOR)


FACULTY
(from ACTOR)
FFCS CLUB
(from CO-CURRICULAR)
STUDENT
(from ACTOR)
GRADES
(from CO-CURRICULAR)
PHD SCHOLARS
(from ACTOR)

LAB EXERCISE 2

AIM:

RAILWAY RESERVATION SYSTEM

PROJECT DESCRIPTION:

PACKAGES:

- RAILWAY WEBSITE:

Usecases:

Book ticket
Cancel ticket
Fill form
Submit form
Check status
Send email/sms
Use case diagram: website

- LOGIN:

Username
Password
Ticket availability

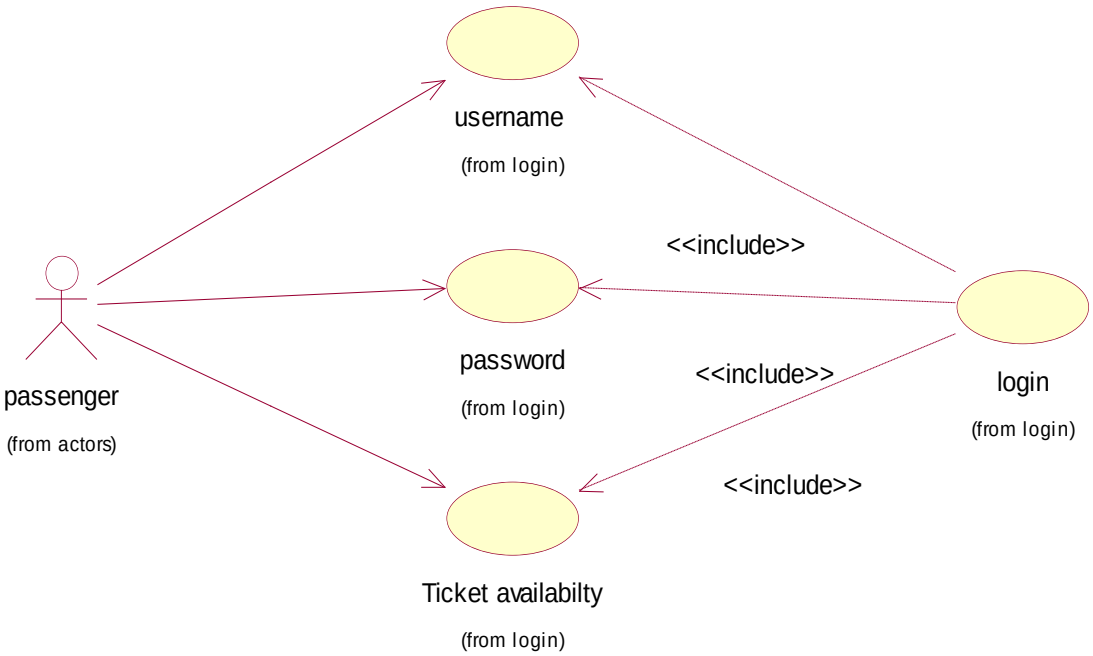
- PAYMENT:

Usecases:

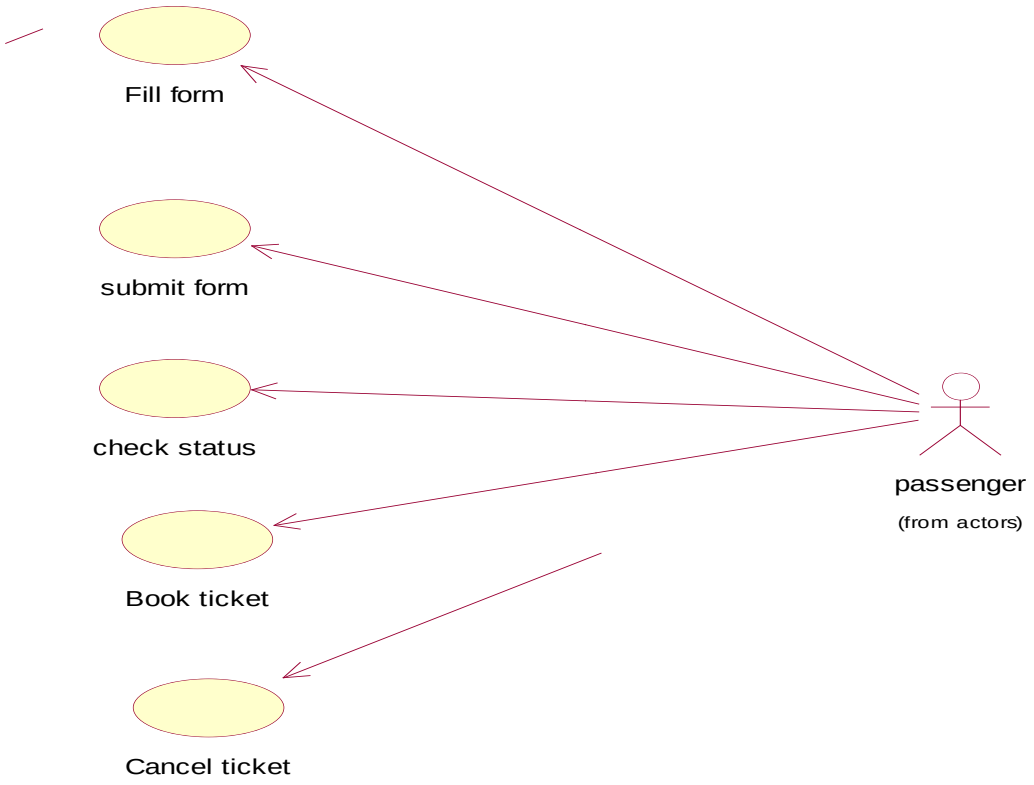
Online payment
Cash

- ACTORS:

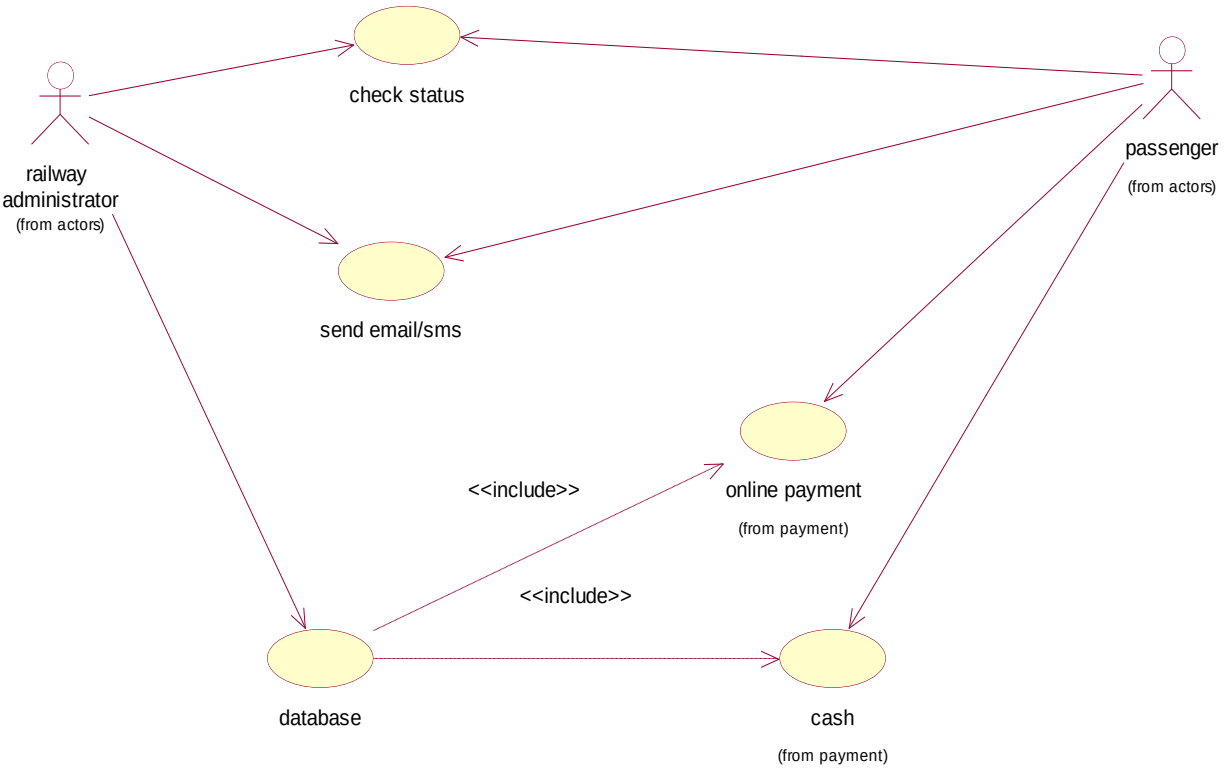
Railway admin
passengers



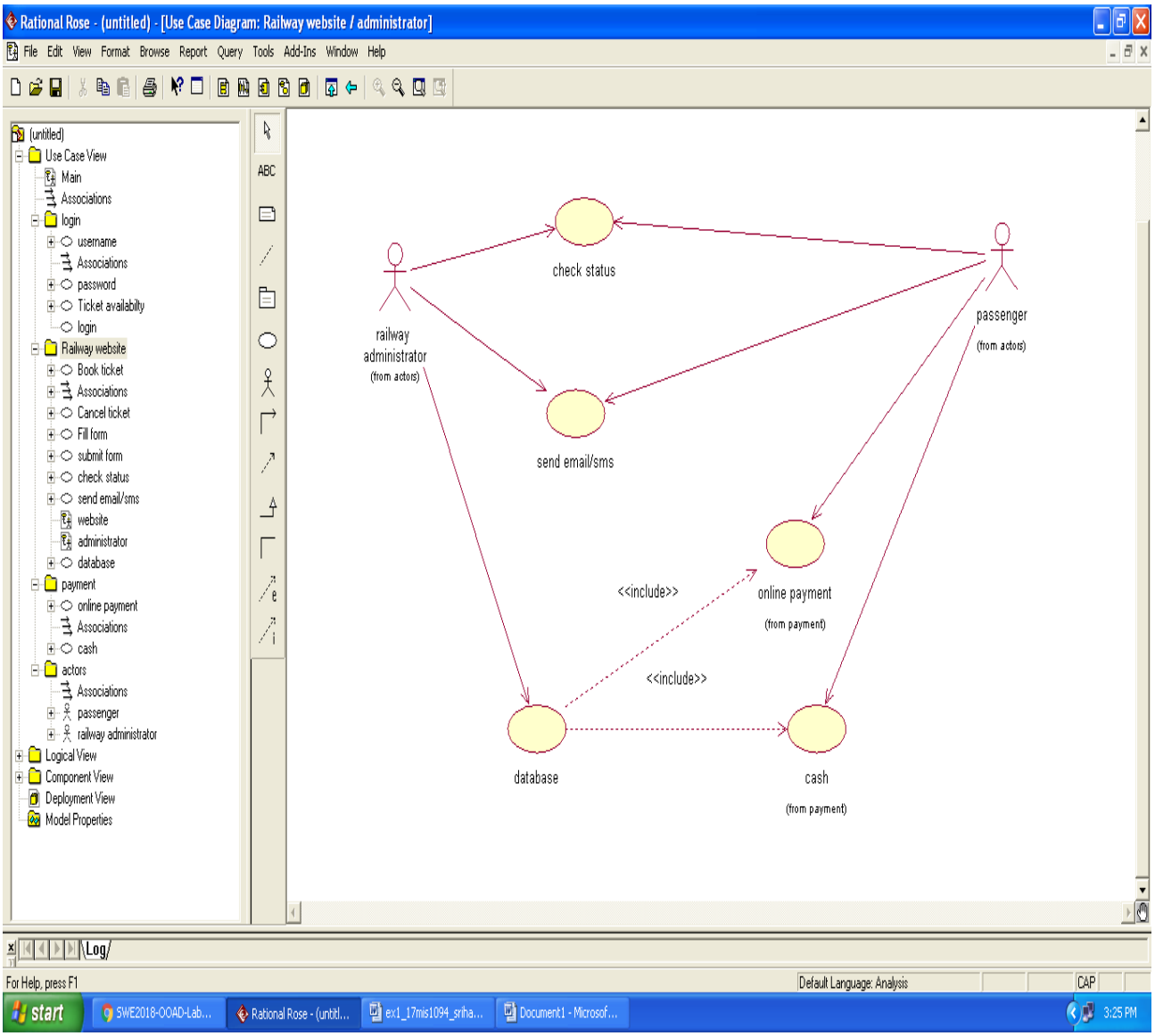
The passenger logins the railway reservation system by username,password and check the ticket availability.



The passenger fills the form and then submit the form and check the status of ticket and book the ticket and also cancel the ticket.



The railway administrator checks the status of passenger ticket and send email to passenger that will be stored in database and passenger pays money either online or cash.



PASSPORT MANAGEMENT

AIM:

To simplify the process of applying passport, software has been created by designing through rational rose tool, using visual basic as a front end and Microsoft access as a back end.

PROJECT DESCRIPTION:

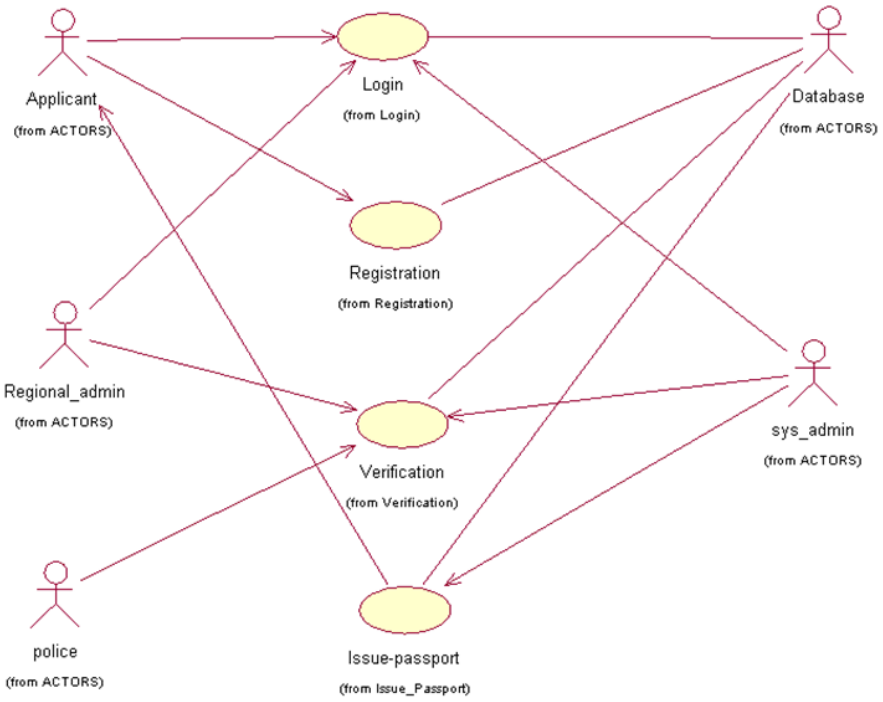
Initially the applicant login the passport automation system and submits his details. These details are stored in the database and verification process done by the passport administrator, regional administrator and police the passport is issued to the applicant

USECASE DIAGRAM:
The Passport Automation system use cases are:
1. Login
2. Registration
3. Verification
4. Check status
5. Enquiry
6. Dispatch Passport

ACTORS INVOLVED:
1. Applicant
2. Passport Officer
3. Police USE-CASE
4. Regional admin
5. system admin

NAME: LOGIN
1. Admin login
2. Applicant login
3. Regional admin login

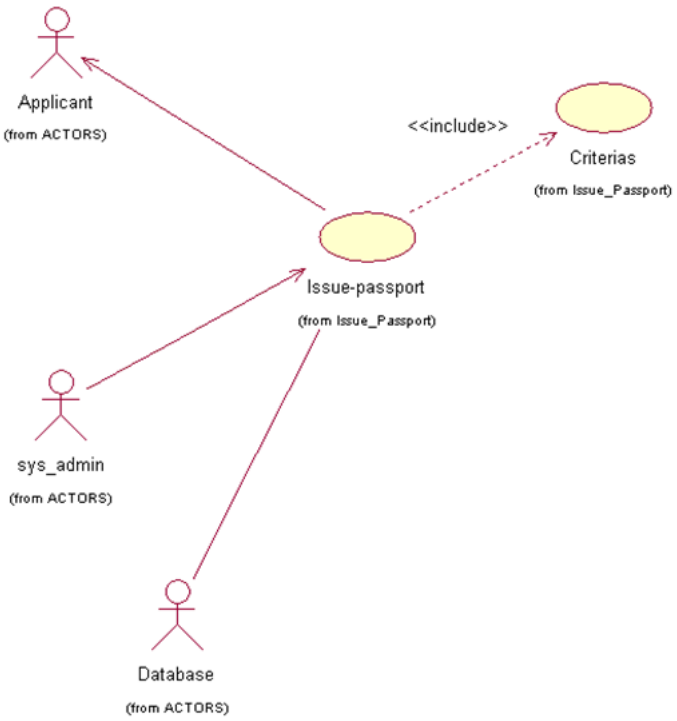
REGISTRATION:
1.Applicaton
2.User_details
3.Valid proofs



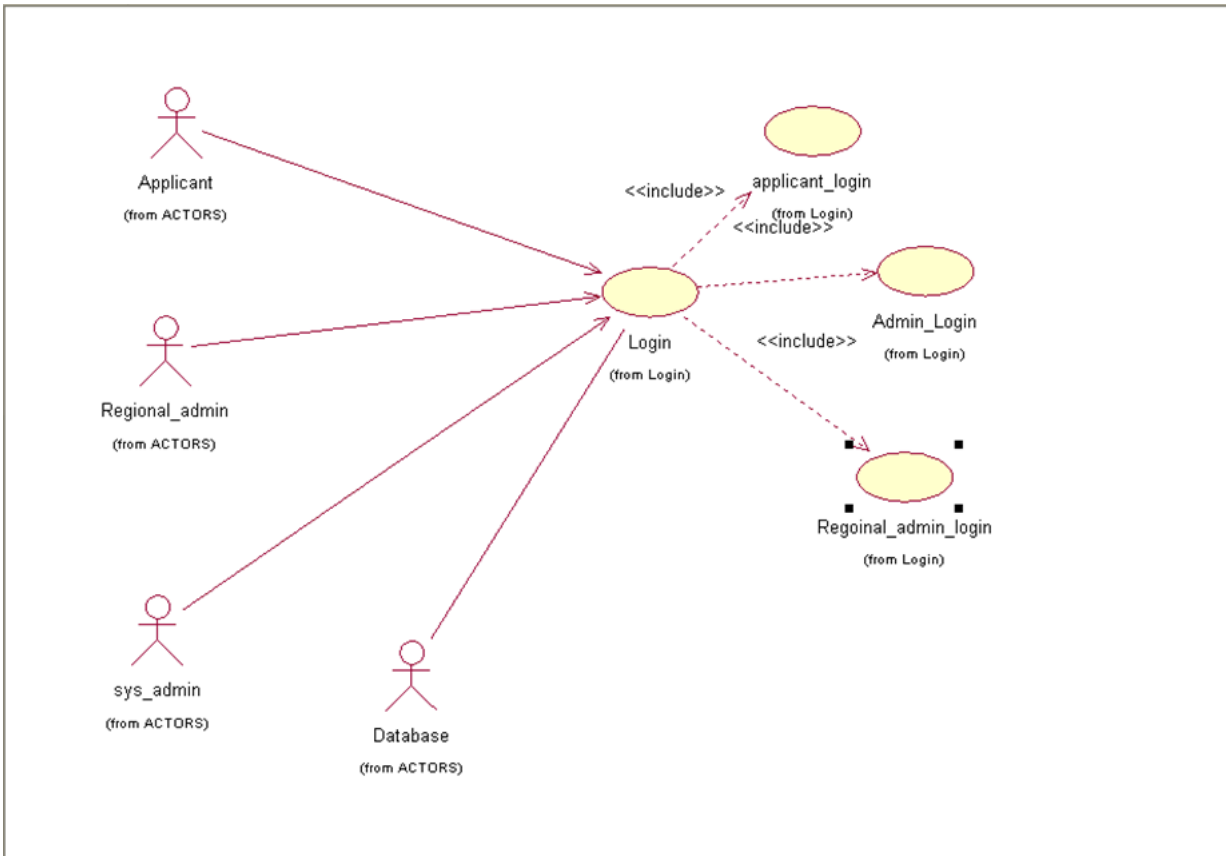
The applicant will login and register and that information will be stored in a database

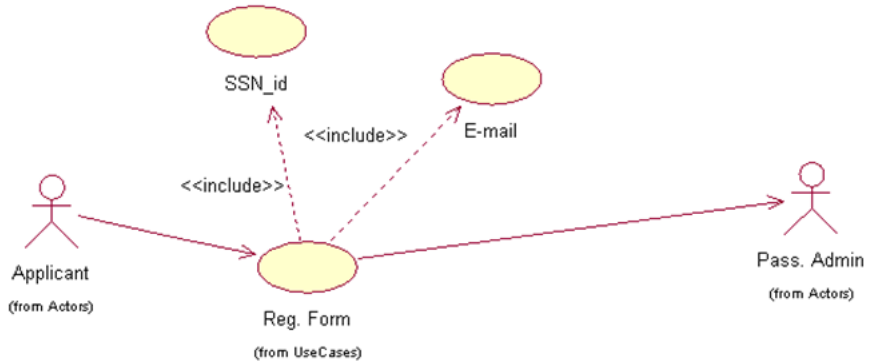
The regional admin logins and verifies the passport.

The police also verifies the passport of applicants



The applicant will issue the passport from the system admin that will be stored in database.

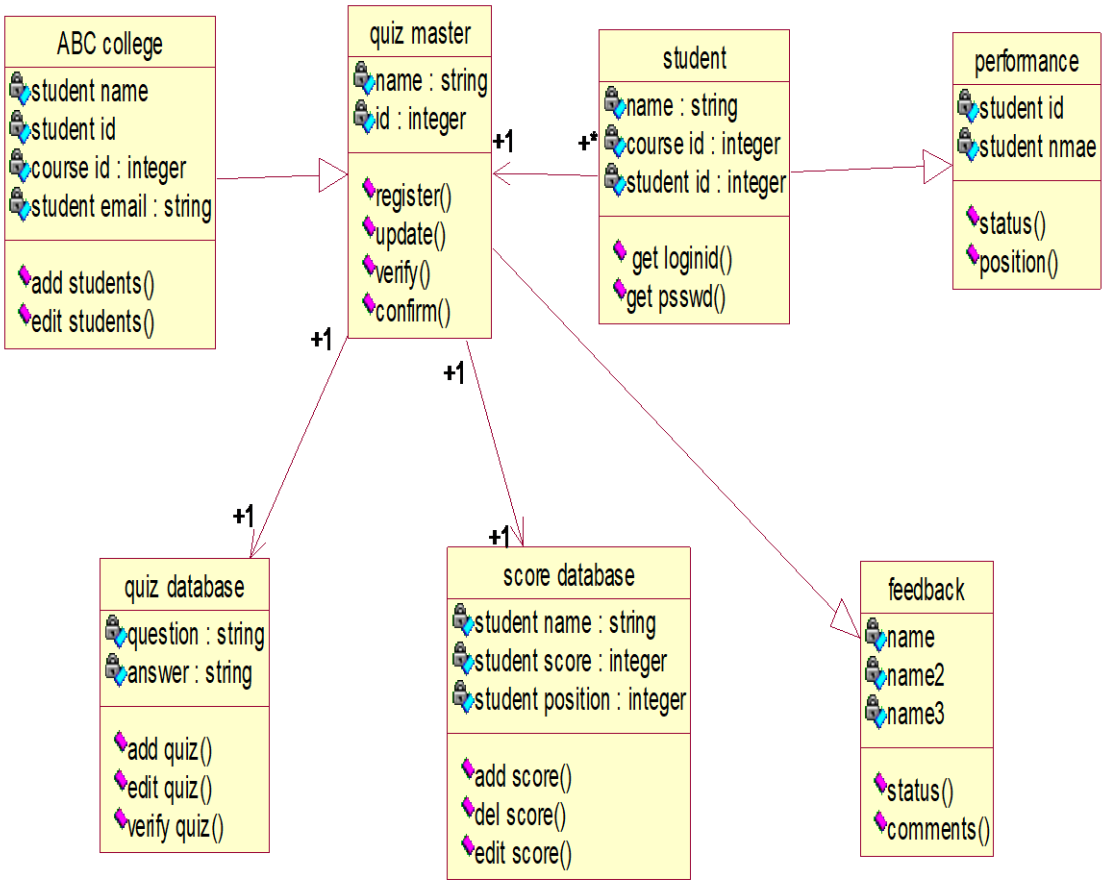




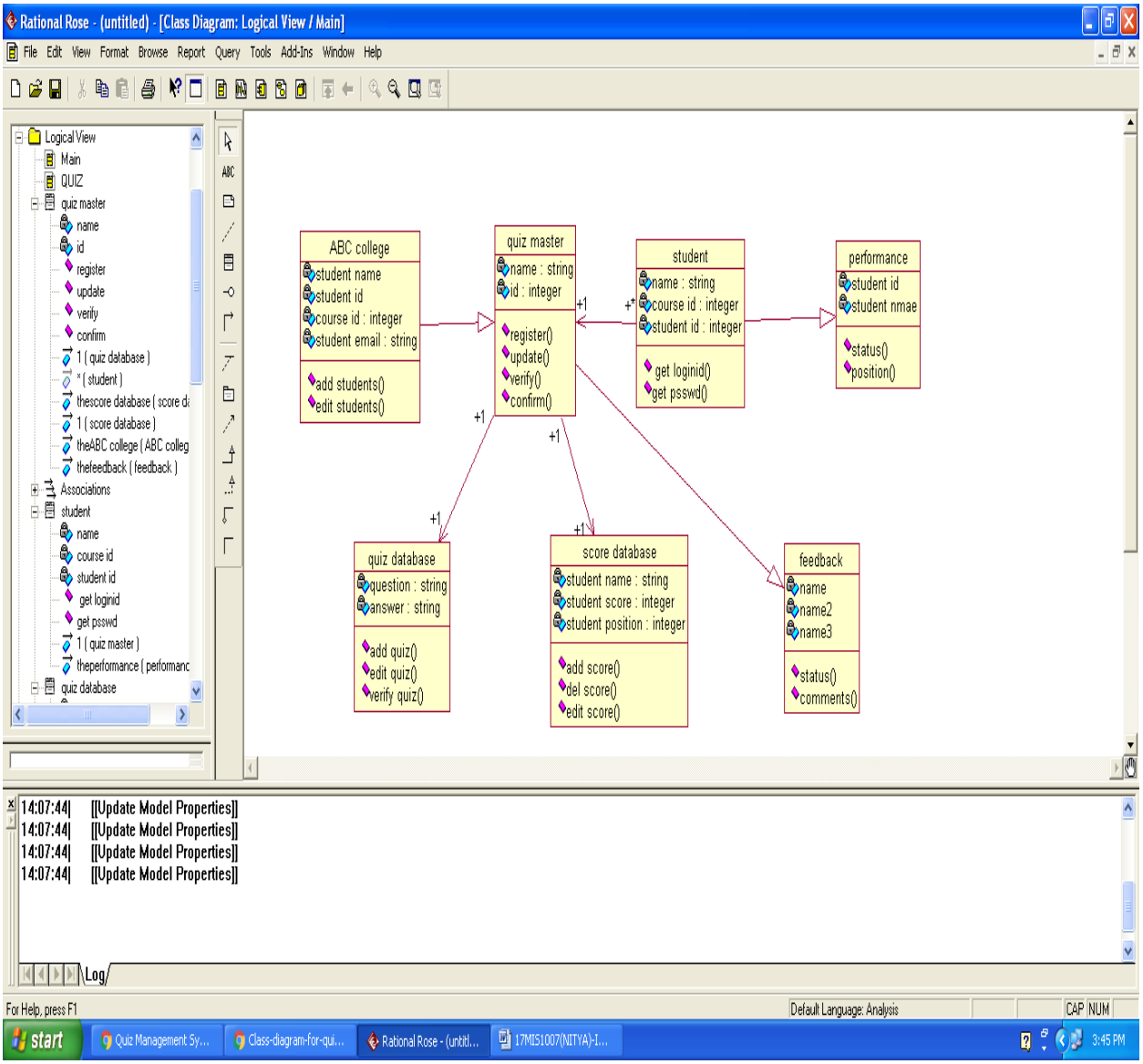
The applicant fills the registration form and gives email id to the passport adminstrator .

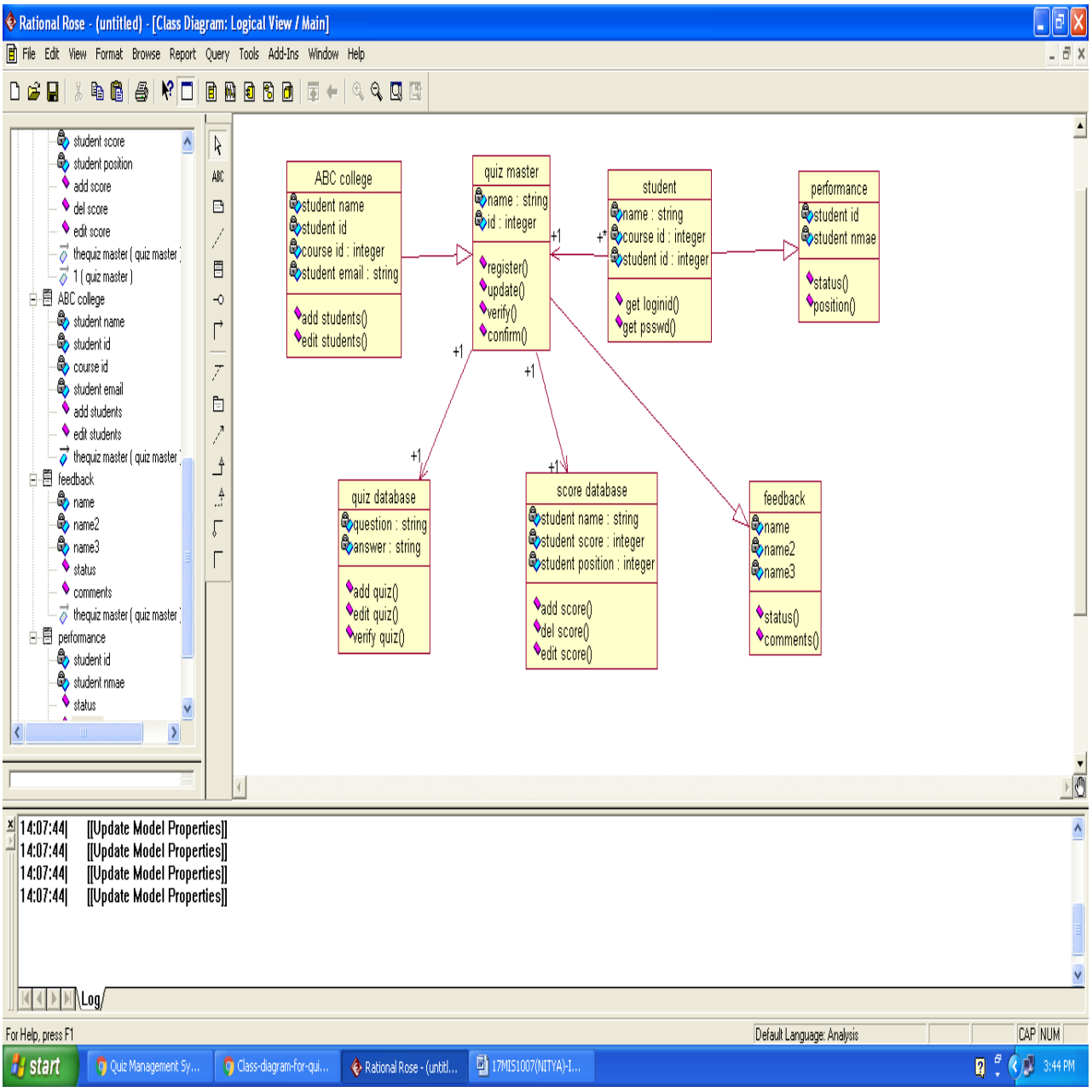
LAB EXERCISE 3

FFCS CLASS DIAGRAM



SCREENSHOTS:


Rational Rose - (untitled) - [Class Diagram: Logical View / Main]
File Edit View Format Browse Report Query Tools Add-Ins Window Help
Logical View
Main
QUIZ
quiz master
name
id
register
update
verify
confirm
1 (quiz database)
* (student)
thescore database (score da
1 (score database)
theABC college (ABC colleg
thefeedback (feedback)
Associations
student
name
course id
student id
get loginid
get psswd
1 (quiz master)
theperformance (performanc
quiz database
ABC college
student name
student id
course id : integer
student email : string
add students()
edit students()
quiz master
name : string
id : integer
register()
update()
verify()
confirm()
student
name : string
course id : integer
student id : integer
get loginid()
get psswd()
performance
student id
student nmae
status()
position()
quiz database
question : string
answer : string
add quiz()
edit quiz()
verify quiz()
score database
student name : string
student score : integer
student position : integer
add score()
del score()
edit score()
feedback
name
name2
name3
status()
comments()
+1
+*
14:07:44| [[Update Model Properties]]
14:07:44| [[Update Model Properties]]
14:07:44| [[Update Model Properties]]
14:07:44| [[Update Model Properties]]
Log
For Help, press F1
Default Language: Analysis
CAP NUM
start
Quiz Management Sy...
Class-diagram-for-qui...
Rational Rose - (untitl...
17MIS1007(NITYA)-I...
3:45 PM


Rational Rose - (untitled) - [Class Diagram: Logical View / Main]
File Edit View Format Browse Report Query Tools Add-Ins Window Help
ABC college
student name
student id
course id : integer
student email : string
add students()
edit students()
quiz master
name : string
id : integer
register()
update()
verify()
confirm()
student
name : string
course id : integer
student id : integer
get loginid()
get psswd()
performance
student id
student nmae
status()
position()
quiz database
question : string
answer : string
add quiz()
edit quiz()
verify quiz()
score database
student name : string
student score : integer
student position : integer
add score()
del score()
edit score()
feedback
name
name2
name3
status()
comments()
+1
+*
14:07:44| [[Update Model Properties]]
14:07:44| [[Update Model Properties]]
14:07:44| [[Update Model Properties]]
14:07:44| [[Update Model Properties]]
Log
For Help, press F1
Default Language: Analysis
CAP NUM
start
Quiz Management Sy...
Class-diagram-for-qui...
Rational Rose - (untitl...
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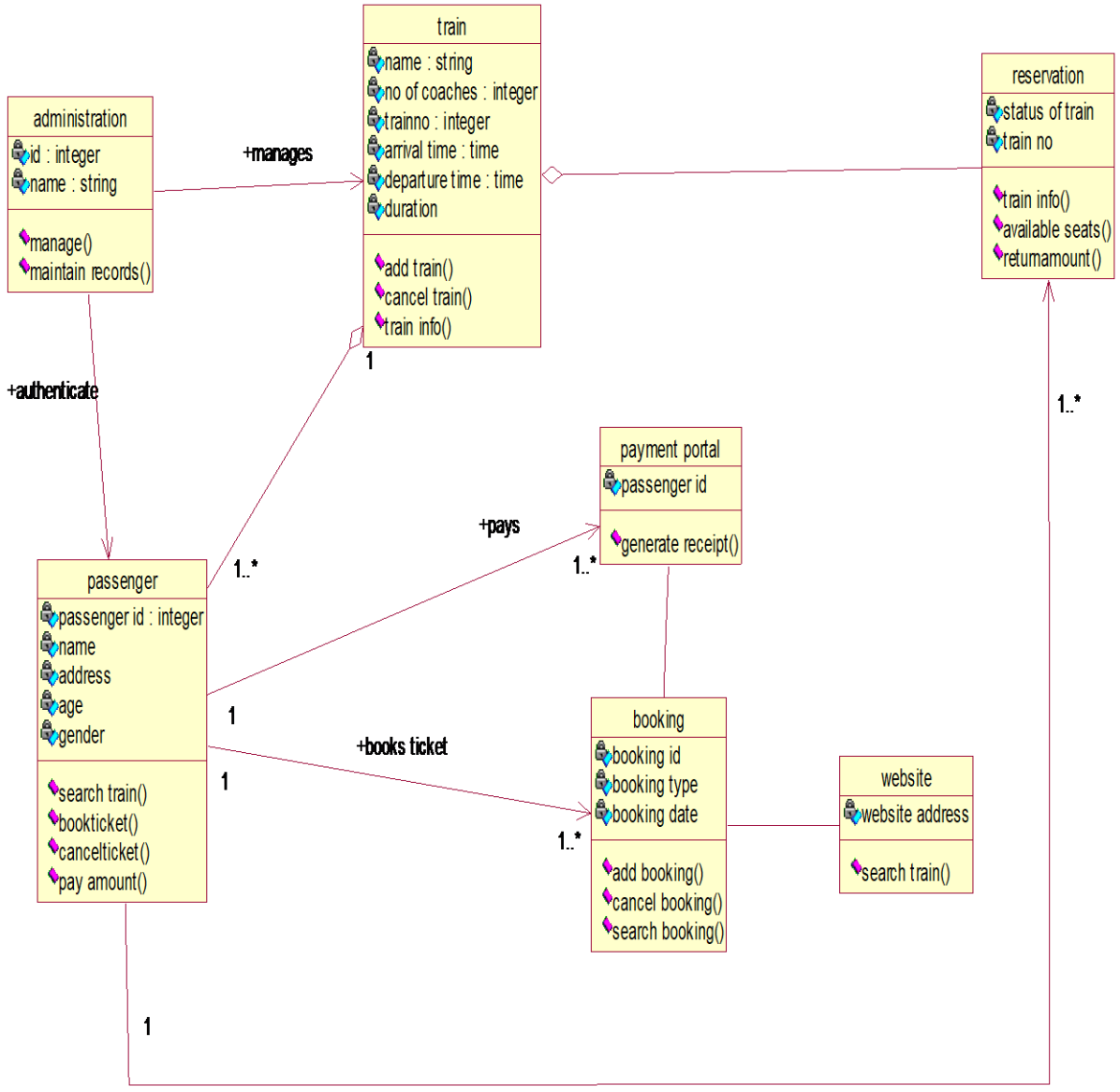
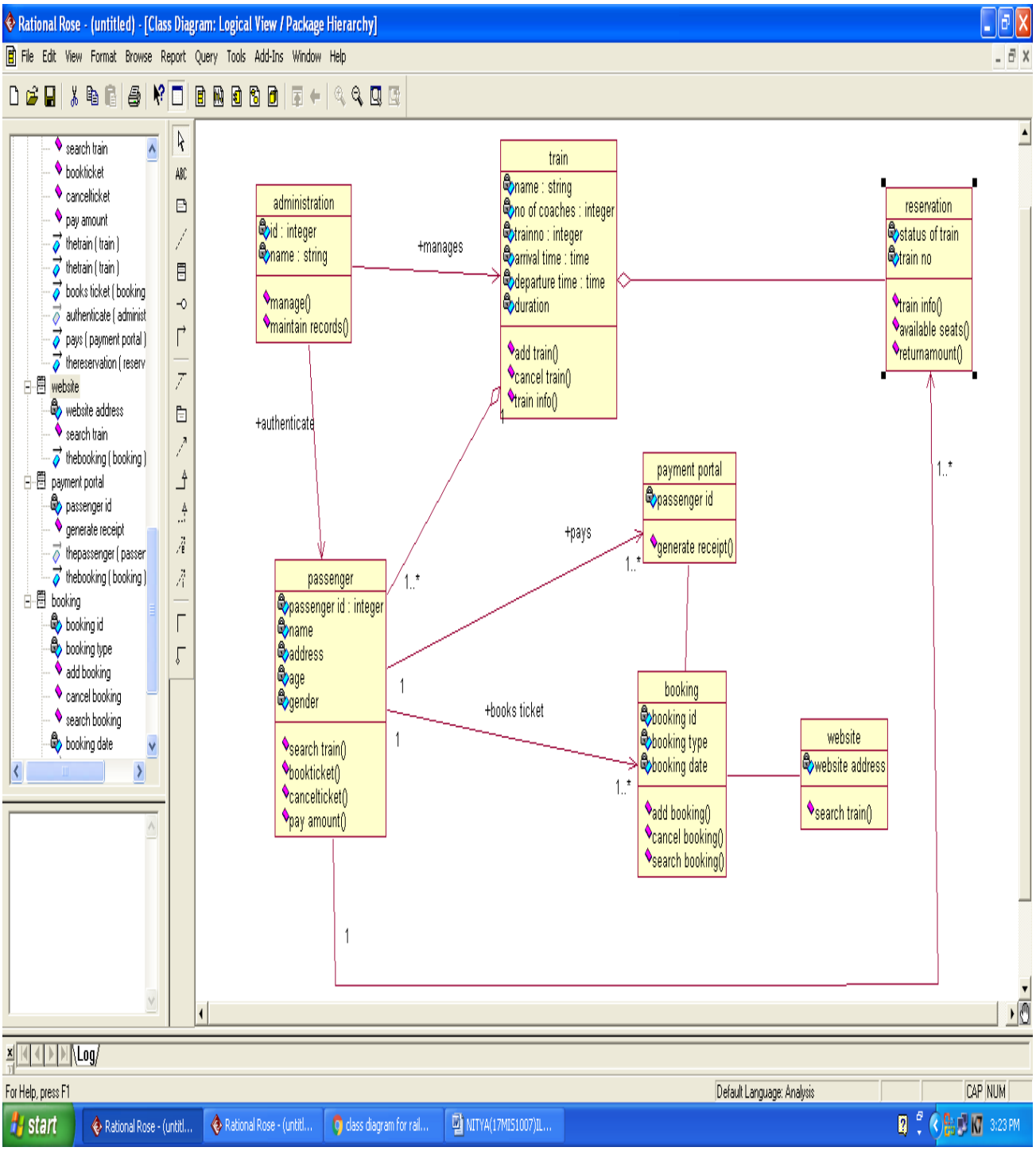
3:44 PM

LAB EXERCISE -4

AIM: CLASS DIAGRAM FOR RAILWAY RESERVATION SYSTEM



Screenshots:



DESCRIPTION:

TRAIN CLASS: Manages all the operations of class

BOOK TICKET:
It has the attributes like bboking id,booking type,booking date

ADMINISTRATION:
It has the attributes like id,name and operations like amange,maintain records

PASSENGER:
It has the attributes like passengerid,name,address,age,gender
And operations like search train,book ticket,cancel ticket, payamount

PAYMENT:
It has the attributes like passenger id and operations like generate receipt.

WEBSITE:
It has the attributes like website address and operations(methods) like search train.

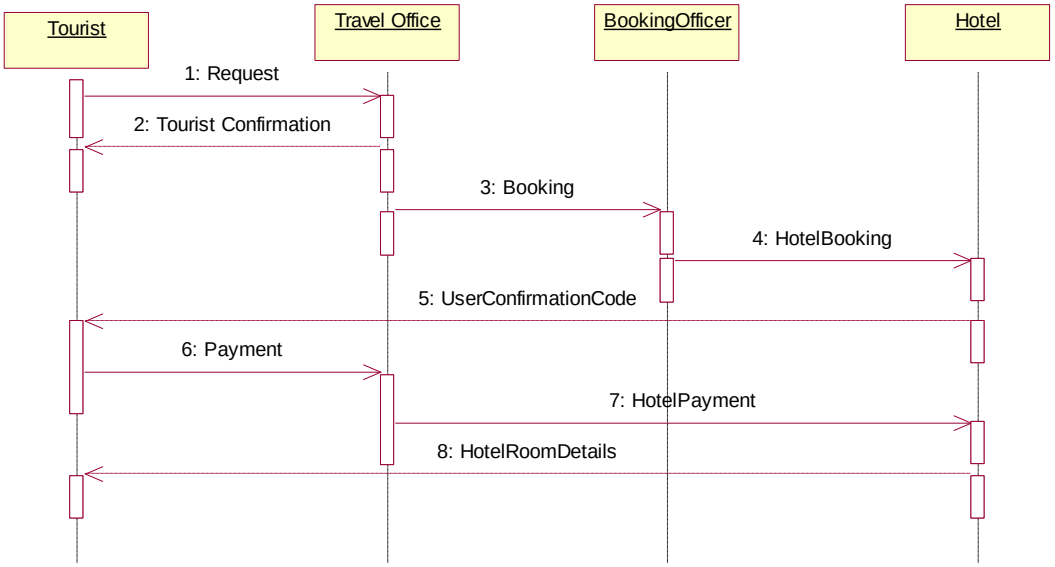
RESERVATION: it is a part of train and has aggregation symbol to it.
It has the attributes like status of train ,train no
And operations like train information , available seats, return amount.

LAB EXERCISE 5

Sequence and collaboration Diagram

Aim: To draw the sequence diagram and collaboration diagram for the travel management system

Sequence Diagram:



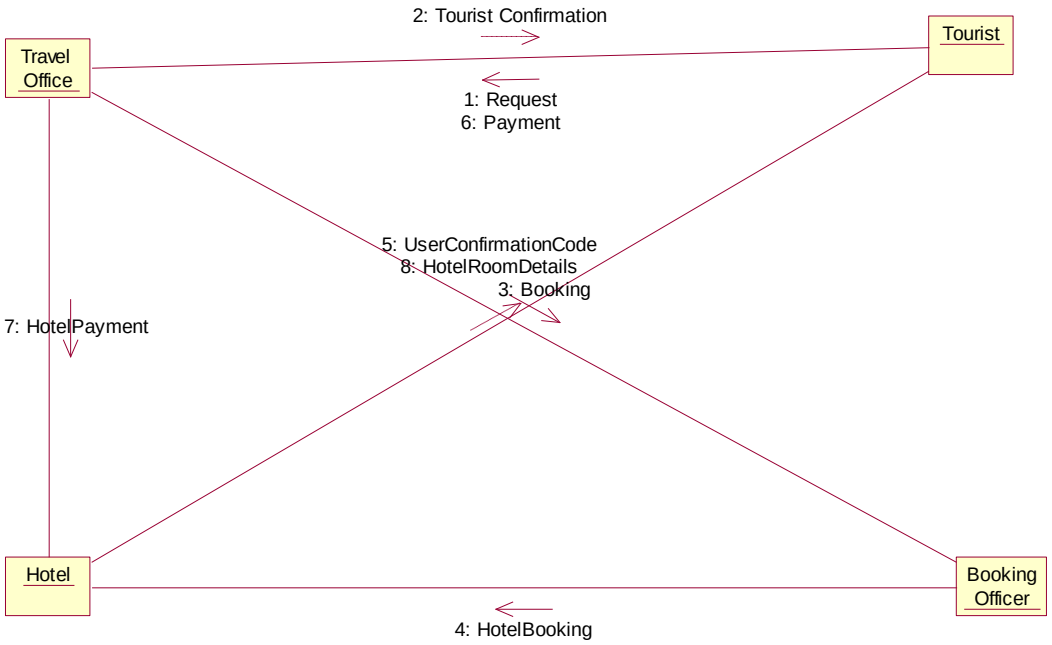
The objects of the diagram include as tourist ,travel office, booking officer, hotel.

The vertical dimension represents time and the sequence of operations as

Tourist request the travel office and tourist confirmation and then booking via booking officer and hotel booking and user conformation code .

Payment and hotel payment and hotel room details.

Collobaration Diagram:



It represents a flowchart that explains about the roles as travel office, tourist ,booking officer, hotel.

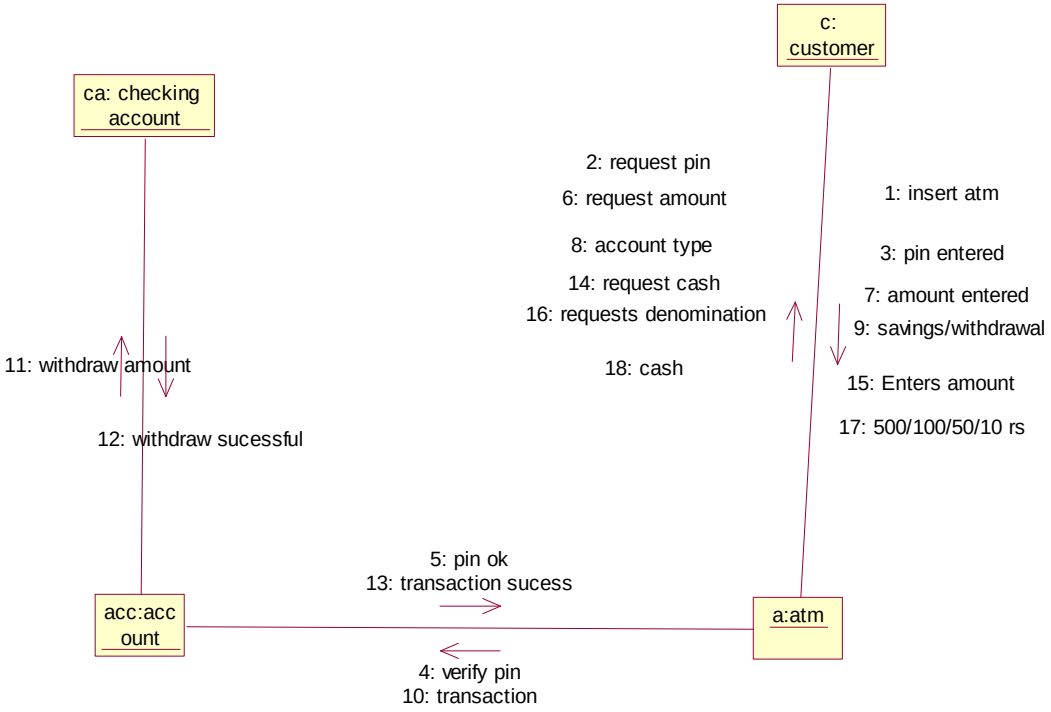
Travel office confirms tourist confirmation with tourist and booking with booking officer and hotel booking .

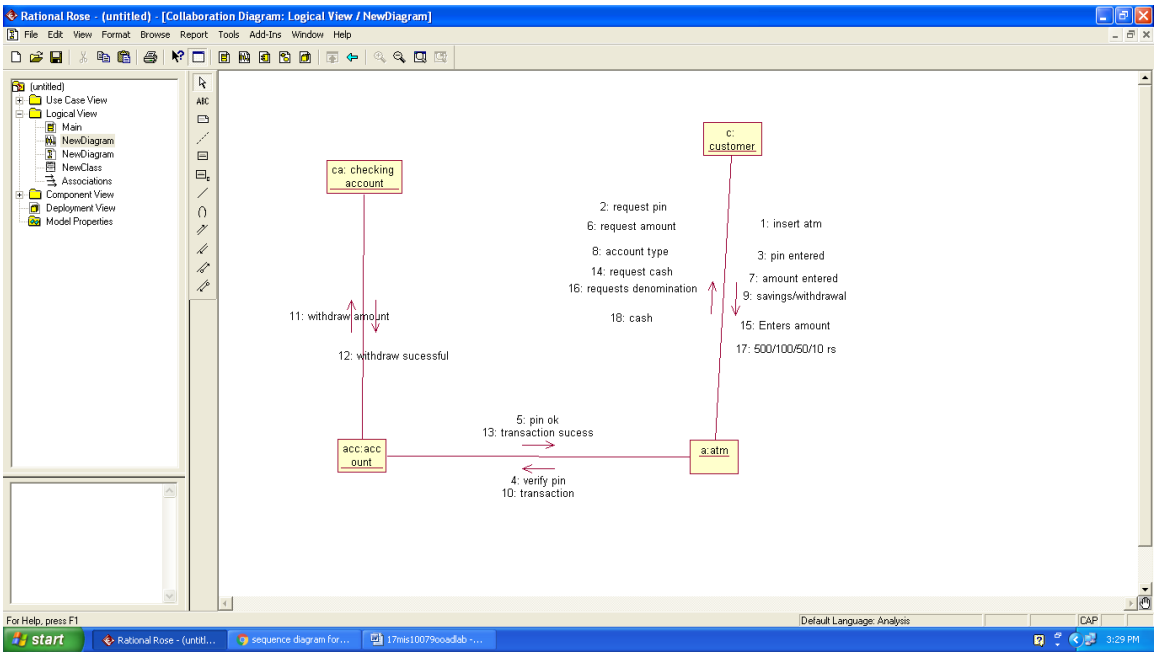
The user confirmation code and hotel booking and finally hotel payment.

LAB EXERCISE 6

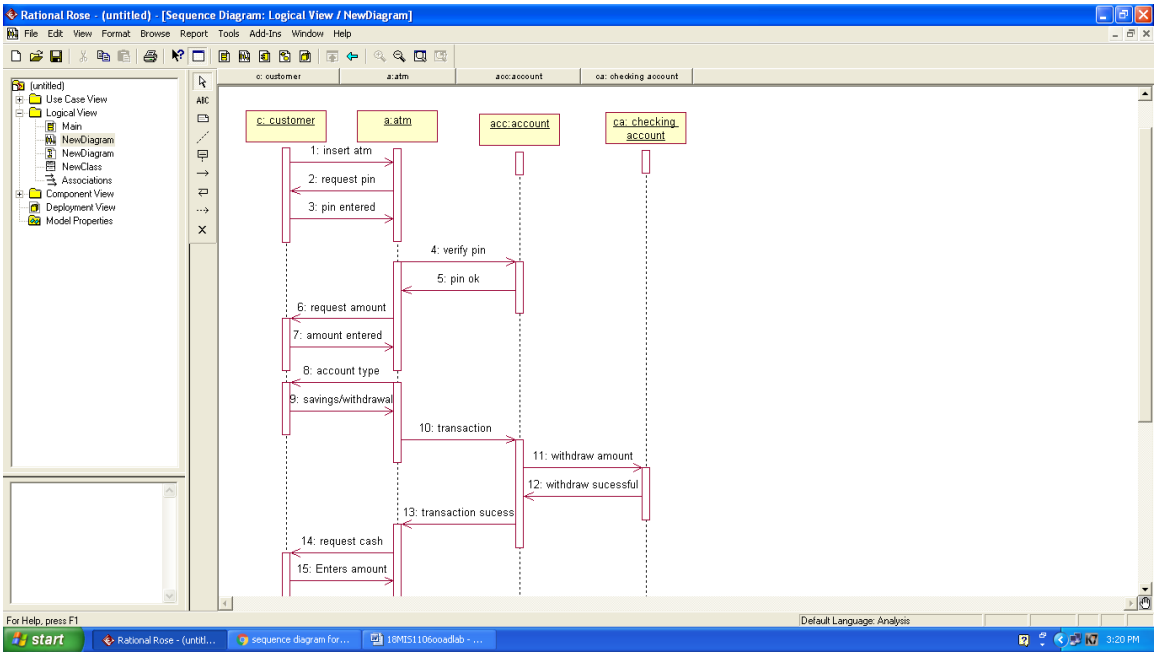
AIM : SEQUENCE DIAGRAM AND COLLABARTION DIAGRAM:

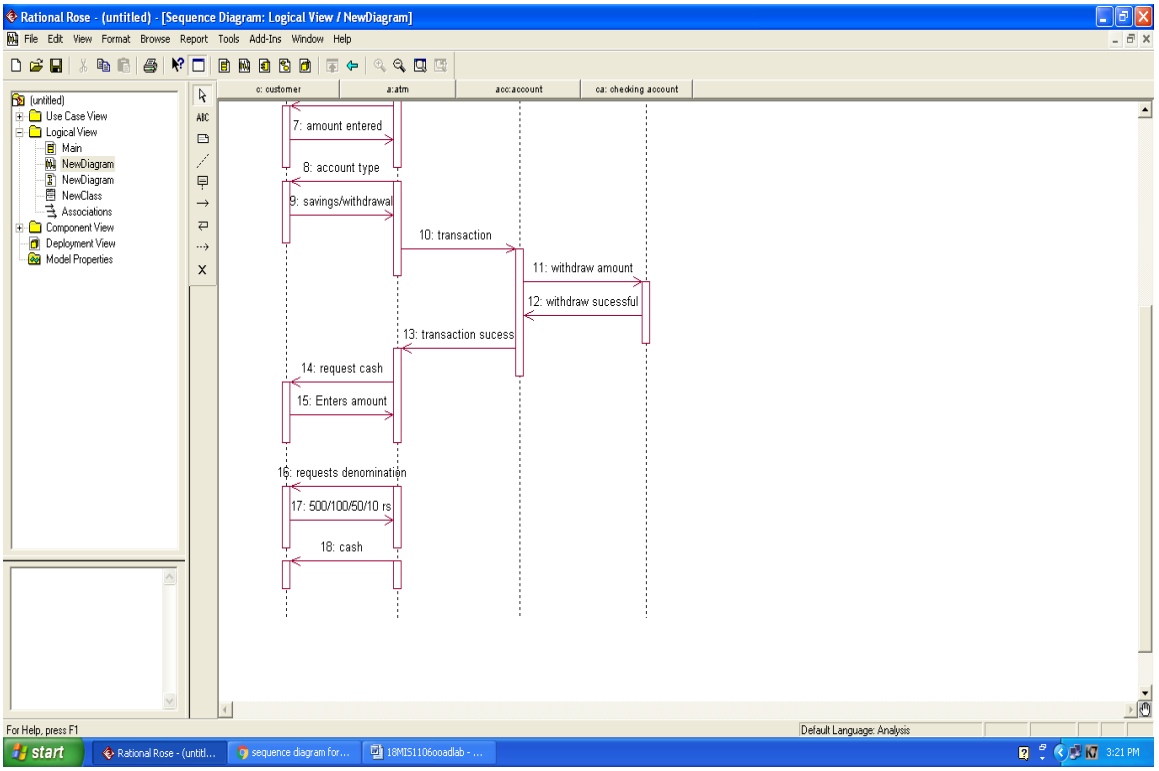
COLLABARTION:

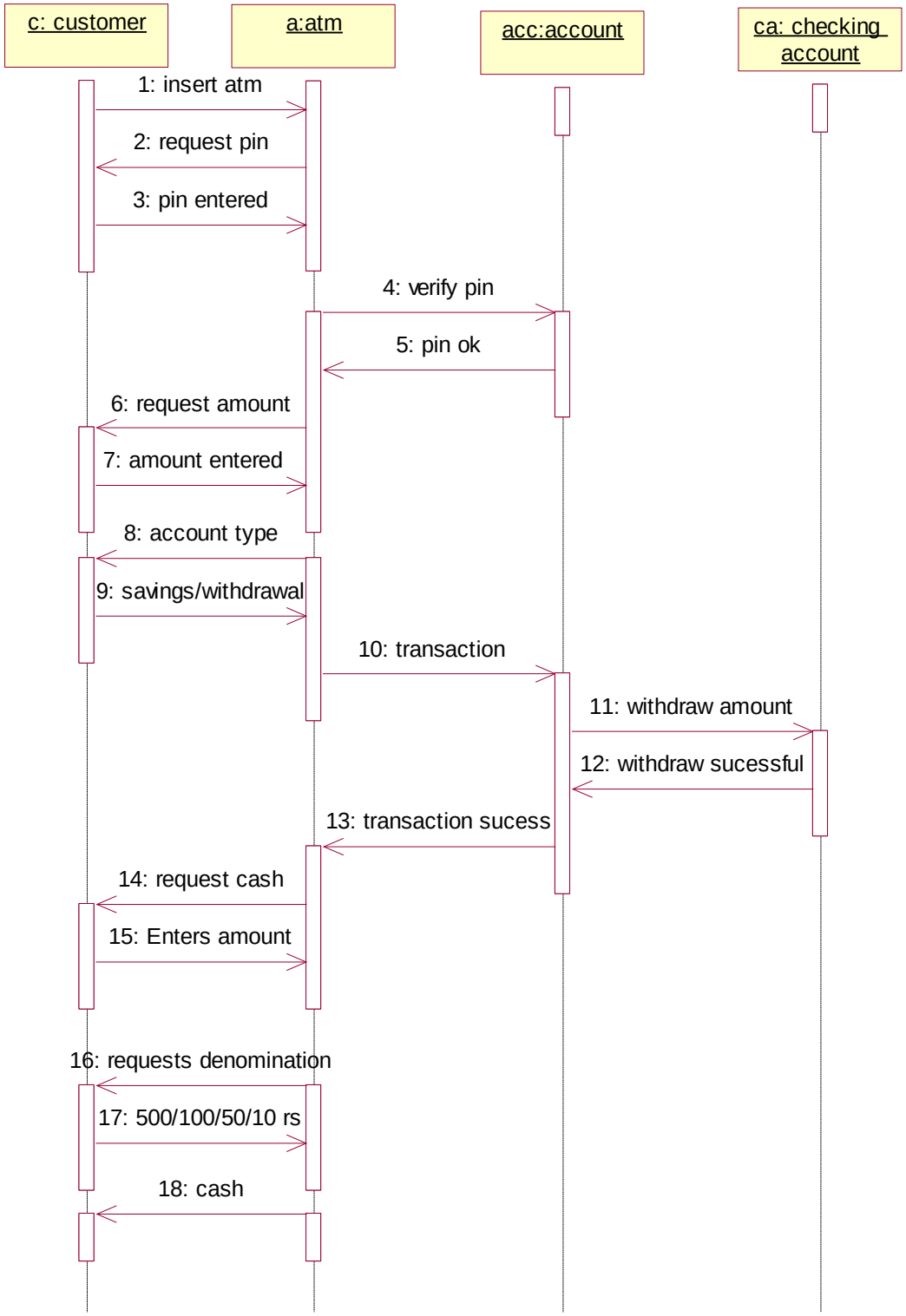




SEQUENCE DIAGRAM :

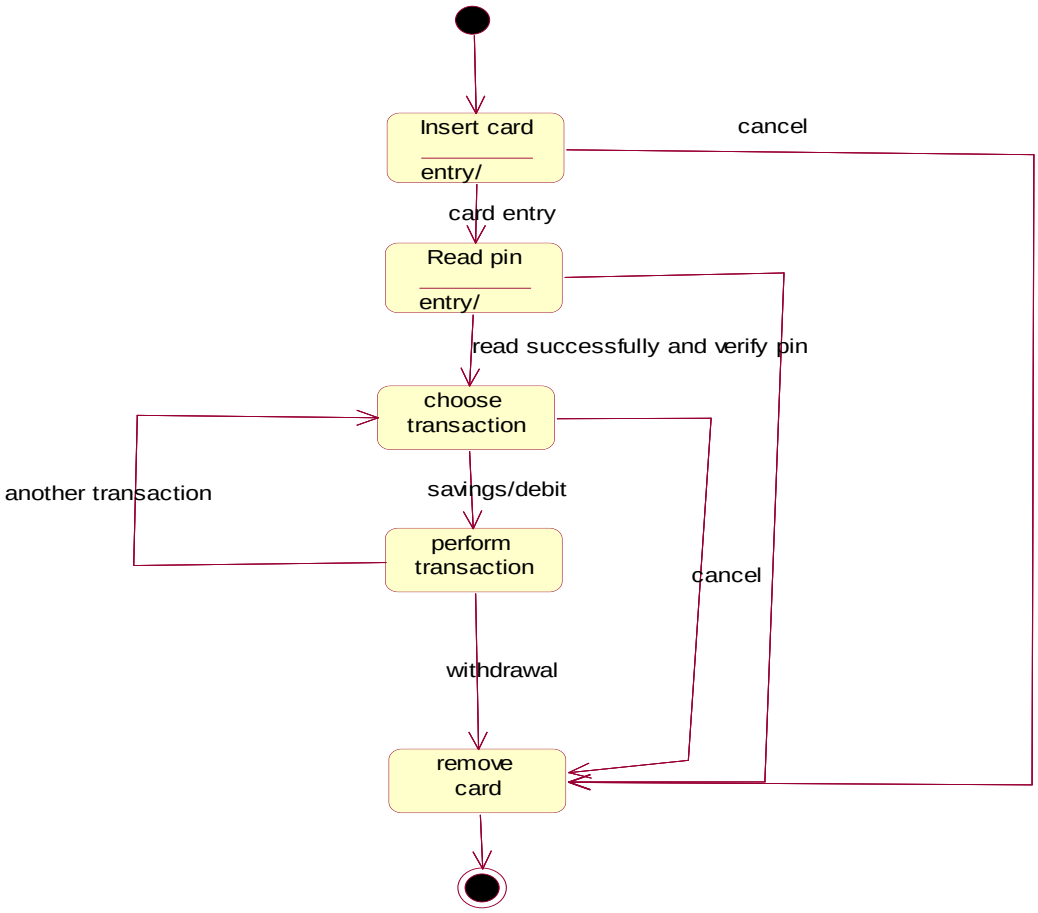


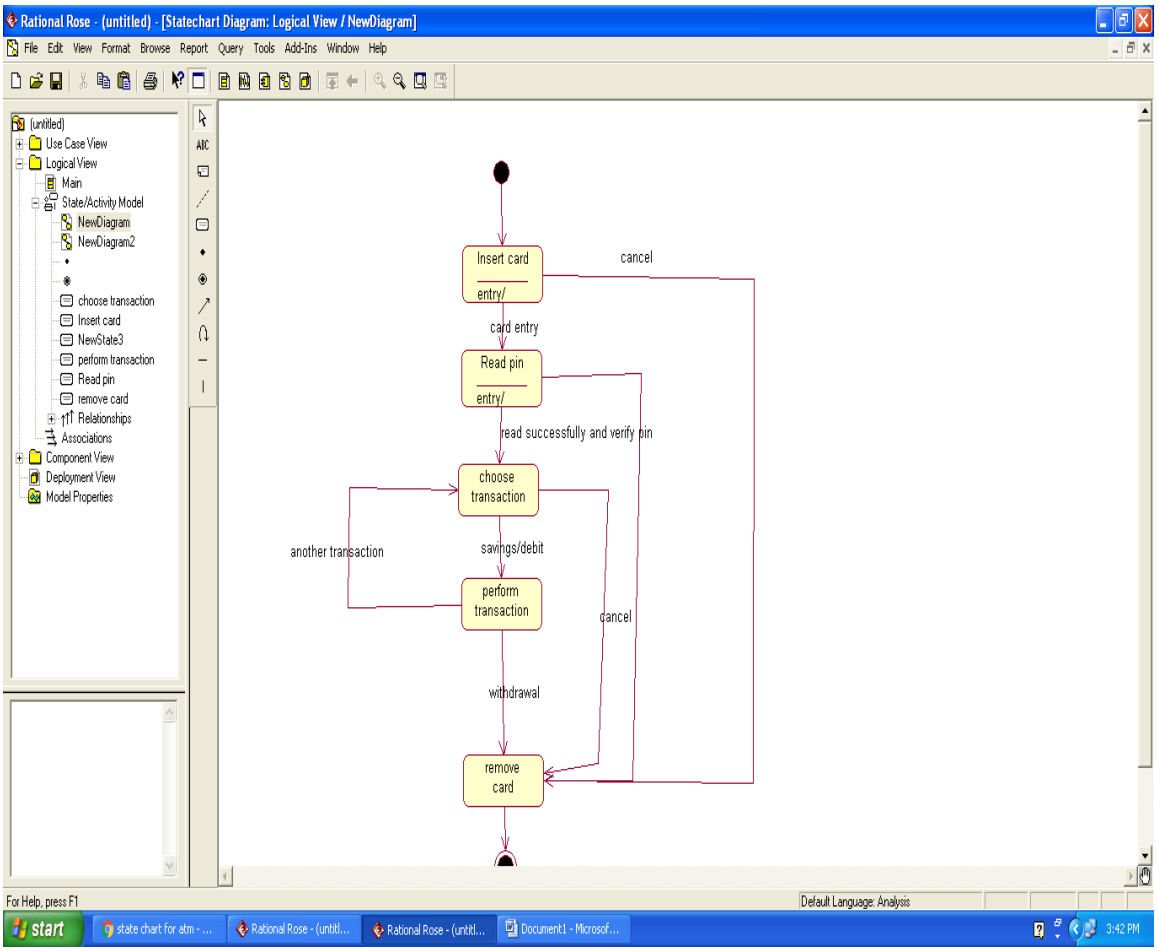

Rational Rose - (untitled) - [Sequence Diagram: Logical View / NewDiagram]
File Edit View Format Browse Report Tools Add-Ins Window Help
(untitled)
Use Case View
Logical View
Main
NewDiagram
NewDiagram
NewClass
Associations
Component View
Deployment View
Model Properties
c: customer
a:atm
acc:account
ca: checking account
7: amount entered
8: account type
9: savings/withdrawal
10: transaction
11: withdraw amount
12: withdraw sucessful
13: transaction sucess
14: request cash
15: Enters amount
16: requests denomination
17: 500/100/50/10 rs
18: cash
For Help, press F1
Default Language: Analysis
start
Rational Rose - (untitl...
sequence diagram for...
18MIS1106ooadlab - ...
3:21 PM


c: customer
a:atm
acc:account
ca: checking account
1: insert atm
2: request pin
3: pin entered
4: verify pin
5: pin ok
6: request amount
7: amount entered
8: account type
9: savings/withdrawal
10: transaction
11: withdraw amount
12: withdraw sucessful
13: transaction sucess
14: request cash
15: Enters amount
16: requests denomination
17: 500/100/50/10 rs
18: cash

LAB EXERCISE-7

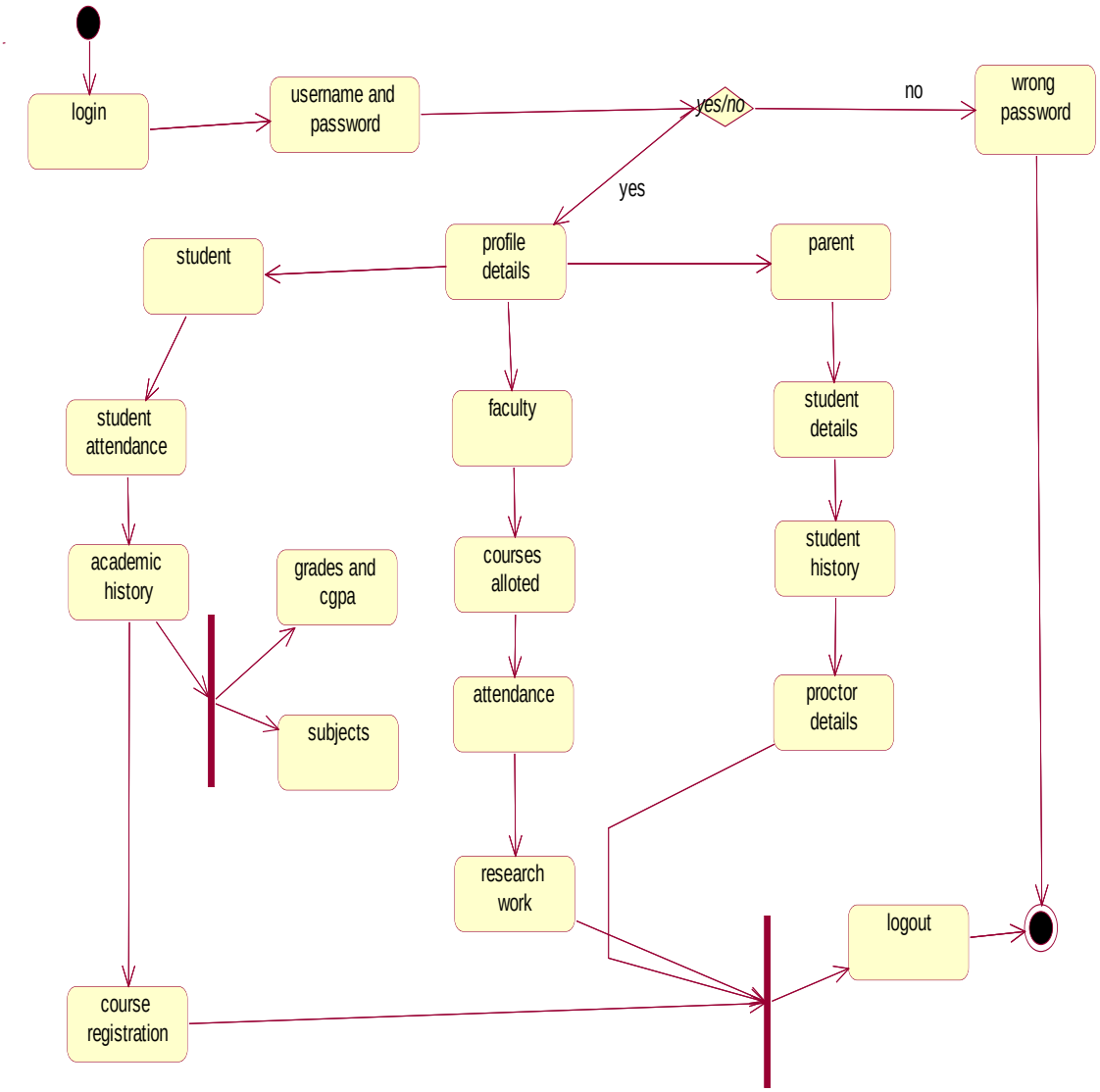
AIM: STATE CHART DIAGRAM FOR ATM

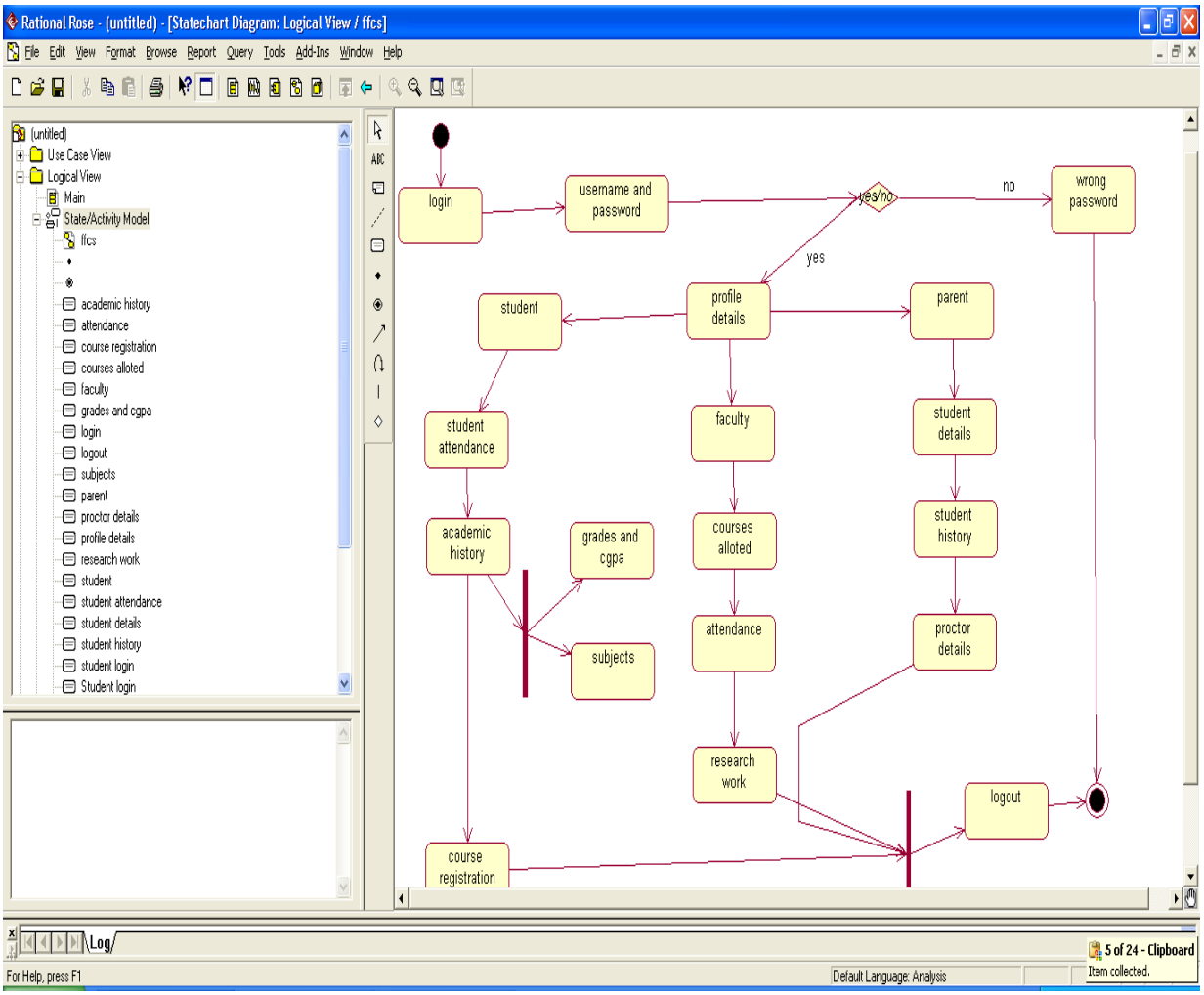



Rational Rose - (untitled) - [Statechart Diagram: Logical View / NewDiagram]
File Edit View Format Browse Report Query Tools Add-Ins Window Help
(untitled)
Use Case View
Logical View
Main
State/Activity Model
NewDiagram
NewDiagram2
choose transaction
Insert card
NewState3
perform transaction
Read pin
remove card
Relationships
Associations
Component View
Deployment View
Model Properties
Insert card
entry/
cancel
card entry
Read pin
entry/
read successfully and verify pin
choose transaction
another transaction
savings/debit
perform transaction
cancel
withdrawal
remove card
For Help, press F1
Default Language: Analysis
start
state chart for atm - ...
Rational Rose - (untitl...
Rational Rose - (untitl...
Document1 - Microsof...
3:42 PM

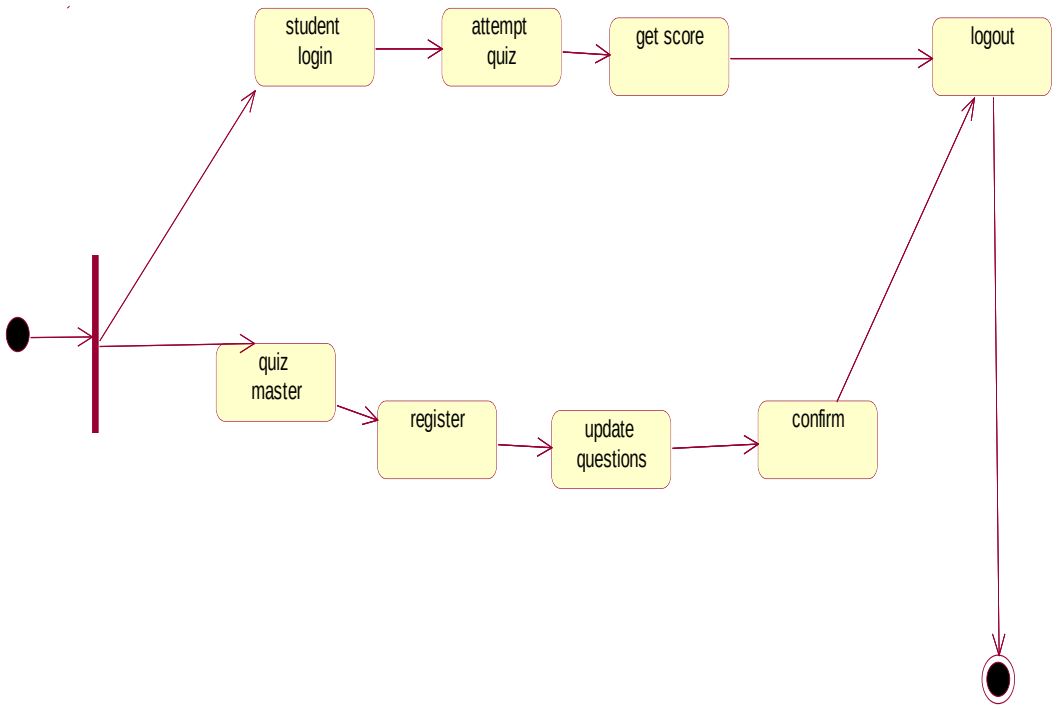
LAB 8: STATE CHART DIAGRAM

AIM: TO DRAW A STATE CHART DIAGRAM FOR FFCS



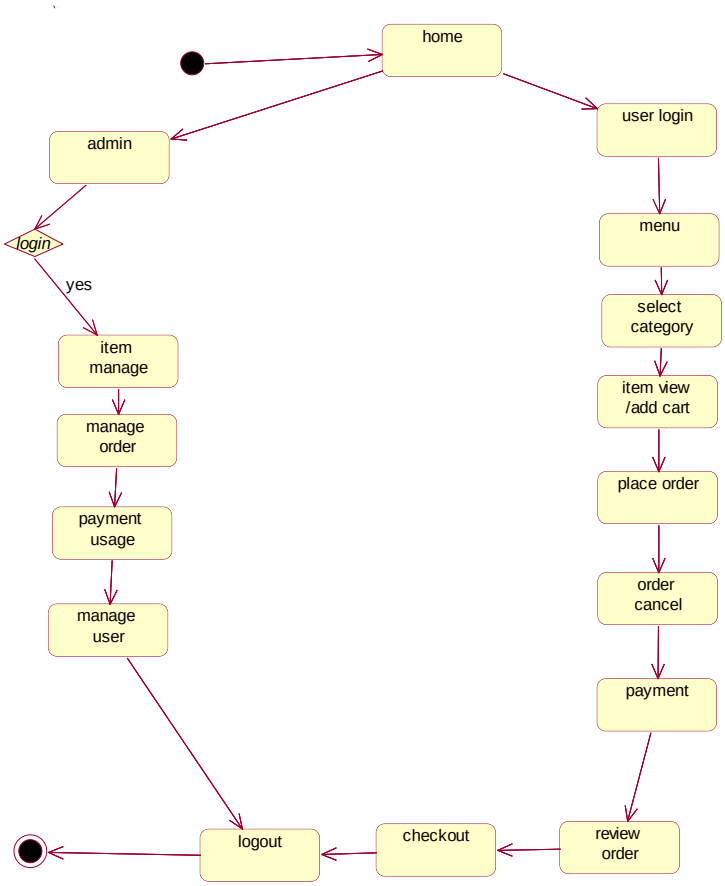


STATE CHART DIAGRAM FOR QUIZ SYSTEM:

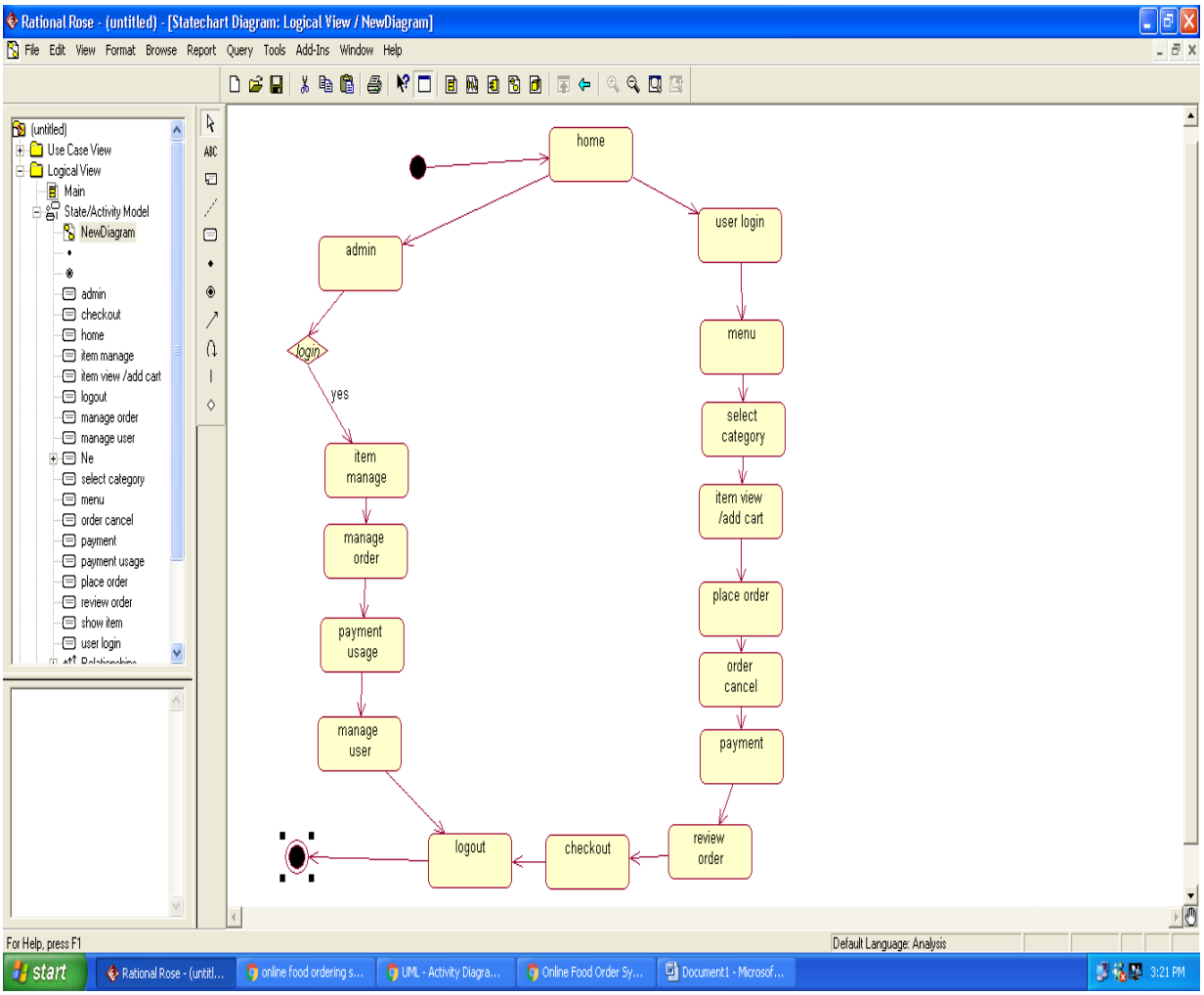

student login
attempt quiz
get score
logout
quiz master
register
update questions
confirm

LAB EXERCISE 9

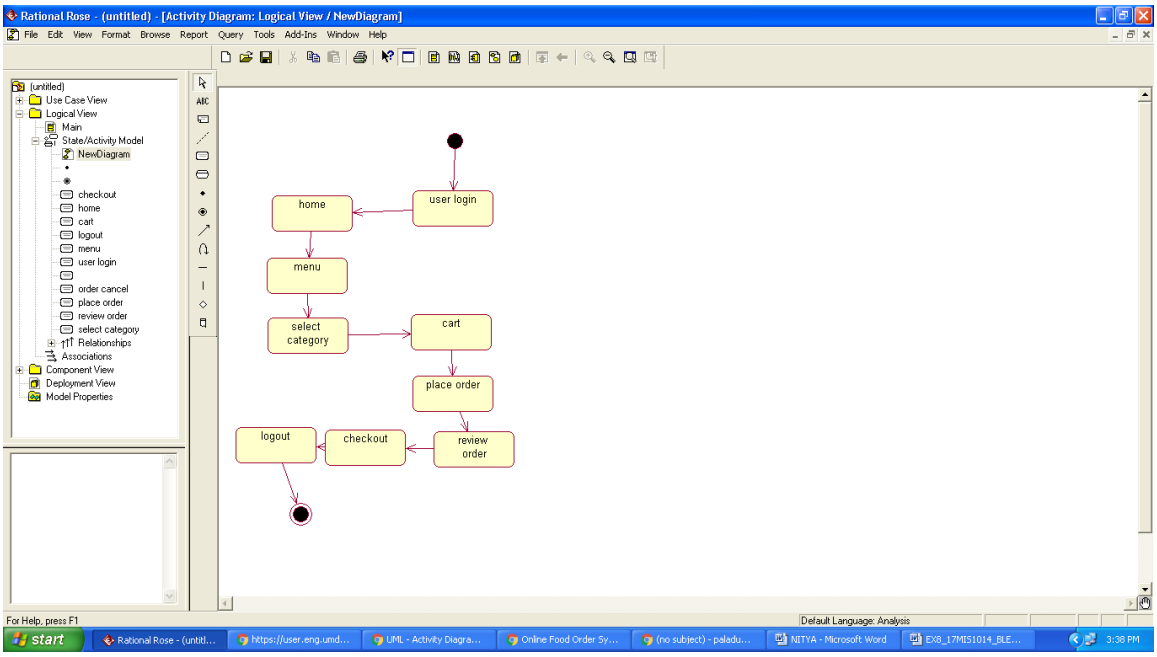
HOTEL MANAGEMENT SYSTEM



State chart:

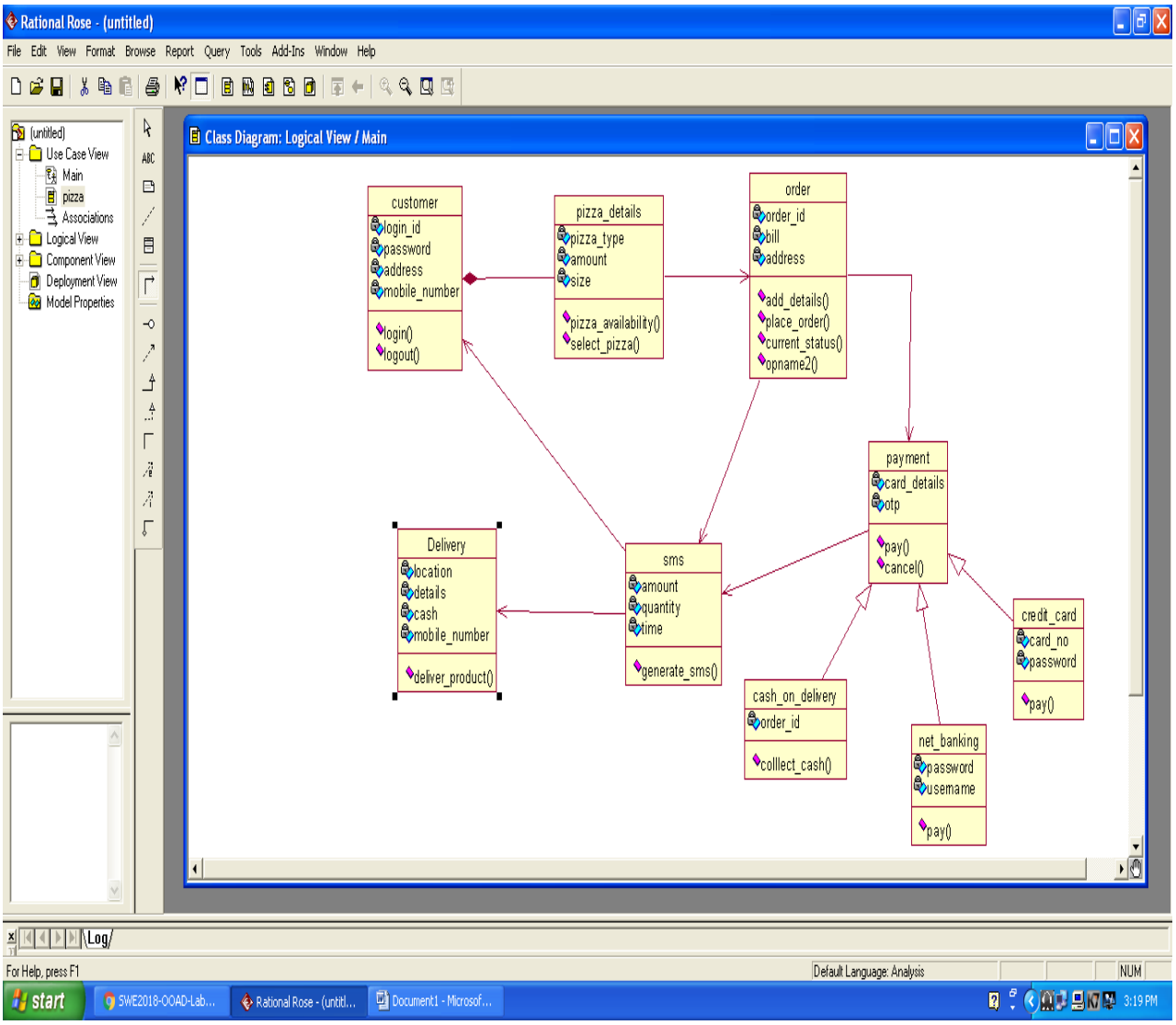


ACTIVITY DIAGRAM:



Class diagram:

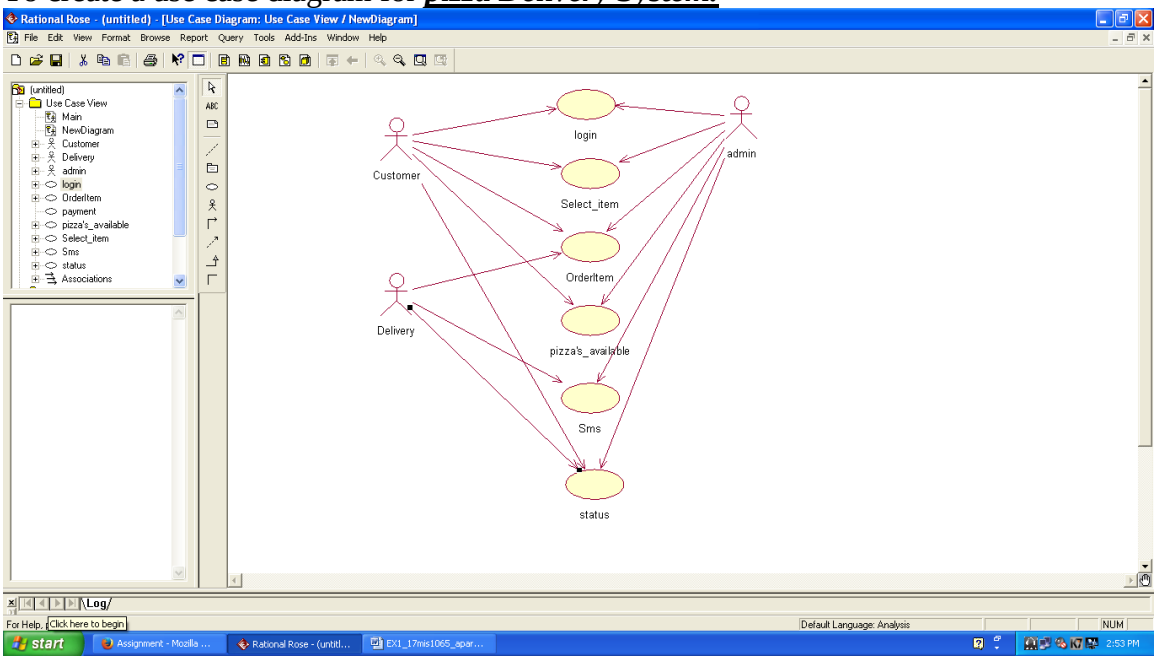
Aim : class diagram for pizza delivery system

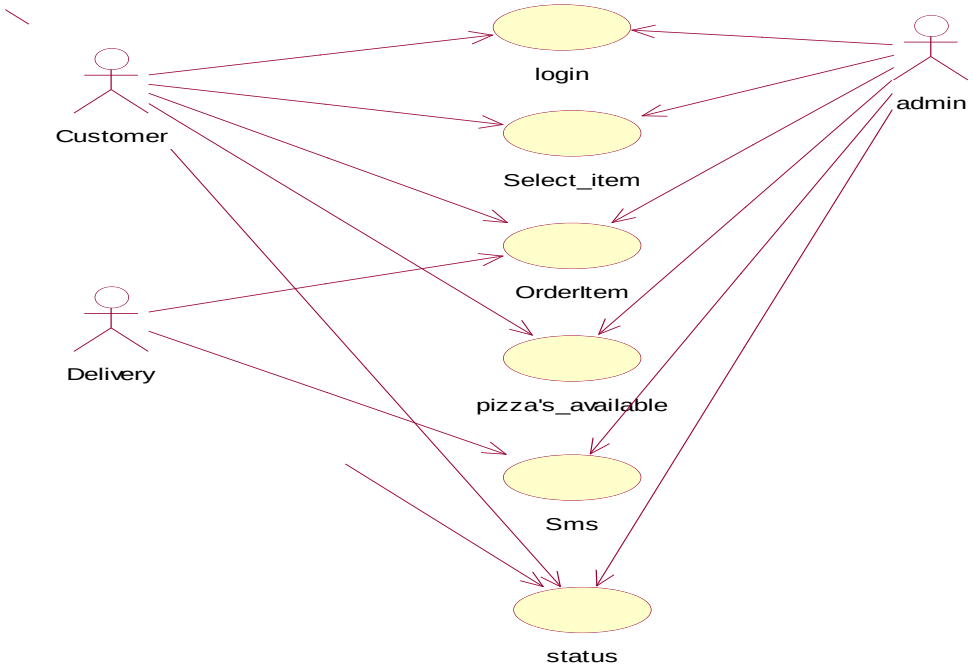


Usecase diagram:

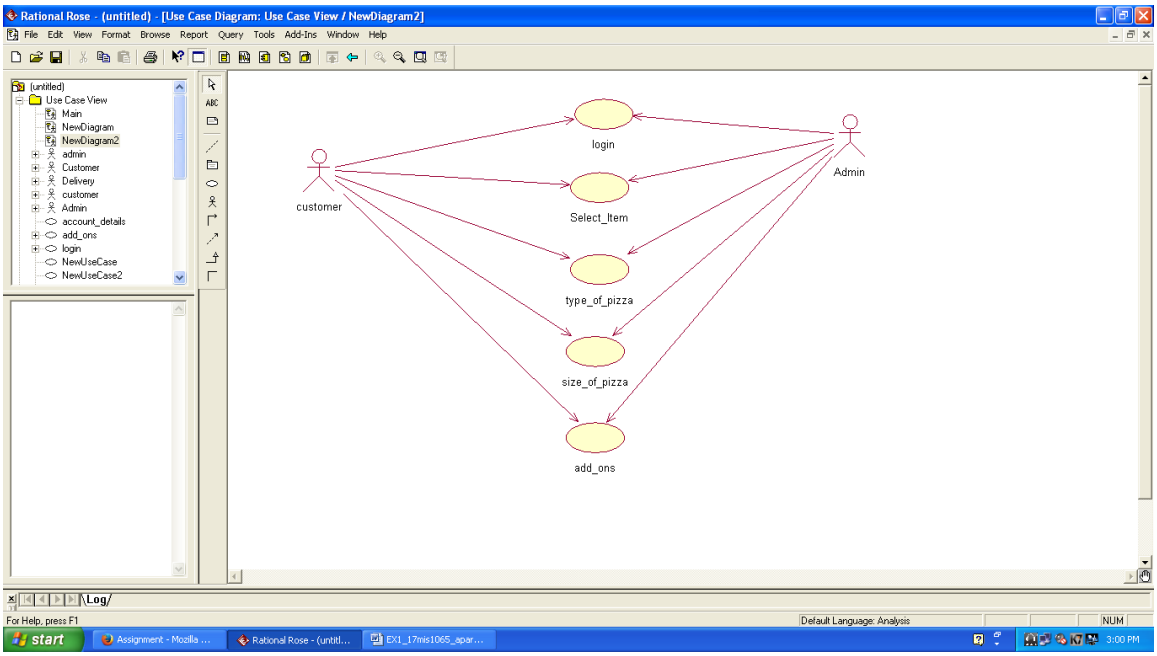
AIM:

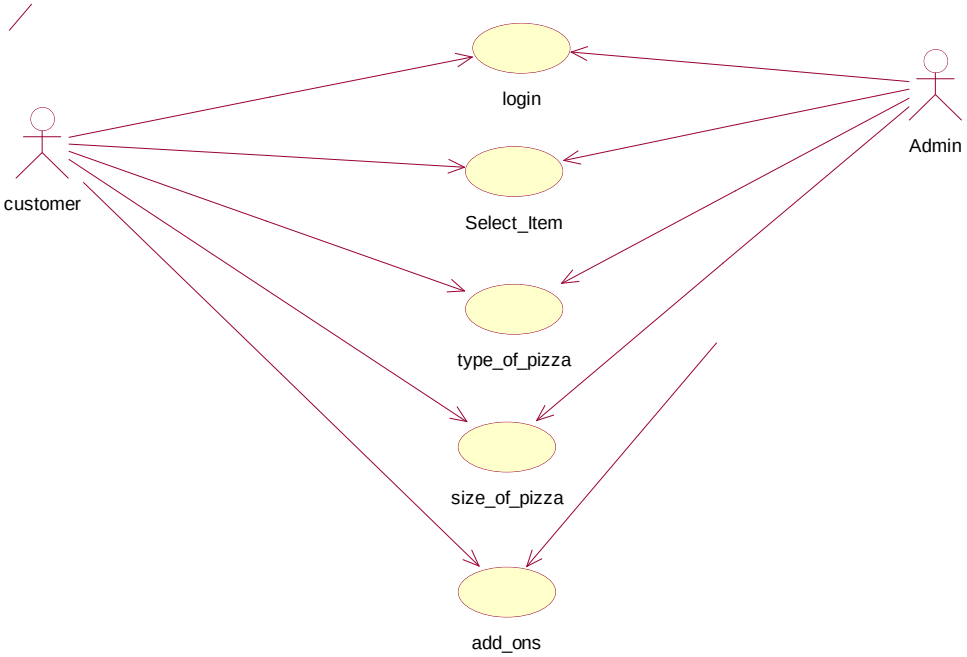
To create a use case diagram for ***pizza Delivery System.***





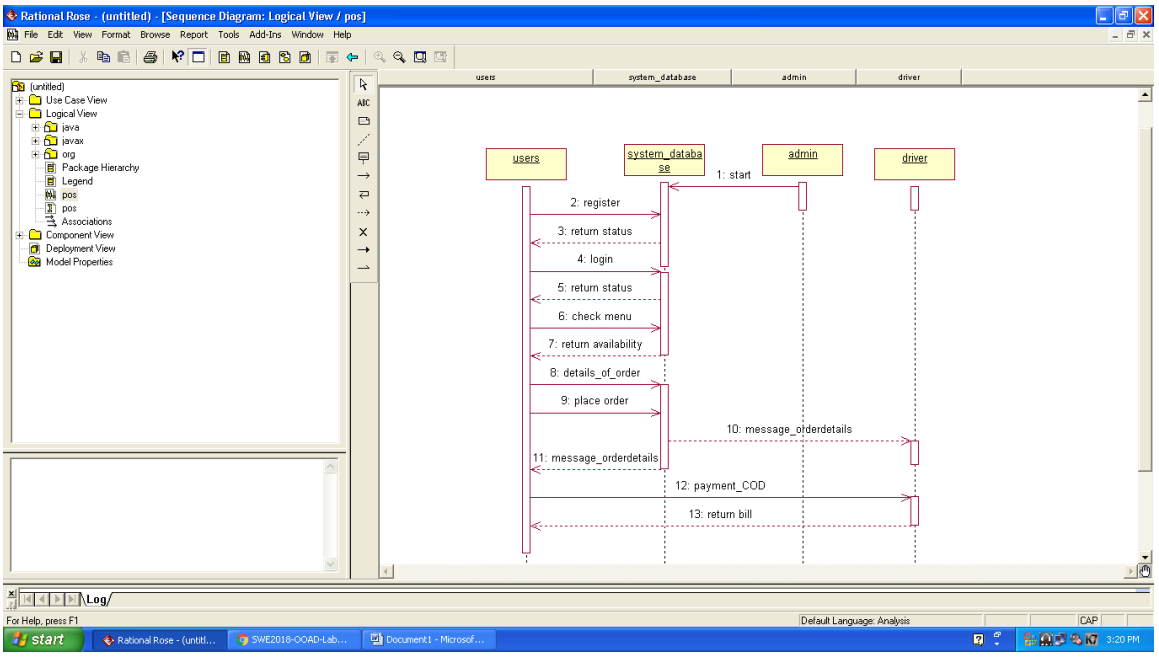
SELECT_ITEM SABMODULE:



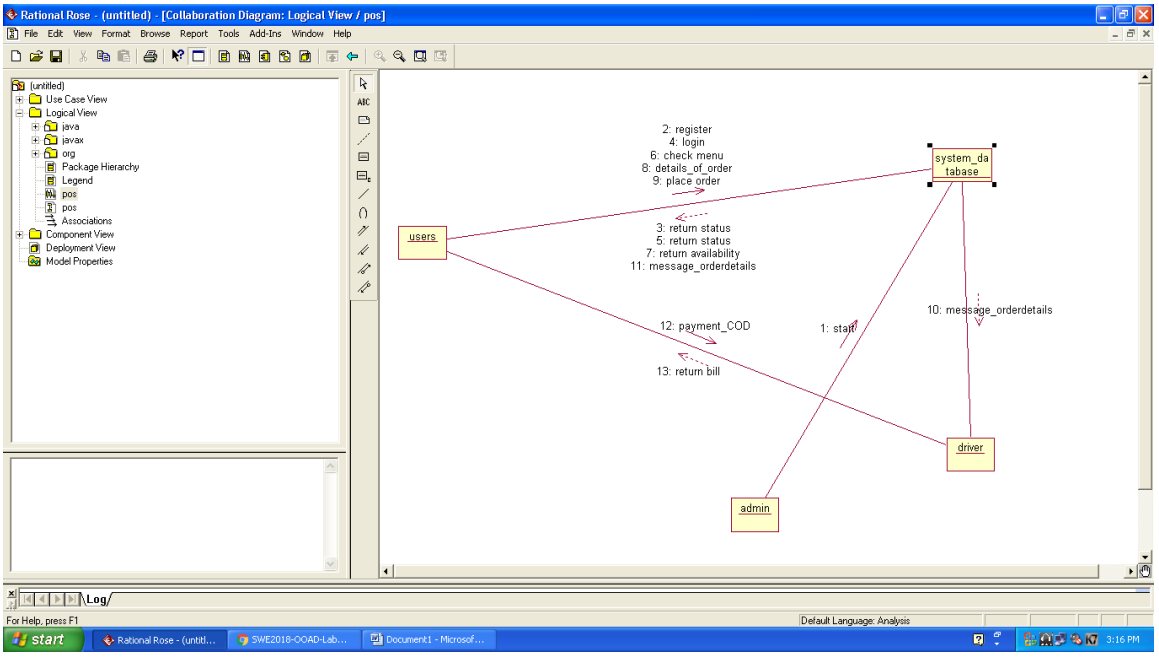


Sequence diagram:

AIM: sequence and collaboration diagram for pizza-ordering system



collaboration



LAB EXERCISE 10

AIM : CLASS DAIGRAM FOR COURSE REGISTRATION

CLASSES:

1) system
2) database
3) residential status
4) student
5) HOD

ATTRIBUTES:

1) class: system

attributes:

name
email
address
phno

2)class:hod

Attributes:

Lecturerid
Department
Updatemarks
Attendance
Viewmarks

3)class:student

Attributes:

Studentname
Welcome email
Select stream
Select electives
Mandatory courses

4) class: database

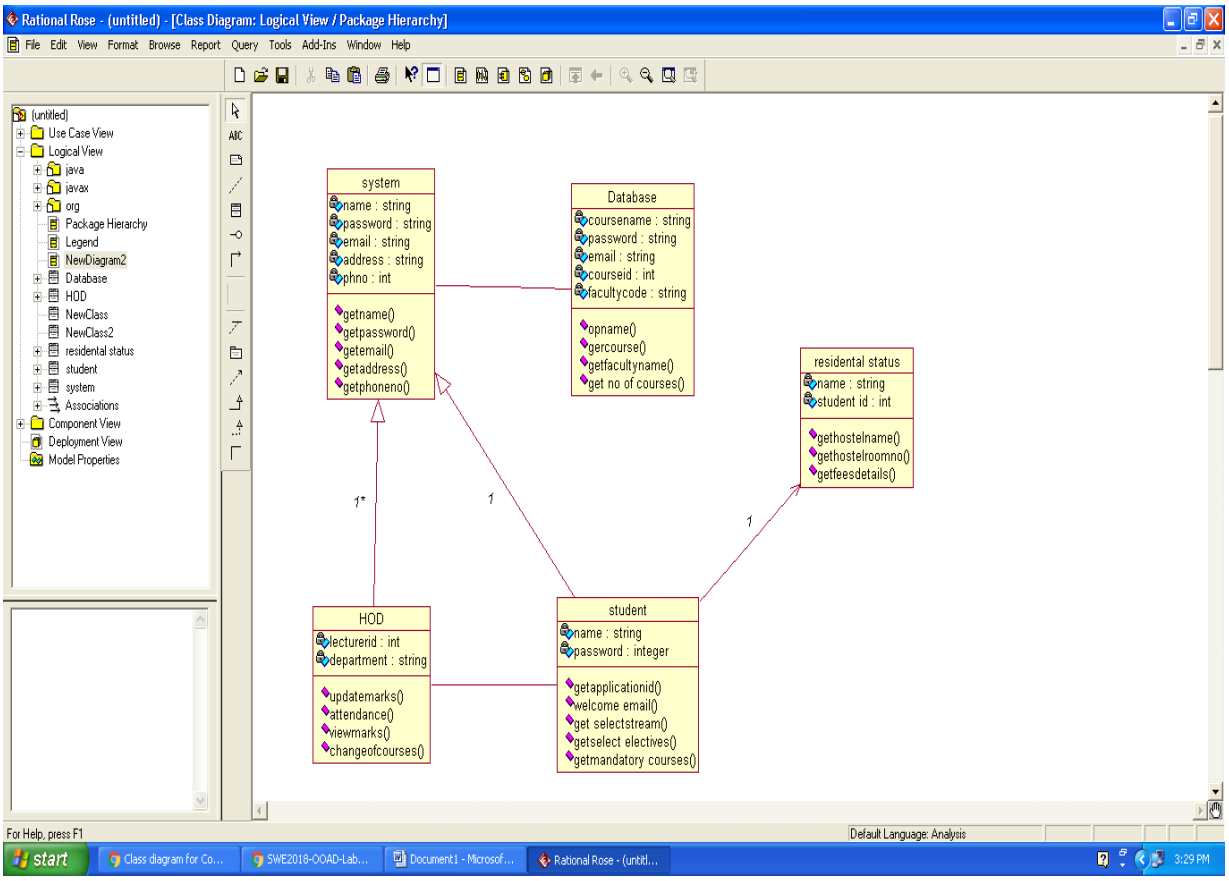
attributes:

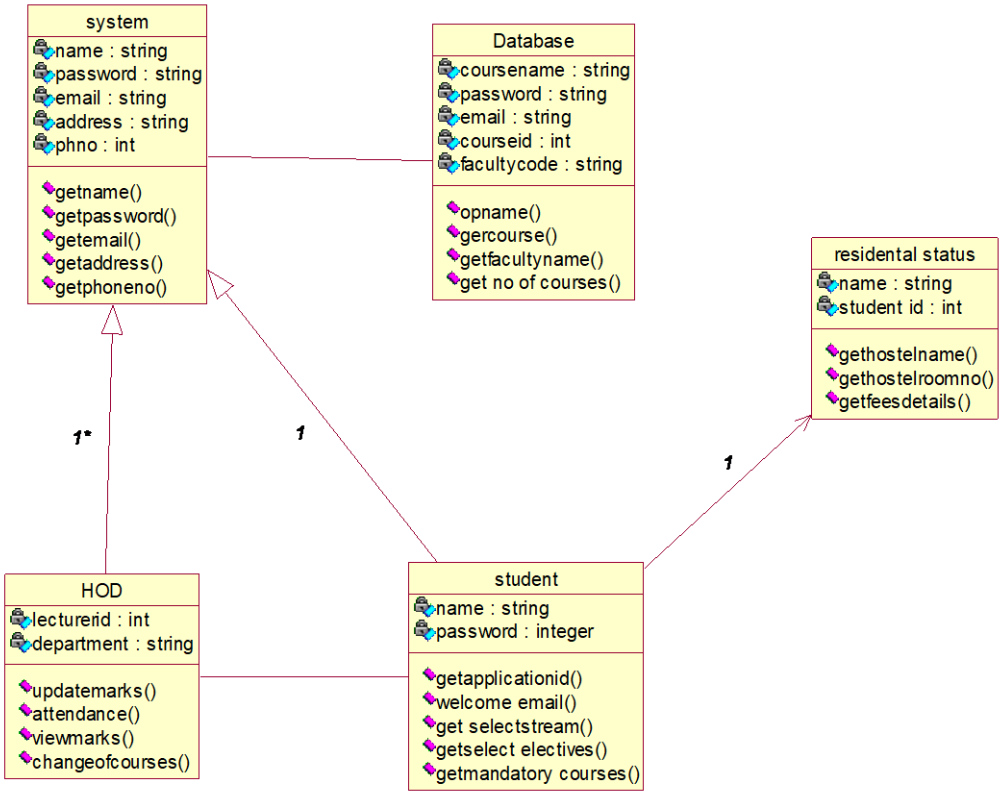
coursename
faculty
courseid
email

5) class: residential status

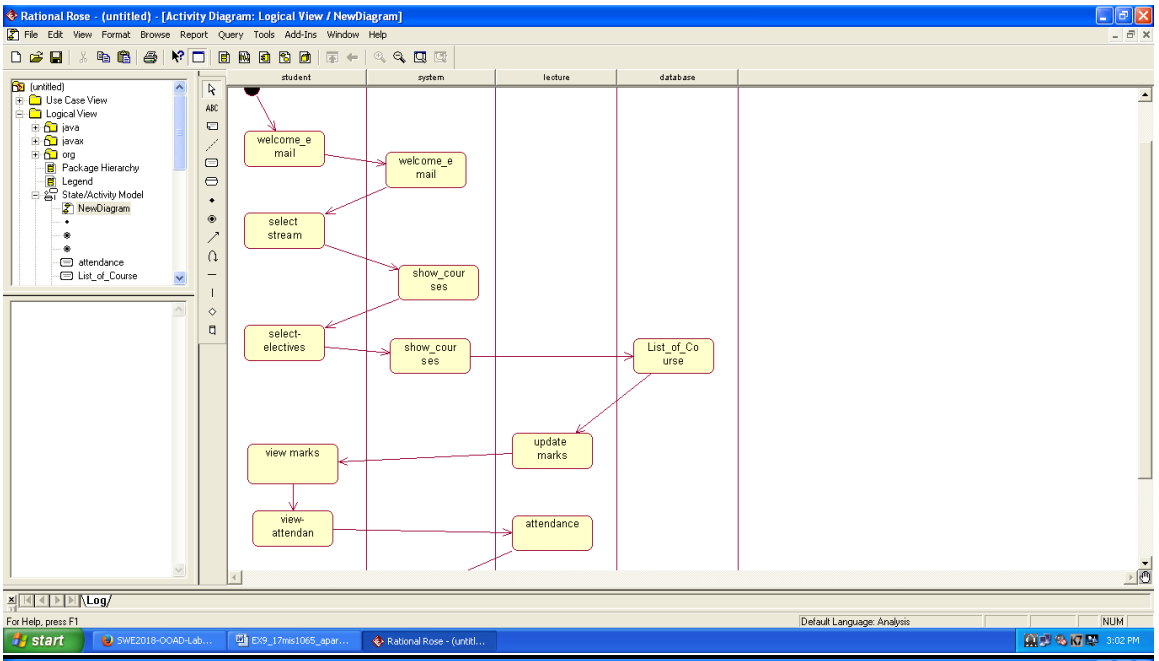
attributes:

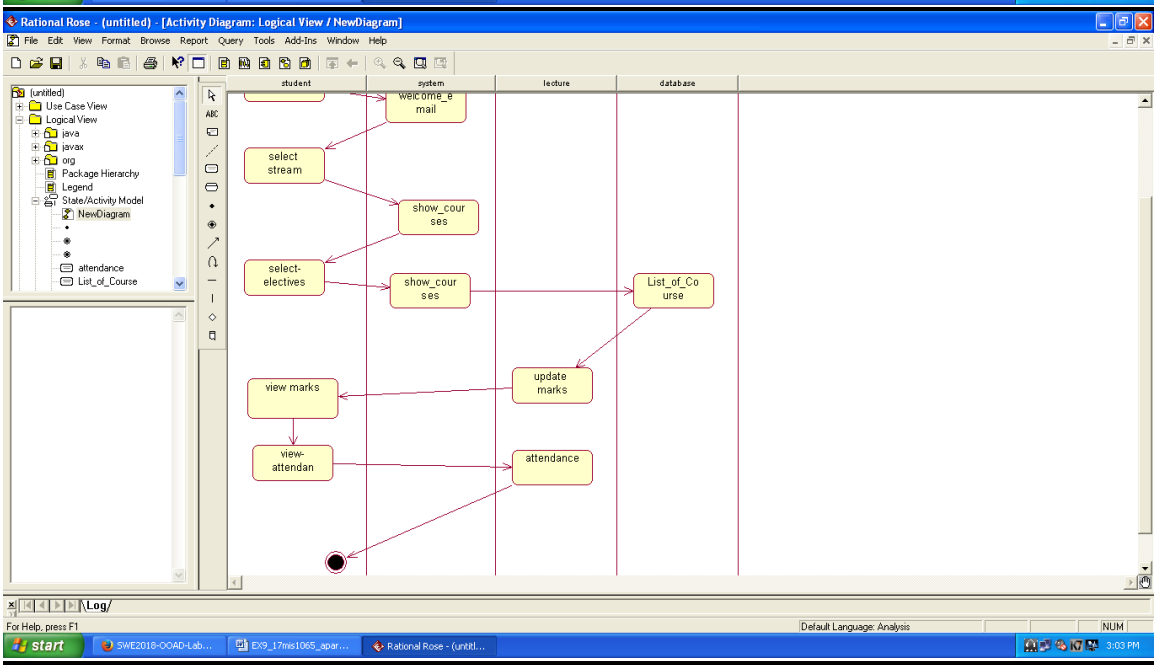
studentname
hostelid
hostelname
feedetails


Rational Rose - (untitled) - [Class Diagram: Logical View / Package Hierarchy]
File Edit View Format Browse Report Query Tools Add-Ins Window Help
(untitled)
Use Case View
Logical View
java
javax
org
Package Hierarchy
Legend
NewDiagram2
Database
HOD
NewClass
NewClass2
residental status
student
system
Associations
Component View
Deployment View
Model Properties
system
name : string
password : string
email : string
address : string
phno : int
getname()
getpassword()
getemail()
getaddress()
getphoneno()
Database
coursename : string
password : string
email : string
courseid : int
facultycode : string
opname()
gercourse()
getfacultyname()
get no of courses()
residental status
name : string
student id : int
gethostelname()
gethostelroomno()
getfeesdetails()
HOD
lecturerid : int
department : string
updatemarks()
attendance()
viewmarks()
changeofcourses()
student
name : string
password : integer
getapplicationid()
welcome email()
get selectstream()
getselect electives()
getmandatory courses()
1*
1
1
For Help, press F1
Default Language: Analysis
start
Class diagram for Co...
SWE2018-OOAD-Lab...
Document1 - Microsof...
Rational Rose - (untitl...
3:29 PM

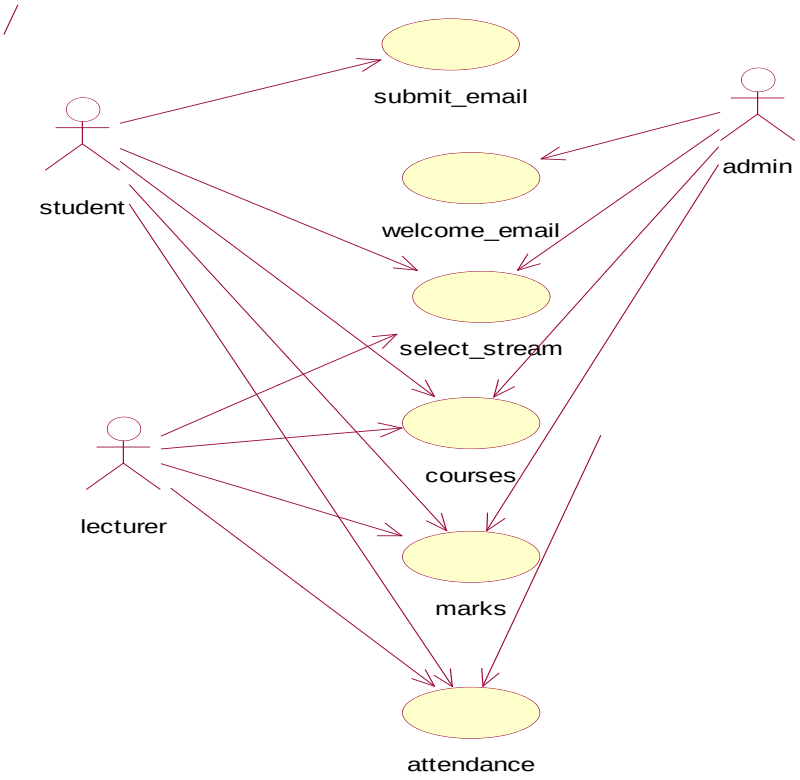

system
name : string
password : string
email : string
address : string
phno : int
getname()
getpassword()
getemail()
getaddress()
getphoneno()
Database
coursename : string
password : string
email : string
courseid : int
facultycode : string
opname()
gercourse()
getfacultyname()
get no of courses()
residental status
name : string
student id : int
gethostelname()
gethostelroomno()
getfeesdetails()
HOD
lecturerid : int
department : string
updatemarks()
attendance()
viewmarks()
changeofcourses()
student
name : string
password : integer
getapplicationid()
welcome email()
get selectstream()
getselect electives()
getmandatory courses()
1*
1
1

To create an activity diagram for Course registration system.

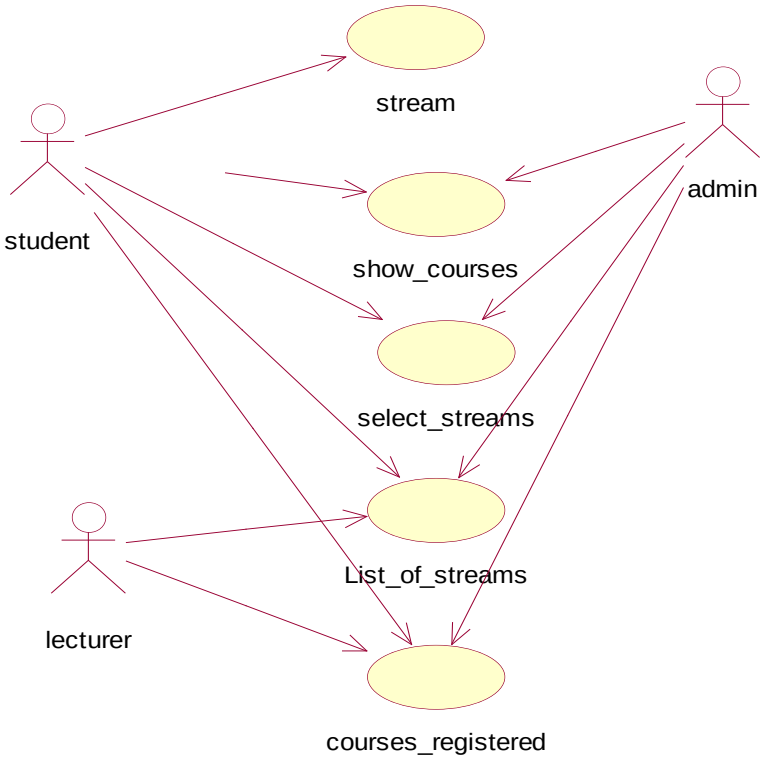




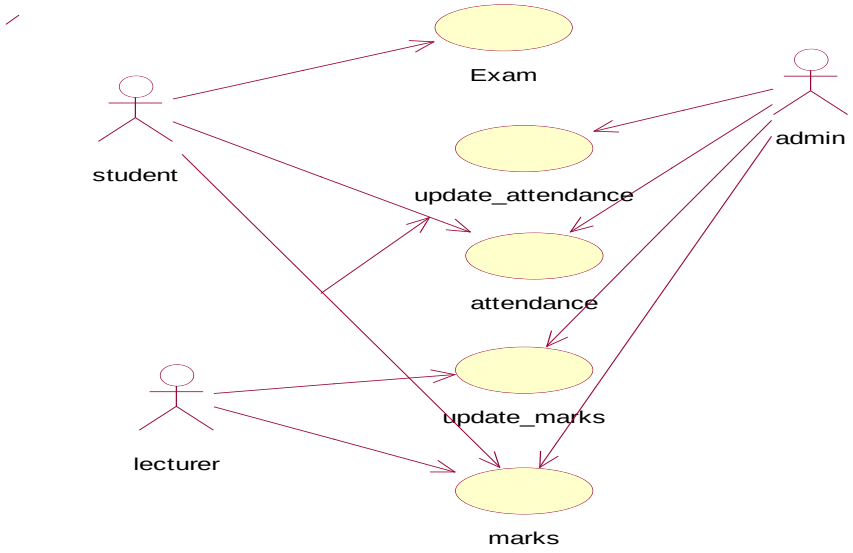
USE_CASE


submit_email
student
admin
welcome_email
select_stream
courses
lecturer
marks
attendance

SUB USECASE:

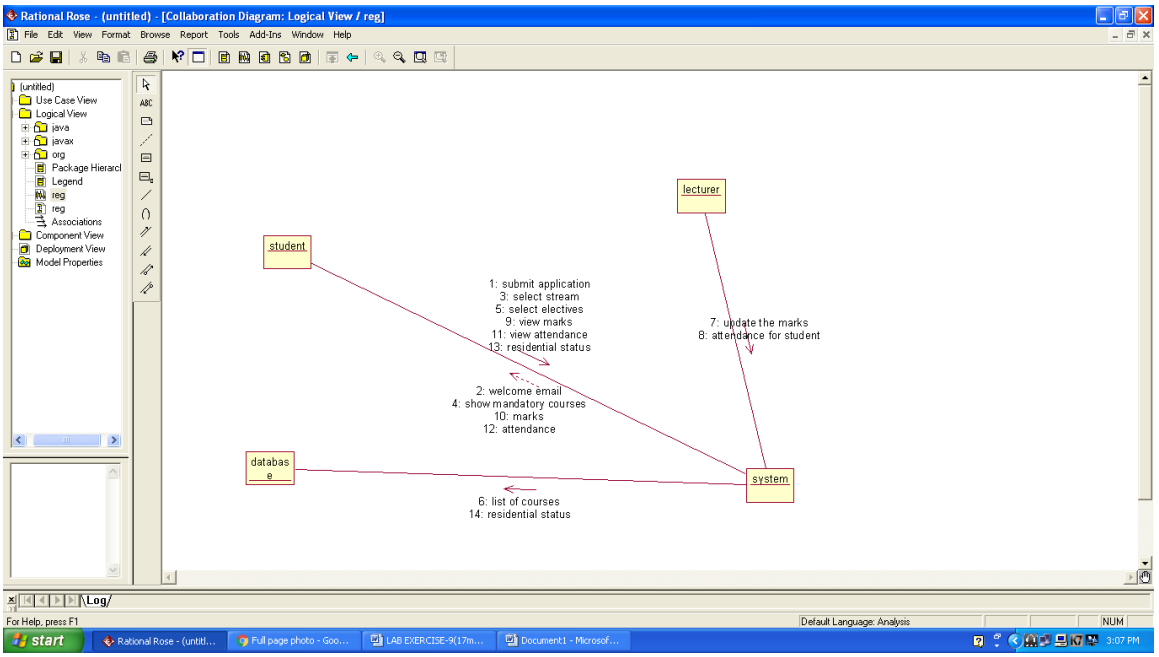

stream
admin
student
show_courses
select_streams
List_of_streams
lecturer
courses_registered

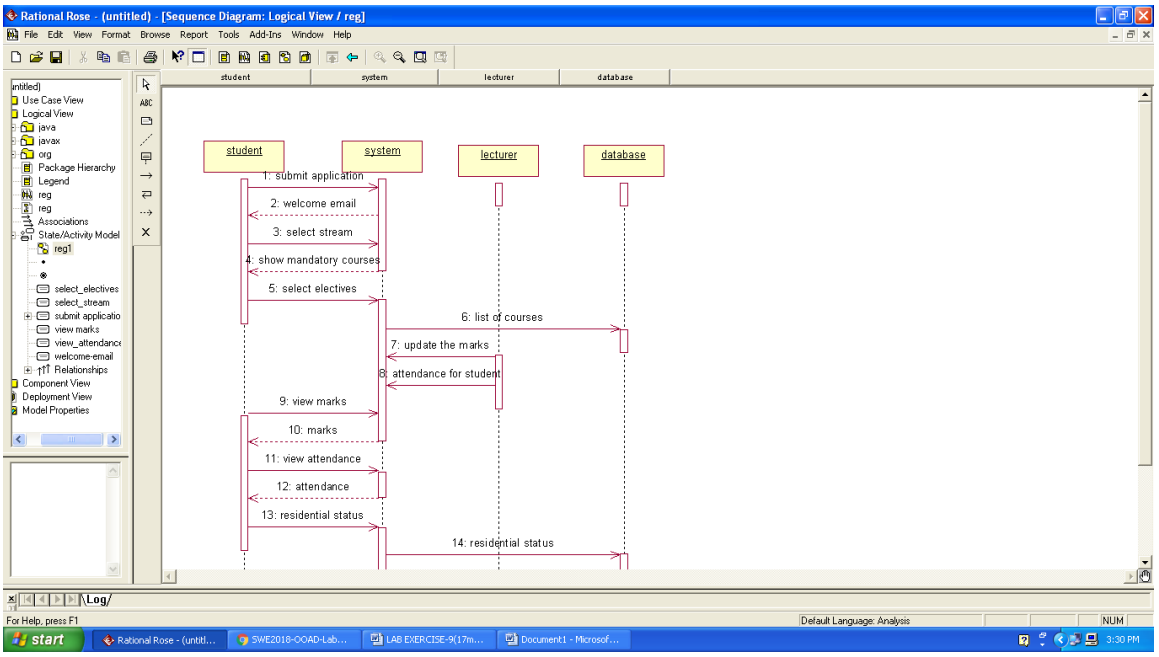
SUB USECASE



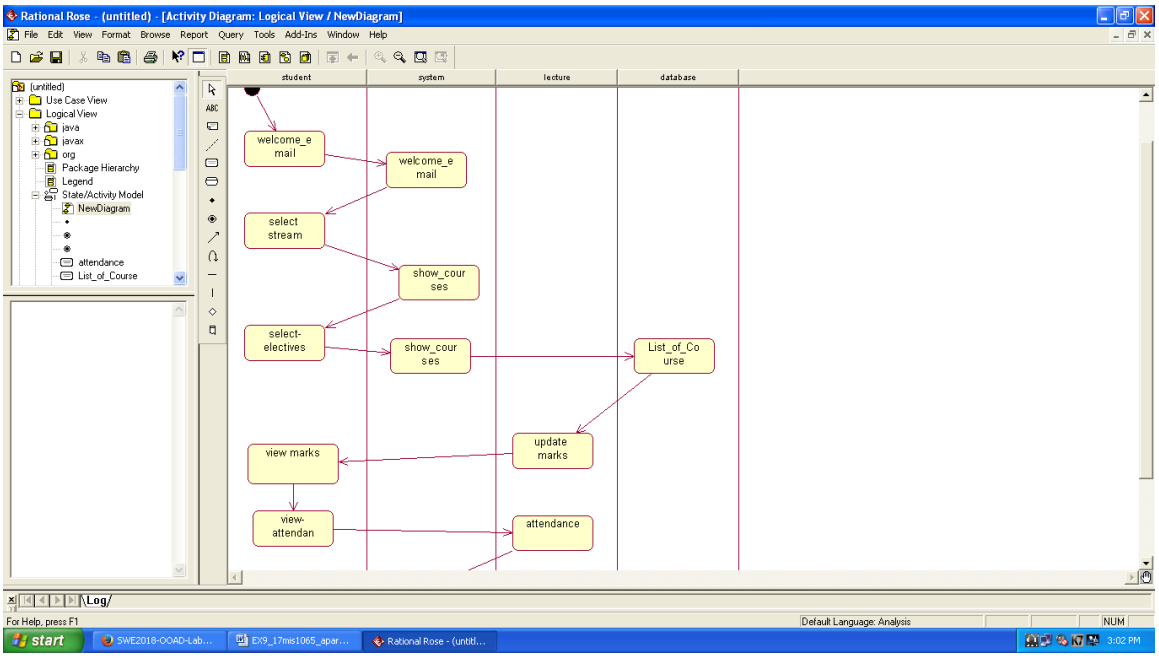
a. Identify the actors and draw the Usecase diagram b. Identify the classes & attributes and draw Class diagram.

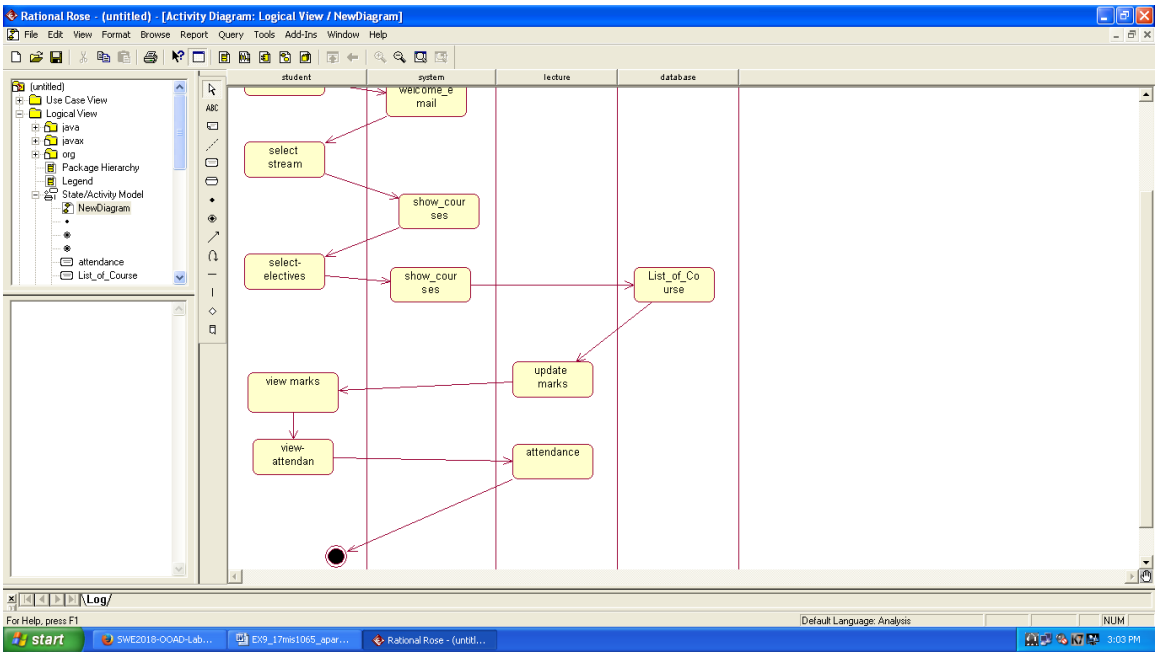
c. Draw Collaboration diagram and Sequence diagram



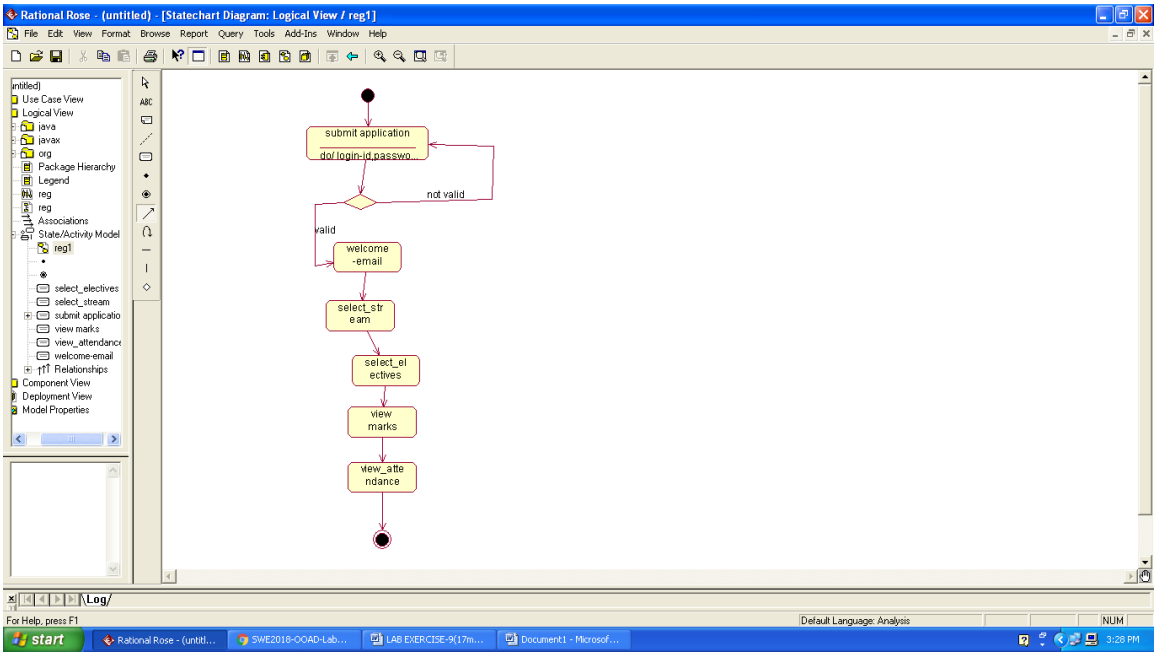


d. Draw Activity diagram





e. Draw State-chart diagram



LAB EXERCISE 11

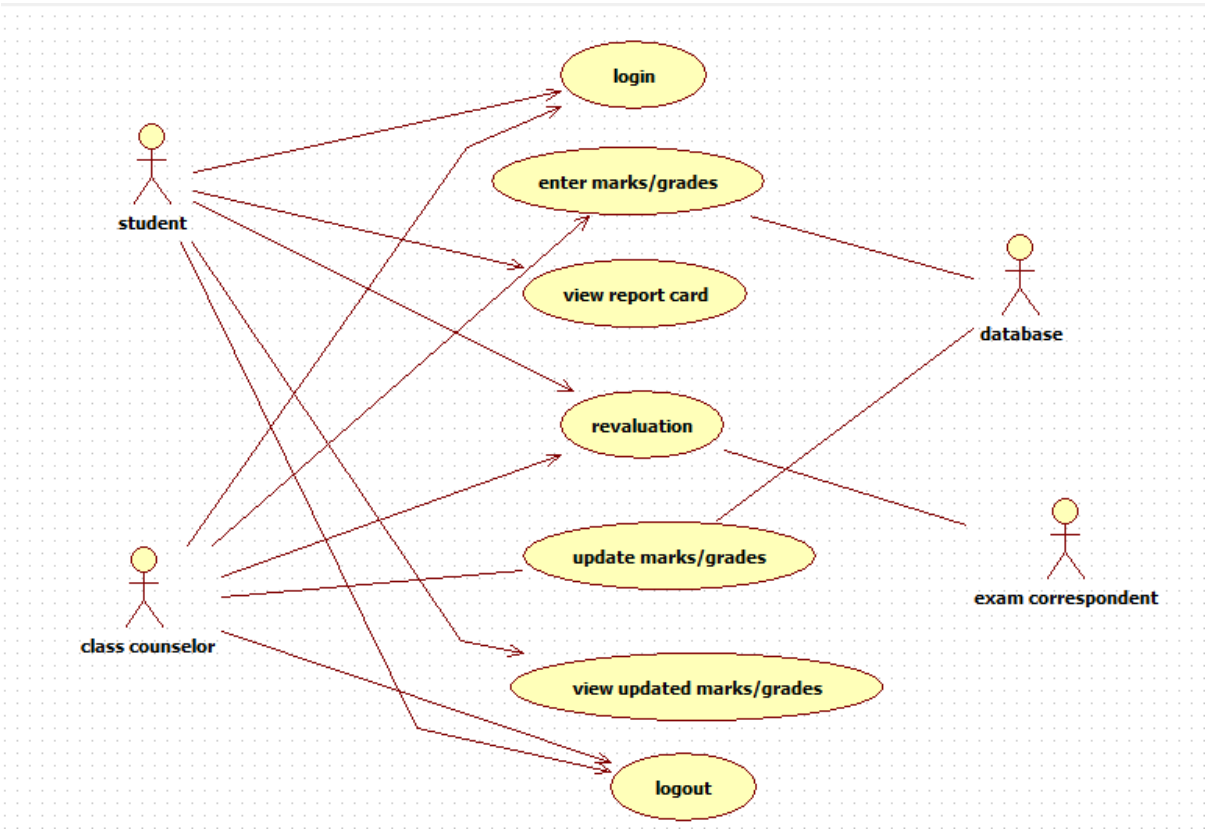
STUDENT MARK ANALYSIS SYSTEM

QUESTION:

The XYZ University has decided to provide web-based student mark analysis system for the students in different Engineering colleges. The University maintains a database which contains student academic details belonging to various colleges. Colleges have various departments and each department has at most 4 sets of students studying in different semesters. If the particular semester students have got 2 sections then totally 8 class counselors are in charge for those classes. Likewise, in each and every department and colleges, there will be a set of class counselors who will operate the Student Mark Analysis System and have the University correspondence. The student will have maximum of 6 theory subjects and 2 practical subjects in each semester. Each subject is evaluated for 100 out of which 20 marks for internals and 80 for external. The class counselor's responsibility is to put internal marks out of 20 and collects the external marks which are out of 80 from university after central valuation through university exam correspondent of the college. The class counselor analyses the marks got by the student in every subject based on the criteria. He/She calculates the overall pass percentage of the class and also department overall percentage is calculated. From each department overall percentage, the overall performance of the college is fetched. Based on some criteria, department wise 3 well performed students in every semester are identified and honored. The students can logon to the specified website and can view his/her report card. The students can also apply for revaluation by downloading appropriate form and filling up the details. He/She can send it to the university through university exam correspondent by attaching the printed revaluation form and Demand Draft for the specified amount. If there is a correction/no change in the mark, university will intimate through university exam correspondent. The class counselor then revises/updates the mark analysis that is done for specified class and corresponding details are updated. a. Identify the actors and draw the Usecase diagram b. Identify the classes & attributes and draw Class diagram c. Draw Collaboration diagram and Sequence diagram d. Draw Activity diagram e. Draw State-chart diagram

STUDENT MARK ANALYSIS SYSTEM

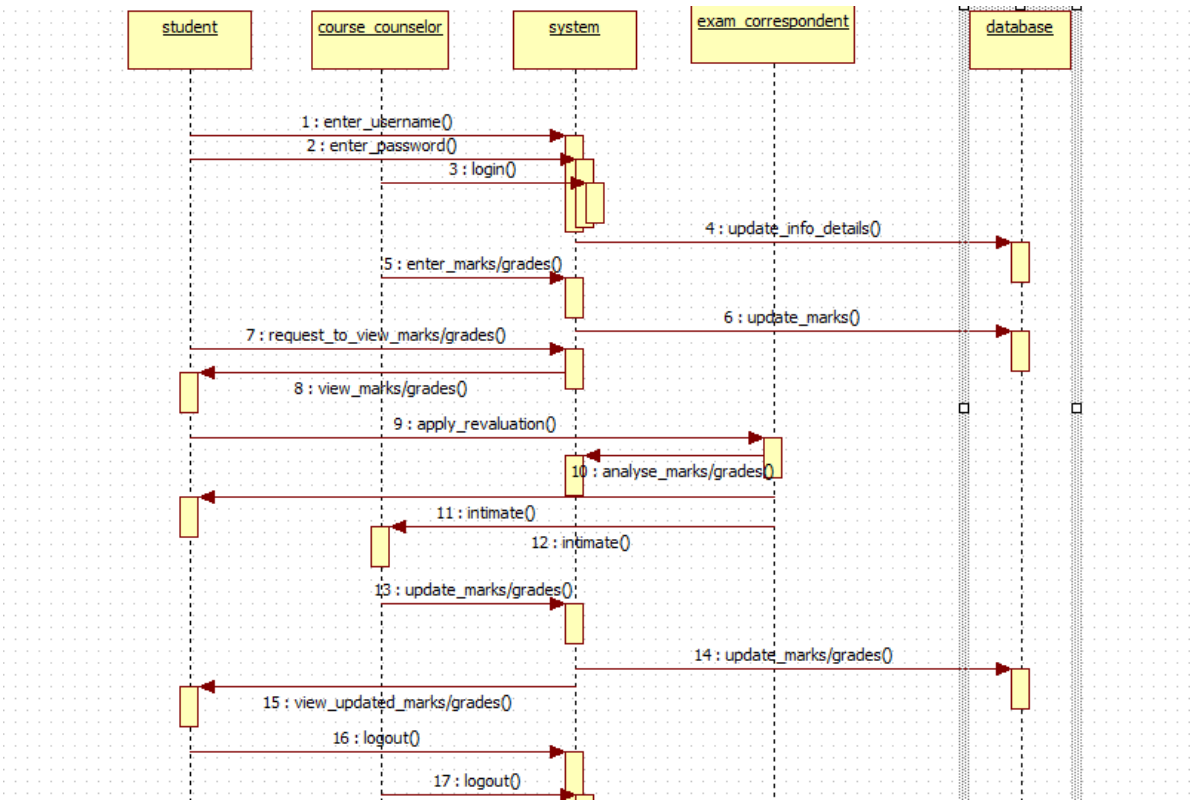
A) USECASE DIAGRAM:



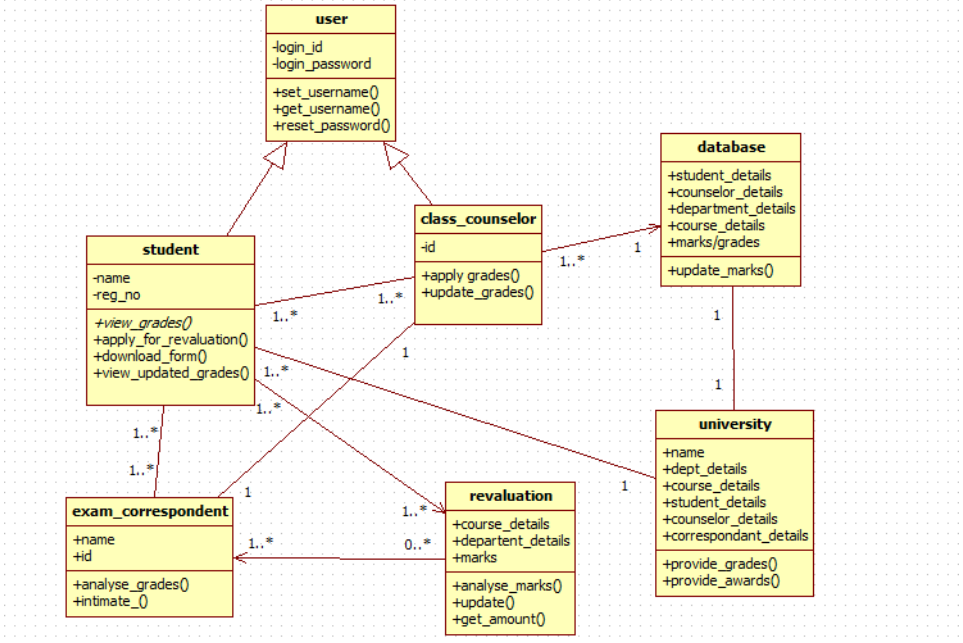
ACTORS:
Student
Class counsellor Exam correspondent Database

USECASES:
Login Logout
View updated marks Revaluation
Reprt card

C) 1)SEQUENCE DIAGRAM :



B)CLASS DIAGRAM :



Class: student Attributes:
name, reg no
Methods:
View grade Download form

Class: revaluation Attributes: course details
Department details
Methods: update,
Get amount

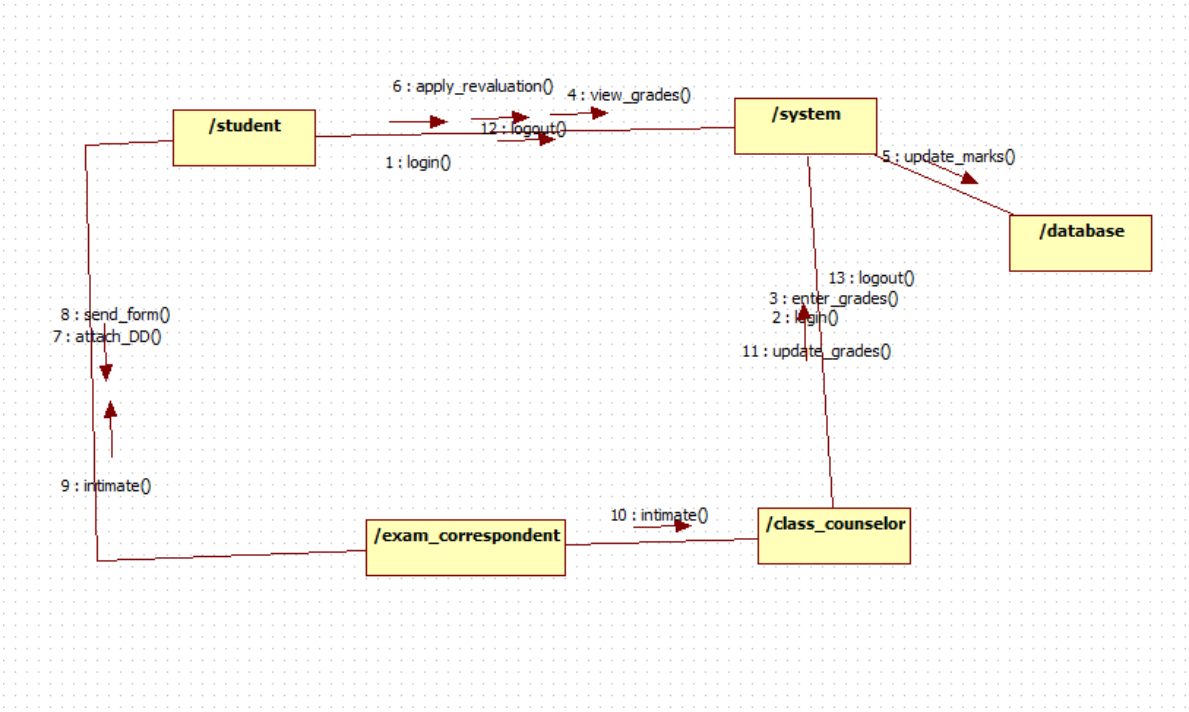
Class: database Attributes: Student details Counsellor details **Method:**
Update marks

Class: university Attributes: Name
Department details Course details course details

Department details
Methods:
Provide grade Provide marks

Class: class counsellor
Attributes:
id Methods:
Apply grades Update marks

2)COLLABORATION DIAGRAM :



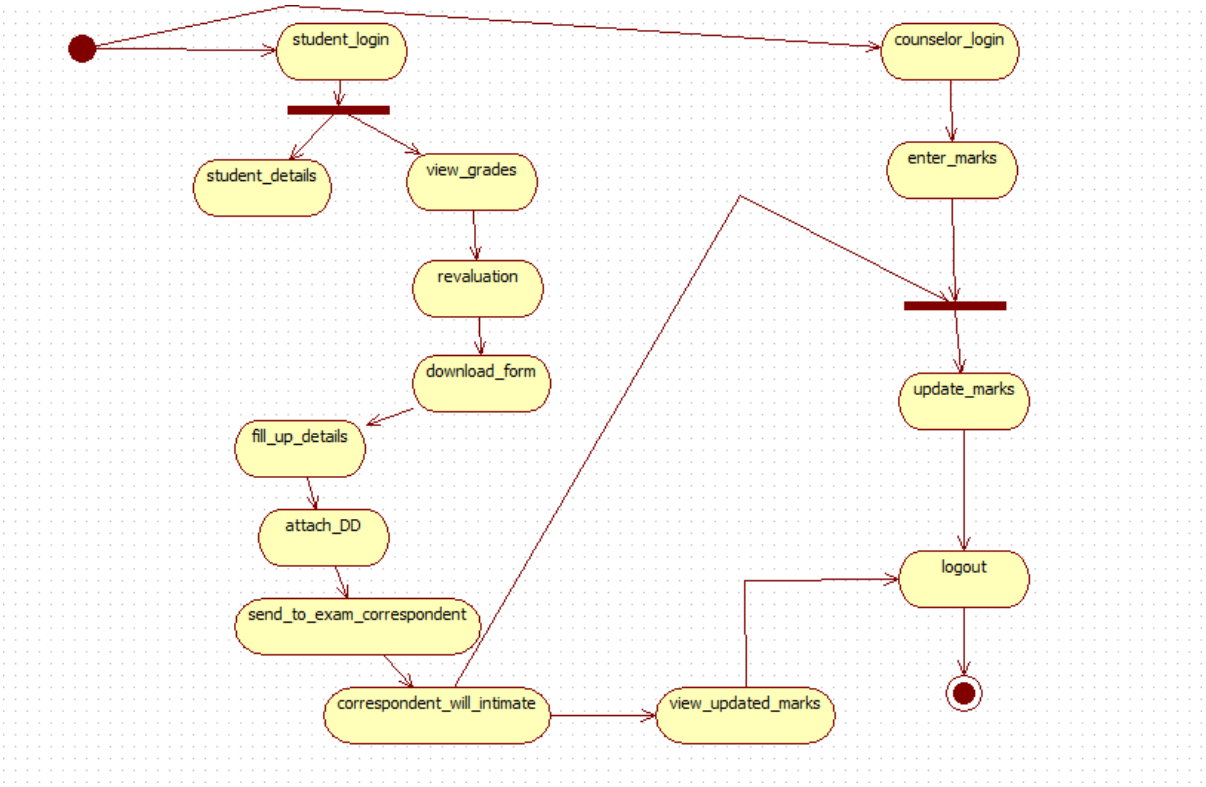
Objects: System Database

Actors: Student Administration
Class counsellor Exam administrator

Links:
View updated marks Revaluation
Reprt card

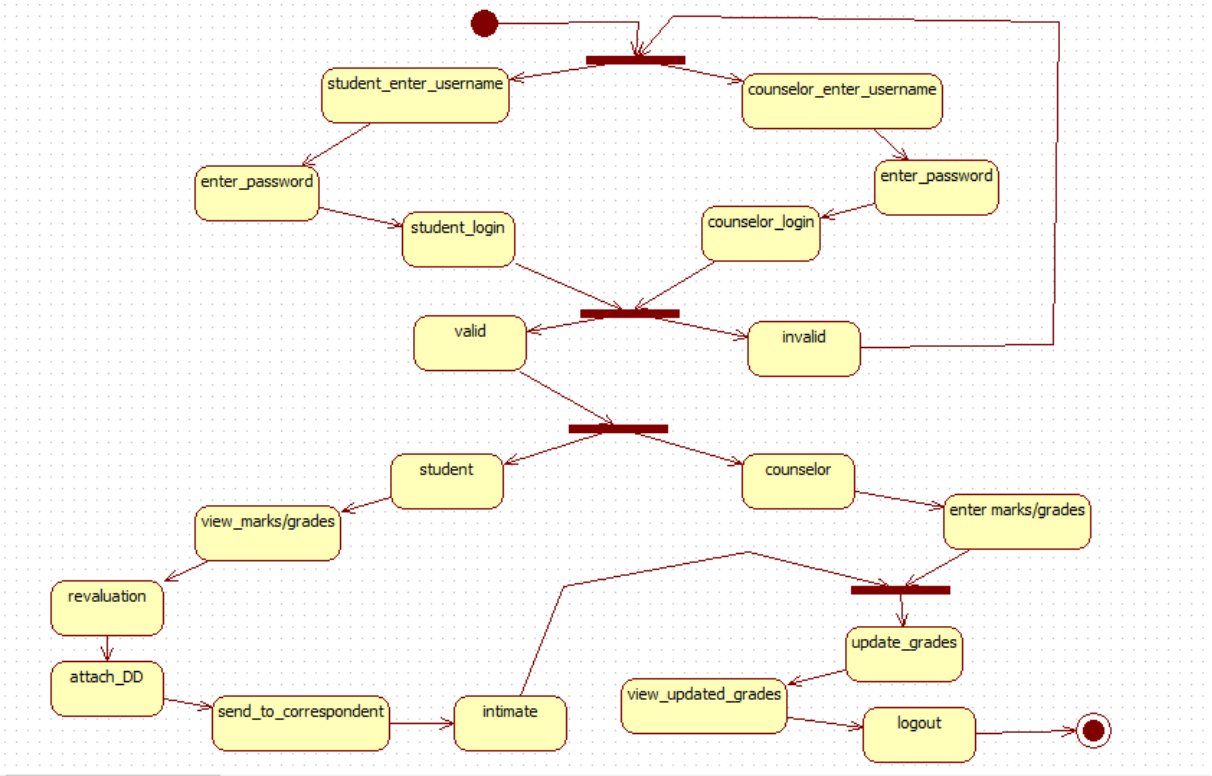
Messages: Send form Intimate Attach DD

D) ACTIVITY DIAGRAM :



Activities: name, reg no
Send form Intimate Attach DD Student Administration
Class counsellor Exam administrator

E)STATE CHART DIAGRAM :



States:
Intimate Attach DD Student Revaluation Intimate Counsellor
Counsellor login View marks
Enter marks/grades Enter password Student login
Student enter username stop

END