Exp No	**Experiment Name**	
1	Passport automation System	
2	Book Bank	
3	Online Exam Registration	
4	Stock Maintenance System	
5	Online course reservation system	
6	E-ticketing	
7	Software Personnel Management System	
8	Credit Card Processing	
9	E-book management System.	
10	Recruitment system	

CS507PC

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III YEAR LABS SYLLABUS (R18)
Applicable From 2018-19 Admitted Batch

SOFTWARE ENGINEERING LAB

III Year B.Tech. IT I-Sem

L	T	P	C
0	0	3	1.5

Prerequisites

1. A course on "Programming for Problem Solving"

Co-requisite

1. A Course on "Software Engineering"

Course Objectives

1. To have hands on experience in developing a software project by using various software engineering principles and methods in each of the phases of software development.

Course Outcomes

1. Ability to translate end-user requirements into system and software requirements
2. Ability to generate a high-level design of the system from the software requirements
3. Will have experience and/or awareness of testing problems and will be able to develop a simple testing report

List of Experiments

Do the following 7 exercises for any two projects given in the list of sample projects or any other projects:

1) Development of problem statement.
2) Preparation of Software Requirement Specification Document, Design Documents and Testing Phase related documents.
3) Preparation of Software Configuration Management and Risk Management related documents.
4) Study and usage of any Design phase CASE tool
5) Performing the Design by using any Design phase CASE tools.
6) Develop test cases for unit testing and integration testing
7) Develop test cases for various white box and black box testing techniques.

Sample Projects:

1. Passport automation System
2. Book Bank
3. Online Exam Registration
4. Stock Maintenance System
5. Online course reservation system
6. E-ticketing
7. Software Personnel Management System
8. Credit Card Processing
9. E-book management System.
10. Recruitment system

TEXT BOOKS:

1. Software Engineering, A practitioner's Approach- Roger S. Pressman, 6th edition, Mc Graw Hill International Edition.
2. Software Engineering- Sommerville, 7th edition, Pearson Education.
3. The unified modeling language user guide Grady Booch, James Rambaugh, Ivar Jacobson, Pearson

Education.

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- To have hands on experience in developing a software project by using various software engineering principles and methods in each of the phases of software development.

COURSE OUTCOMES:

IT318.CO1: Ability to translate end-user requirements into system and software requirements

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LIST OF EXPERIMENTS

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EXPERIMENT 1

PASSPORT AUTOMATION SYSTEM

AIM

To develop the Passport Automation System using rational rose tools/ StarUML

PROBLEM ANALYSIS AND PROJECT PLAN

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. 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.

PROBLEM STATEMENT

1. Passport Automation System is used in the effective dispatch of passport to all of the applicants. This system adopts a comprehensive approach to minimize the manual work and schedule resources, time in a cogent manner.

2. The core of the system is to get the online registration form (with details such as name, address etc.,) filled by the applicant whose testament is verified for its genuineness by the Passport Automation System with respect to the already existing information in the database.

3. This forms the first and foremost step in the processing of passport application. After the first round of verification done by the system, the information is in turn forwarded to the regional administrator's (Ministry of External Affairs) office.

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1.0 INTRODUCTION		
Passport Automation System	is an interface between the Applicant and	the

Authority responsible for the Issue of Passport. It aims at improving the efficiency in the Issue of Passport and reduces the complexities involved in it to the maximum possible extent.

PURPOSE

If the entire process of 'Issue of Passport' is done in a manual manner then it would take several months for the passport to reach the applicant. Considering the fact that the number of applicants for passport is increasing every year, an Automated System becomes essential to meet the demand. So this system uses several programming and database techniques to elucidate the work involved in this process. As this is a matter of National Security, the system has been carefully verified and validated in order to satisfy it.

SCOPE

The System provides an online interface to the user where they can fill in their personal details. The authority concerned with the issue of passport can use this system to reduce his workload and process the application in a speedy manner.Provide a communication platform between the applicant and the administrator Transfer of data between the Passport Issuing Authority and the Local Police for verification of applicant's information.

DEFINITIONS, ACRONYMS AND THE ABBREVIATIONS

1. Administrator - Refers to the super user who is the Central Authority who has been vested with the privilege to manage the entire system. It can be any higher official in the Regional Passport Office of Ministry of External Affairs.
2. Applicant - One who wishes to obtain the Passport.
3. PAS - Refers to this Passport Automation System.

TECHNOLOGIES TO BE USED • Microsoft Visual Basic 6.0

TOOLS TO BE USED • Rational Rose tool or StarUML (for developing UML Patterns)

OVERVIEW

SRS includes two sections overall description and specific requirements - Overall description will describe major role of the system components and inter- connections. Specific requirements will describe roles & functions of the actors.

OVERALL DESCRIPTION

PRODUCT PERSPECTIVE

The PAS acts as an interface between the 'applicant' and the 'administrator'. This system tries to make the interface as simple as possible and at the same time not risking the security of data stored in. This minimizes the time duration in which the user receives the passport.

SOFTWARE INTERFACE

1. **Front End Client** - The applicant and Administrator online interface is built using Microsoft Visual Basic 6.0.
2. **Back End** – MS Access database

HARDWARE INTERFACE

The server is directly connected to the client systems. The client systems have access to the database in the server.

SYSTEM FUNCTIONS

3. Secure Registration of information by the Applicants.
4. Message box for Passport Application Status Display by the Administrator.
5. Administrator can generate reports from the information and is the only authorized personnel to add the eligible application information to the database.

USER CHARACTERISTICS

1. Applicant - They are the people who desires to obtain the passport and submit the information to the database.
2. Administrator - He has the certain privileges to add the passport status and to approve the issue of passport. He may contain a group of persons under him to verify the documents and give suggestion whether or not to approve the dispatch of passport.
3. Police - He is the person who upon receiving intimation from the PAS, perform a personal verification of the applicant and see if he has any criminal case against him before or at present. He has been vetoed with the power to decline an application by suggesting it to the Administrator if he finds any discrepancy with the applicant. He communicates via this PAS.

CONSTRAINTS

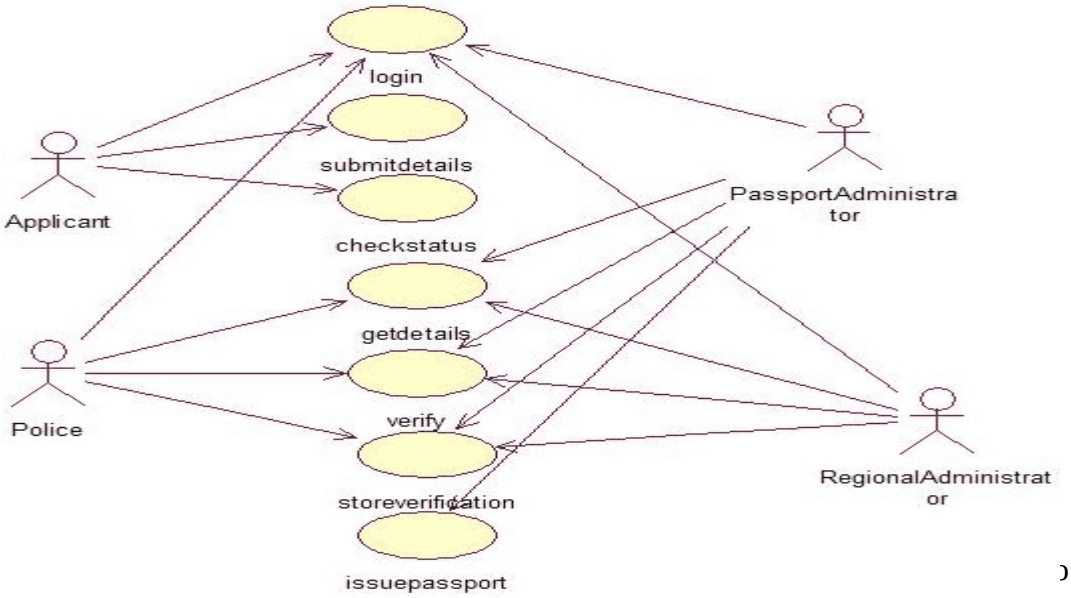
1. The applicants require a computer to submit their information.
2. Although the security is given high importance, there is always a chance of intrusion in the web world which requires constant monitoring.
3. The user has to be careful while submitting the information. Much care is required.

ASSUMPTIONS AND DEPENDENCIES

1. The Applicants and Administrator must have basic knowledge of computers and English Language.
2. The applicants may be required to scan the documents and send.

UML DIAGRAMS

Sno	UML DIAGRAMS
1	Use Case diagram
2	Class diagram
3	Interaction diagram
4	Sequence diagram
5	Collaboration diagram
6	State Chart diagram
7	Activity diagram
8	Component diagram
9	Deployment diagram
10	Package diagram



DOCUMENTATION OF USECASE DIAGRAM

a. The actors in use case diagram are Applicant, regional administrator, database, passport Administrator, Police.

b. The use cases are Login, give details, logout, collect details, verification, issue.

c. The actors use the use case are denoted by the arrow

d. The login use case checks the username and password for applicant, regional administrator, passport administrator and police.

e. The submit details use case is used by the applicant for submitting his details

f. The check status use case is used by the applicant for checking the status of the application process.

g. The get details, verify and store verification use case is used by passport administrator, regional administrator, and police.

h. The details use case is used for getting the details form the database for verification

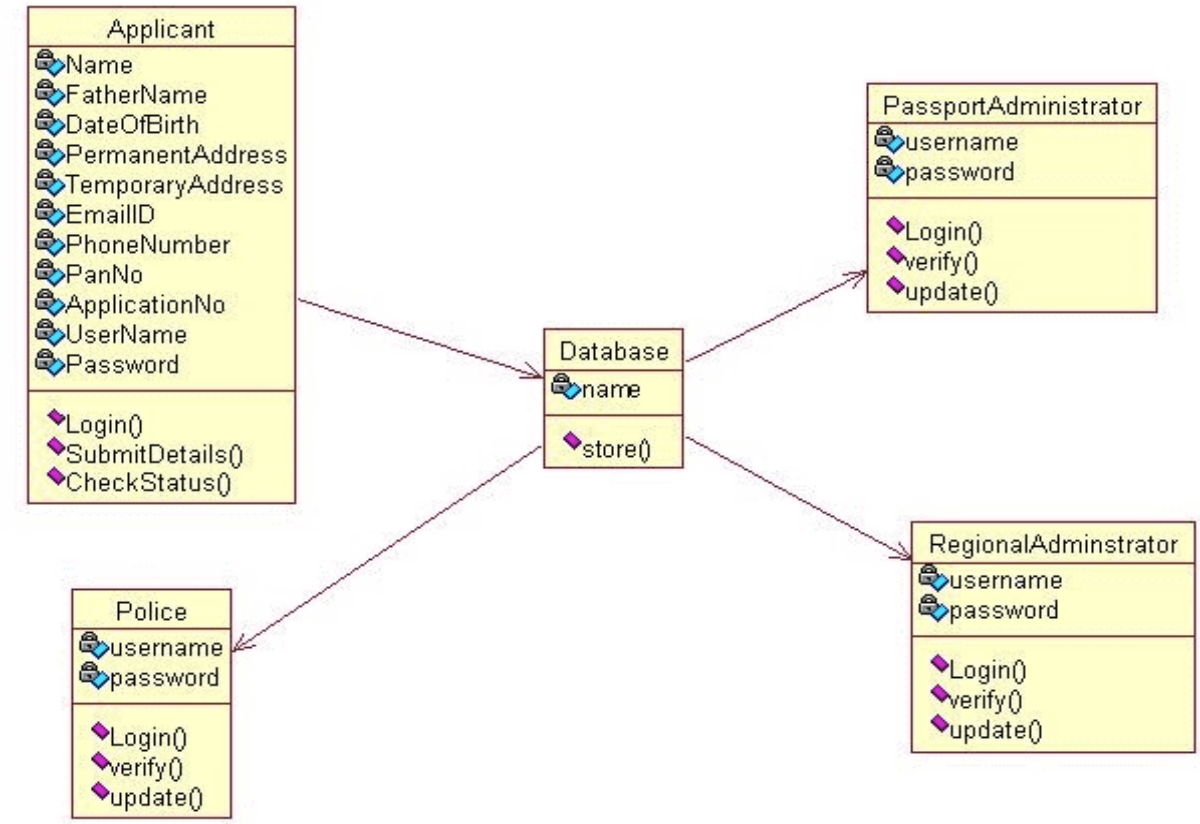
2. The verify use case is used for verifying the details by comparing the data in the database.

a. The store verification use case is to update the data in the database

b. And finally the issue passport use case is used by the passport administrator for issuing passport who's application verified successfully by all the actor .

CLASSDIAGRAM

A class is drawn as rectangle box with three compartments or components separated by horizontal lines. The top compartment holds the class name and middle compartment holds the attribute and bottom compartment holds list of operations.



DOCUMENTATION OF CLASS DIAGRAM

a. **APPLICANT**-The applicant has attribute such as name and password and operations are login, give details and logout. The applicant login and fill the details that are required for applying the passport .After applying the person can view the status of the passport verification process

b. **THE DATABASE**-The database has attributed such as name and operation is store. The purpose is to store the data.

c. **REGIONAL ADMINISTRATOR**- The regional administrator has attribute such as name and operation are get details, verify details and send. The regional administrator get the details form database and verify with their database

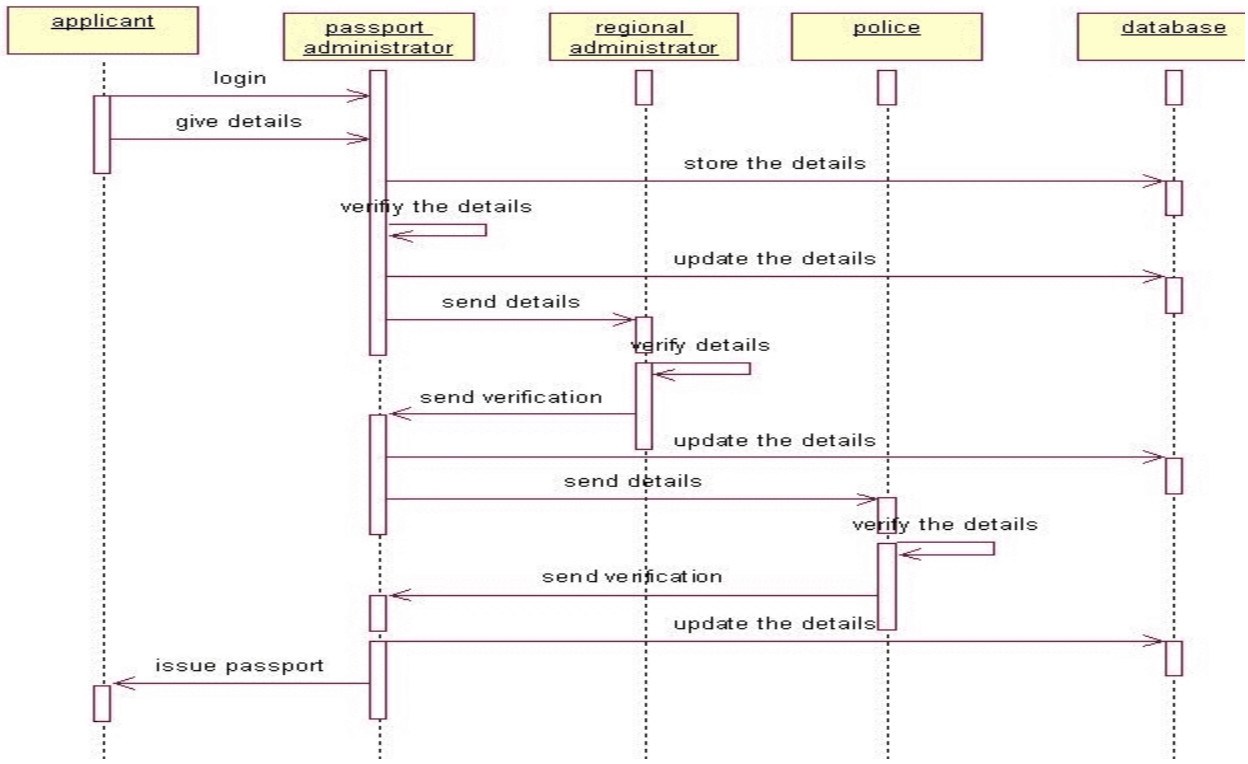
d. **PASSPORT ADMINISTRATOR**-The passport administrator has attributed such as name and operation are get details, verify details and issue. The passport administrator get the details form database and verify with their database , update the verification and issue the passport

e. **THE POLICE**-The police has attribute such as name and operation are get details, verify details and send. The police get the details form database and verify with their database , update the verification in the database

SEQUENCE DIAGRAM

A sequence diagram shows an interaction arranged in time sequence,

It shows object participating in interaction by their lifeline by the message they exchange arranged in time sequence. Vertical dimension represent time and horizontal dimension represent object.



DOCUMENTATION OF SEQUENCE DIAGRAM.

a. The applicant login the database and give his details and database store the details.

b. The passport administrator get the details from the database and do verification and the forward to regional administrator.

c. The regional administrator get details form passport administrator and perform verification and send report to passport administrator.

d. The police get the details form passport administrator and perform verification and send report to passport administrator

COLLABORATION DIAGRAM

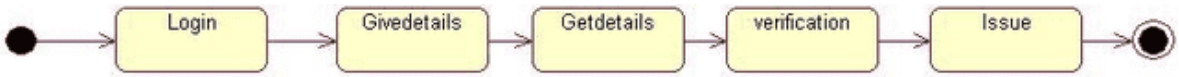
A collaboration diagram is similar to sequence diagram but the message in number format. In a collaboration diagram sequence diagram is indicated by the numbering the message. A collaboration diagram, also called a communication diagram or interaction diagram, A sophisticated modeling tool can easily convert a collaboration diagram into a sequence diagram and the vice versa. A collaboration diagram resembles a flowchart that portrays the roles, functionality and behavior of individual objects as well as the overall operation of the system in real time

DOCUMENTATION OF COLLABORATION DIAGRAM

- The applicant, passport administrator, regional administrator, police and database functions are show in sequence number
- The applicant first login the passport automation system and submit his details the passport administrator, regional administrator and police verification are denoted.

STATE CHART DIAGRAM

The state chart diagram contains the states in the rectangle boxes and starts in indicated by the dot and finish is indicated by dot encircled. The purpose of state chart diagram is to understand the algorithm in the performing method.



DOCUMENTATION OF STATE CHART DIAGRAM

a. The states of the passport automation system are denoted in the state chart diagram

b. Login state represent authentication for login the passport automation system.

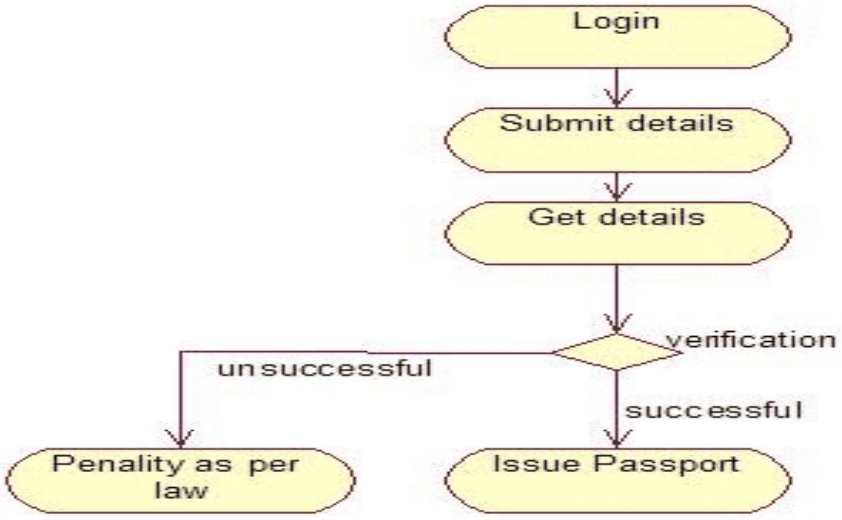
c. In this state, it checks whether the applicant has provided all the

details that is required.

d. Police, regional administrator and passport administrator get necessary details and verification of the applicant are denoted from the Get detail state and verification state

ACTIVITY DIAGRAM

An activity diagram is a variation or special case of a state machine in which the states or activity representing the performance of operation and transitions are triggered by the completion of operation. The purpose is to provide view of close and what is going on inside a use case or among several classes. An activity is shown as rounded box containing the name of operation.



DOCUMENTATION OF ACTIVITY DIAGRAM

a. The activities in the passport automation system are login, submit details, get details, issue passport and penalty and verification.

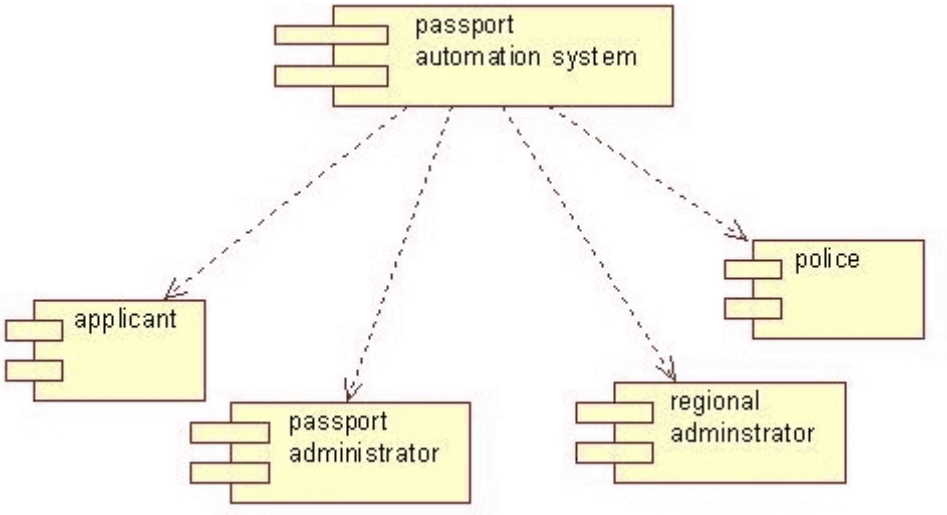
b. In the login activity applicant give username and password and then login into the passport automation system after then fill the details that are required for application.

c. After the verification procedure completed successfully the passport is issued to the applicant.

COMPONENT DIAGRAM

The component diagram is represented by figure dependency and it is a graph of design of

figure dependency. The component diagram's main purpose is to show the structural relationships between the components of systems. It is represented by boxed figure. Dependencies are represented by communication association.



DOCUMENTATION OF COMPONENT DIAGRAM

a. The components in the passport automation system are passport automation system, applicant, passport administrator, regional administrator, and police.

b. Applicant ,passport administrator, regional administrator and police are dependent on passport automation system are shown by the dotted arrow

DEPLOYMENT DIAGRAM

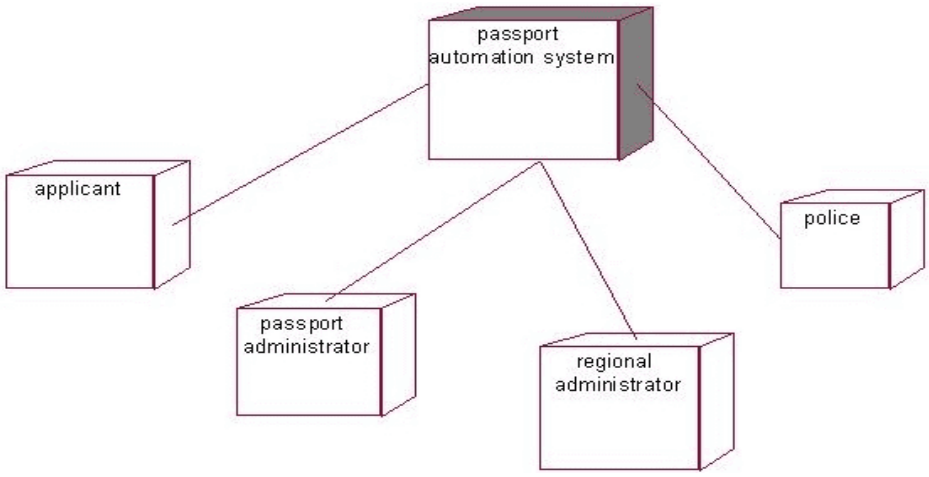
It is a graph of nodes connected by communication association. It is represented by a three dimensional box. A deployment diagram in the unified modeling language serves to model the physical deployment of artifacts on deployment targets. Deployment diagrams show "the allocation of artifacts to nodes according to the Deployments defined between them. It is represented by 3-dimentional box. Dependencies are represented by communication association. The basic element of a deployment diagram is a node of two types

DEVICE NODE–

A physical computing resource with processing and memory service to execute software, such as a typical computer or a mobile phone.

EXECUTION ENVIRONMENT NODE

This is a software computing resource that runs within an outer node and which itself provides a service to host an execute other executable software element.



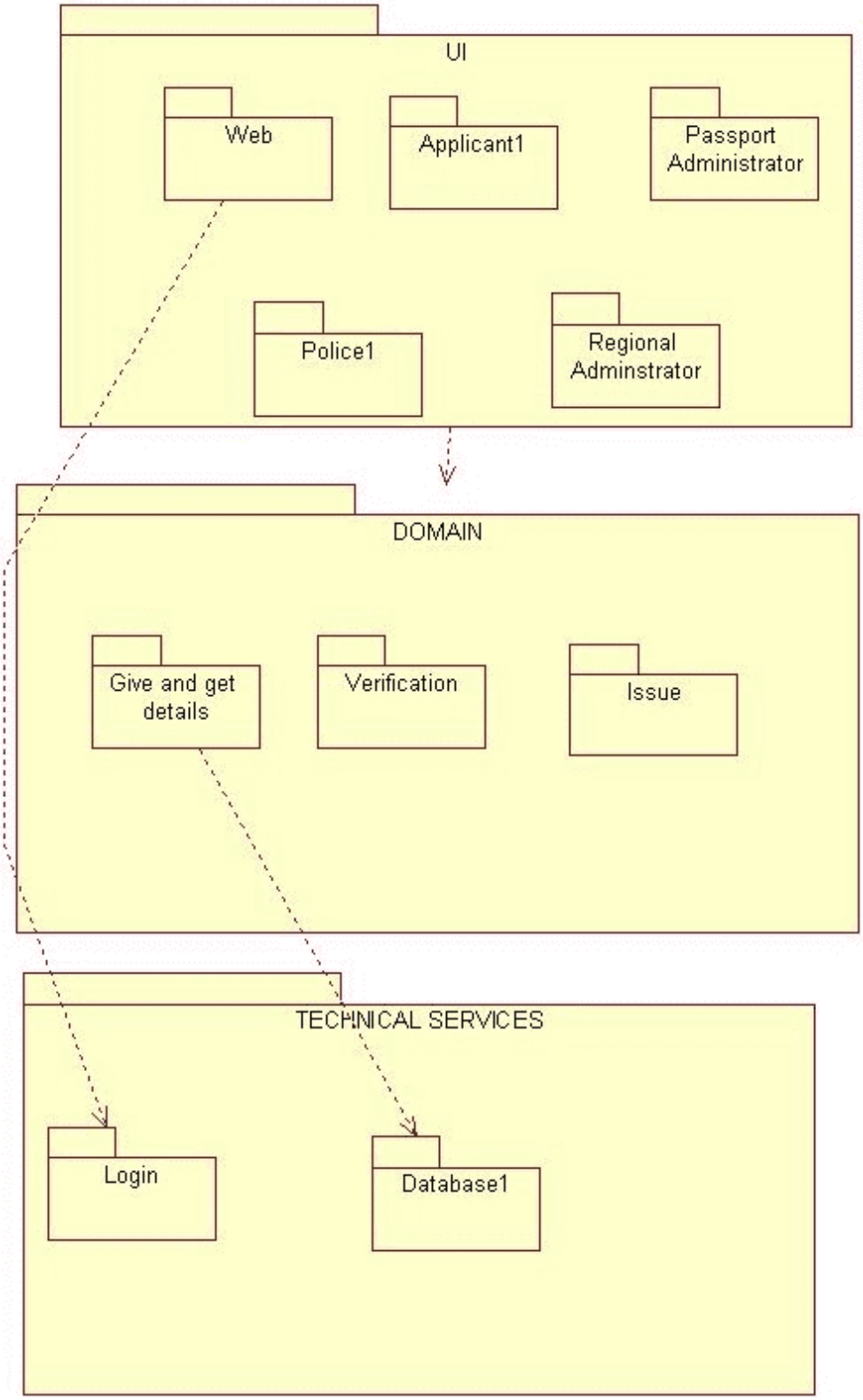
DOCUMENTATION OF DEPLOYMENT DIAGRAM

The device node is passport automation system and execution environment node are applicant passport administrator, regional administrator, and police.

PACKAGE DIAGRAM

A package diagram is represented as a folder shown as a large rectangle with a top attached to its upper left corner. A package may contain both sub ordinate package and ordinary model elements. All uml models and diagrams are organized into package. A package diagram in unified modeling language that depicts the dependencies between the packages that make up a model. A Package Diagram (PD) shows a grouping of elements in the OO model, and is a Cradle extension to UML. PDs can be used to show groups of classes in Class Diagrams (CDs), groups of components or processes in Component Diagrams (CPDs), or groups of processors in Deployment Diagrams (DPDs).
There are three types of layer. They are

- User interface layer
- Domain layer
- Technical services layer


UI
Web
Applicant1
Passport Administrator
Police1
Regional Adminstrator
DOMAIN
Give and get details
Verification
Issue
TECHNICAL SERVICES
Login
Database1

DOCUMENTATION OF PACKAGE DIAGRAM

The three layer in the passport automation system are user interface layer, domain layer, technical service layer

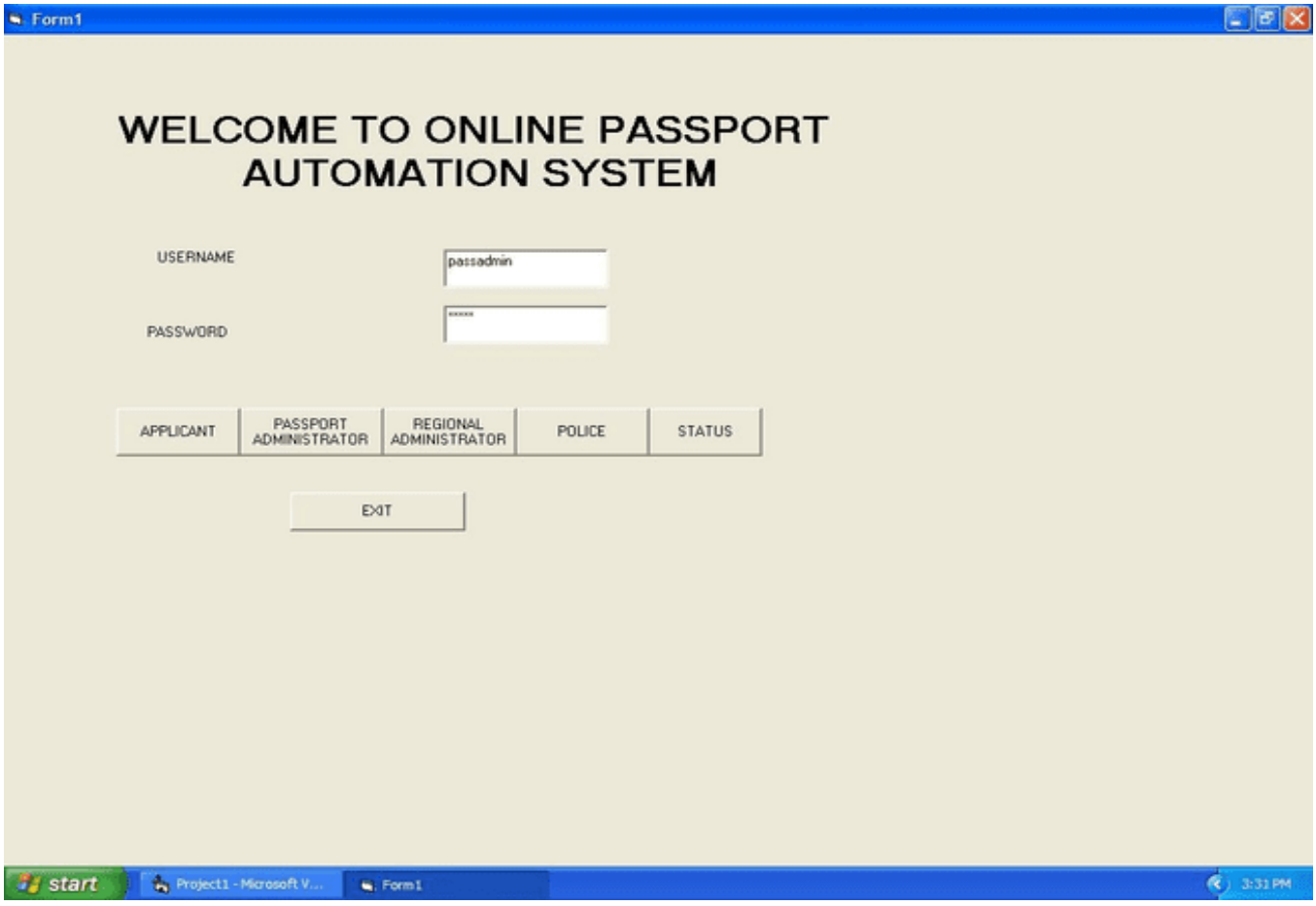
a. **The user interface layer-** represents the user interface components such as web, applicant, passport administrator, police, and regional administrator.

b. **The domain layer-** has major actions such as give and get details, verification and issues.

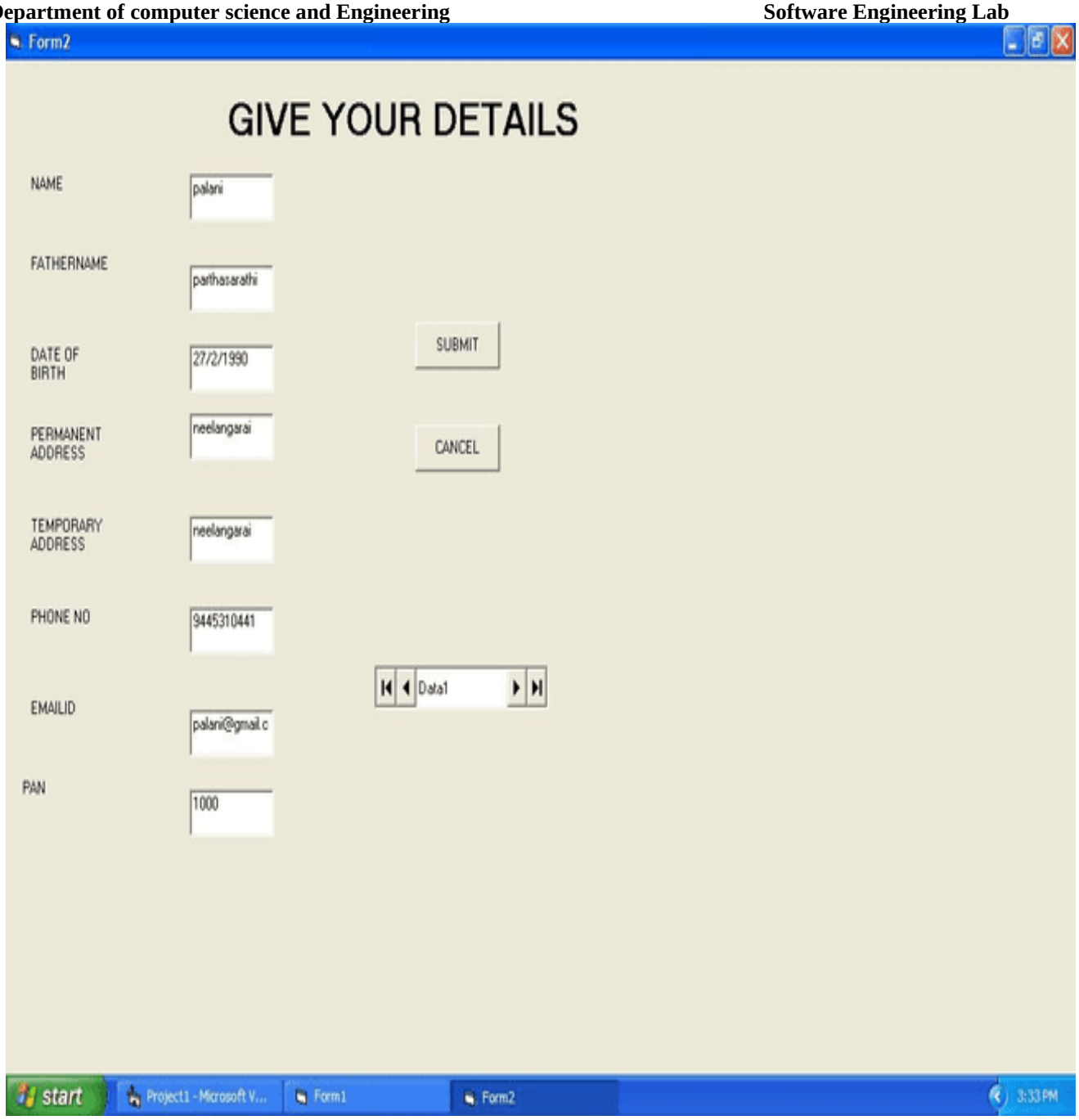
c. **Technical service layer**- authenticated user only can access the technical services.

FOR MS:

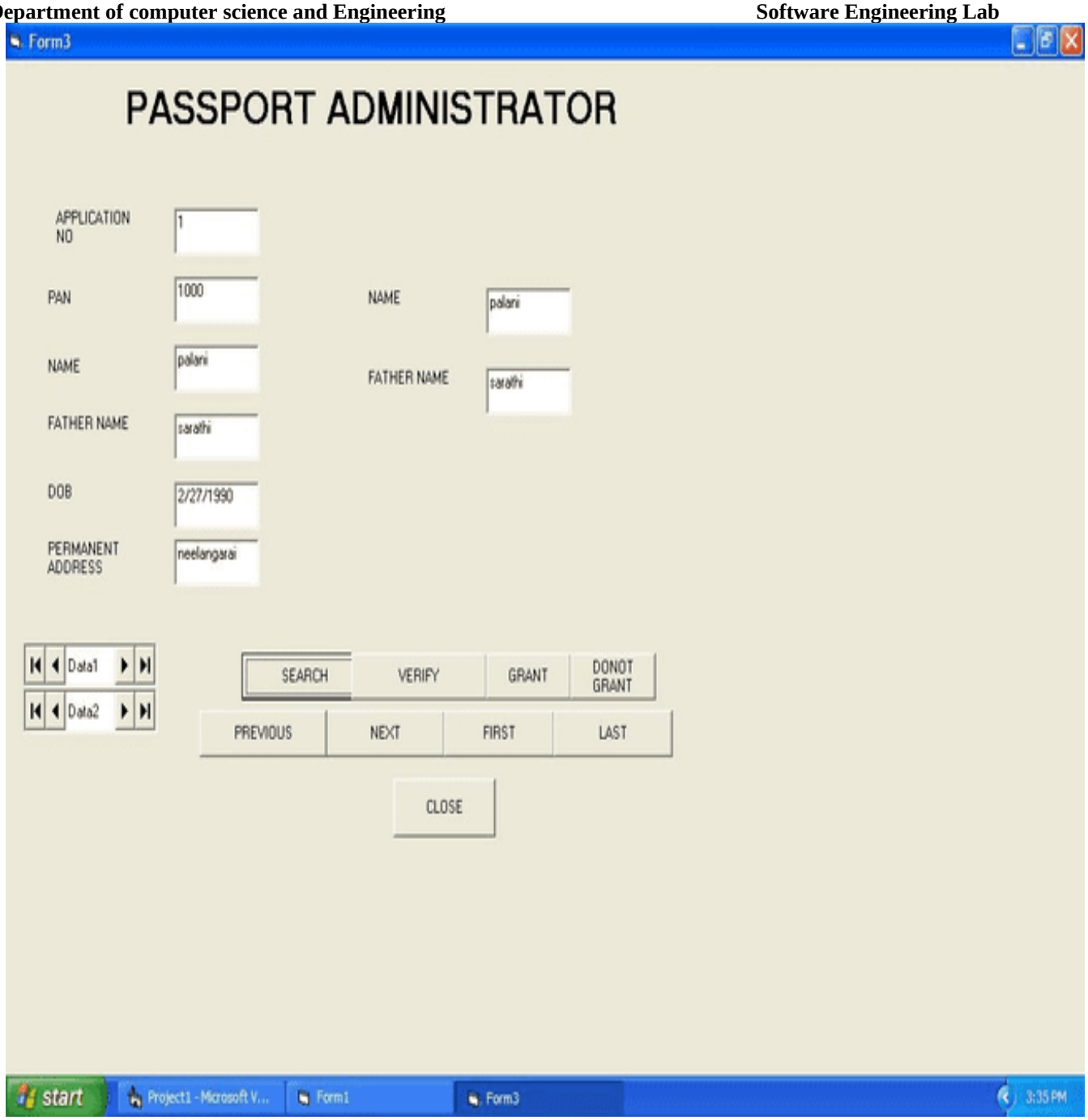
FOR M1:



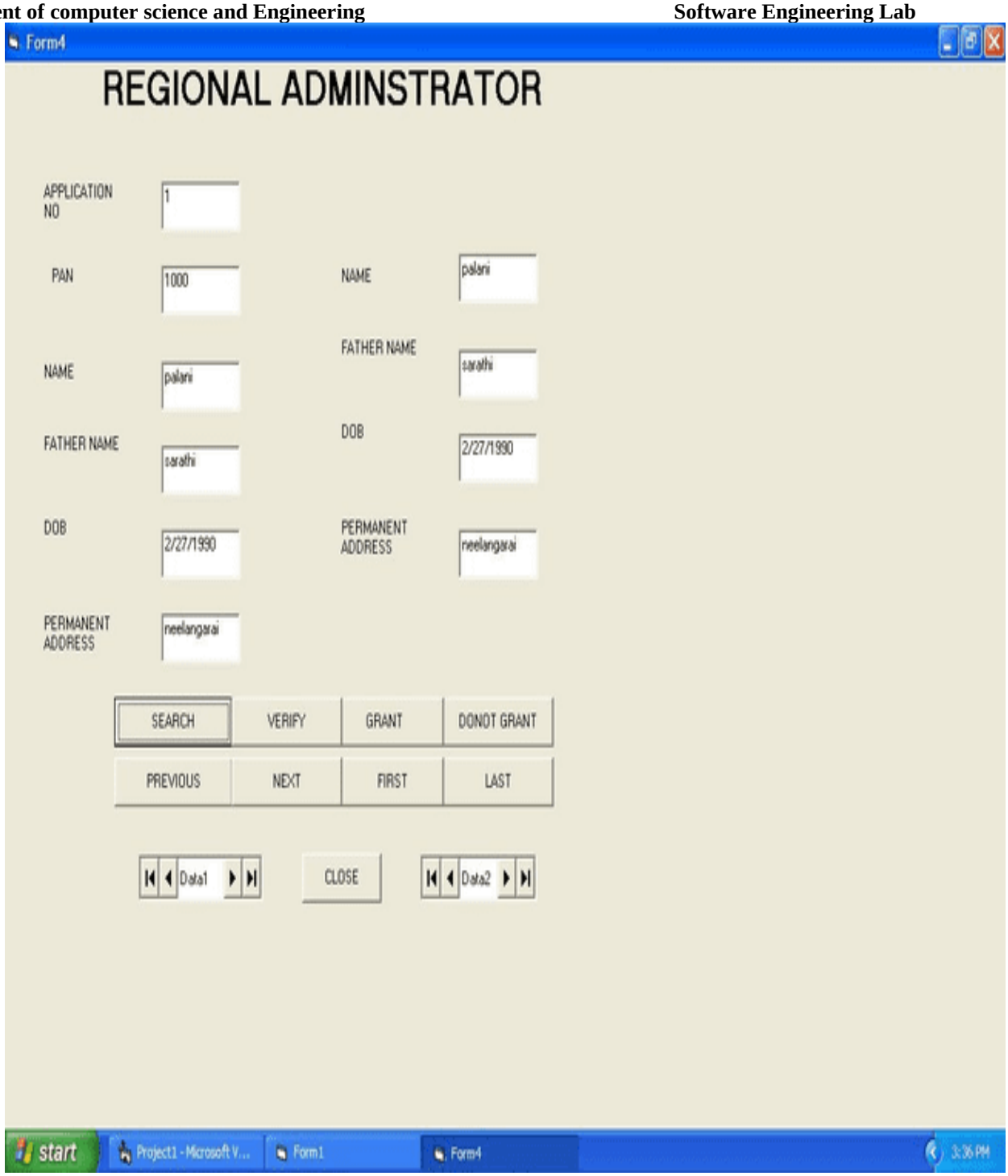
FORM2:


Form2
GIVE YOUR DETAILS
NAME
palani
FATHERNAME
parthasarathi
DATE OF BIRTH
27/2/1990
PERMANENT ADDRESS
neelangarai
TEMPORARY ADDRESS
neelangarai
PHONE NO
9445310441
EMAILID
palani@gmail.c
PAN
1000
SUBMIT
CANCEL
Data1
start
Project1 - Microsoft V...
Form1
Form2
3:33 PM

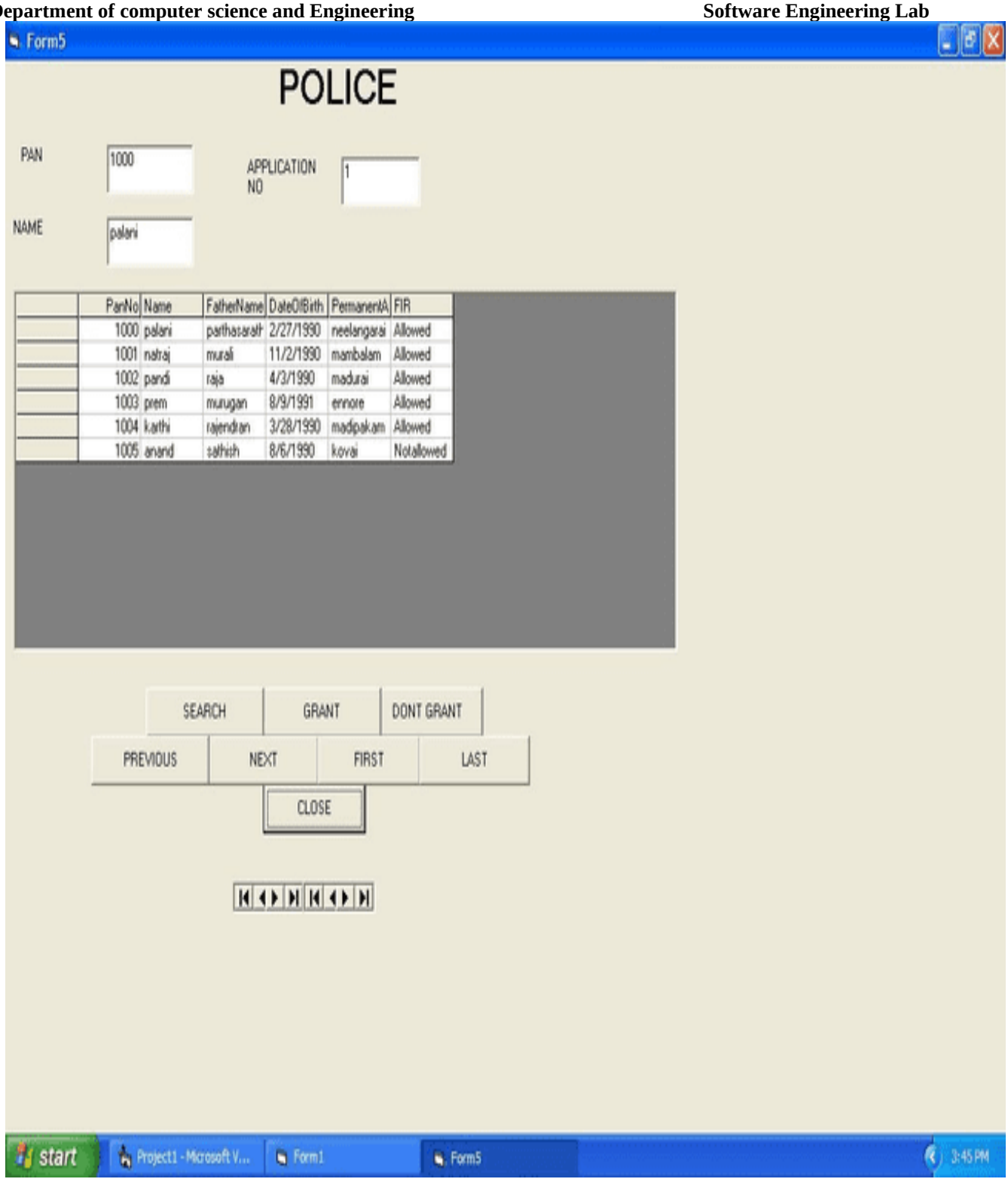
FORM3:


Form3
PASSPORT ADMINISTRATOR
APPLICATION NO
1
PAN
1000
NAME
palani
NAME
palani
FATHER NAME
sarathi
FATHER NAME
sarathi
DOB
2/27/1990
PERMANENT ADDRESS
neelangarai
Data1
Data2
SEARCH
VERIFY
GRANT
DONOT GRANT
PREVIOUS
NEXT
FIRST
LAST
CLOSE
start
Project1 - Microsoft V...
Form1
Form3
3:35 PM

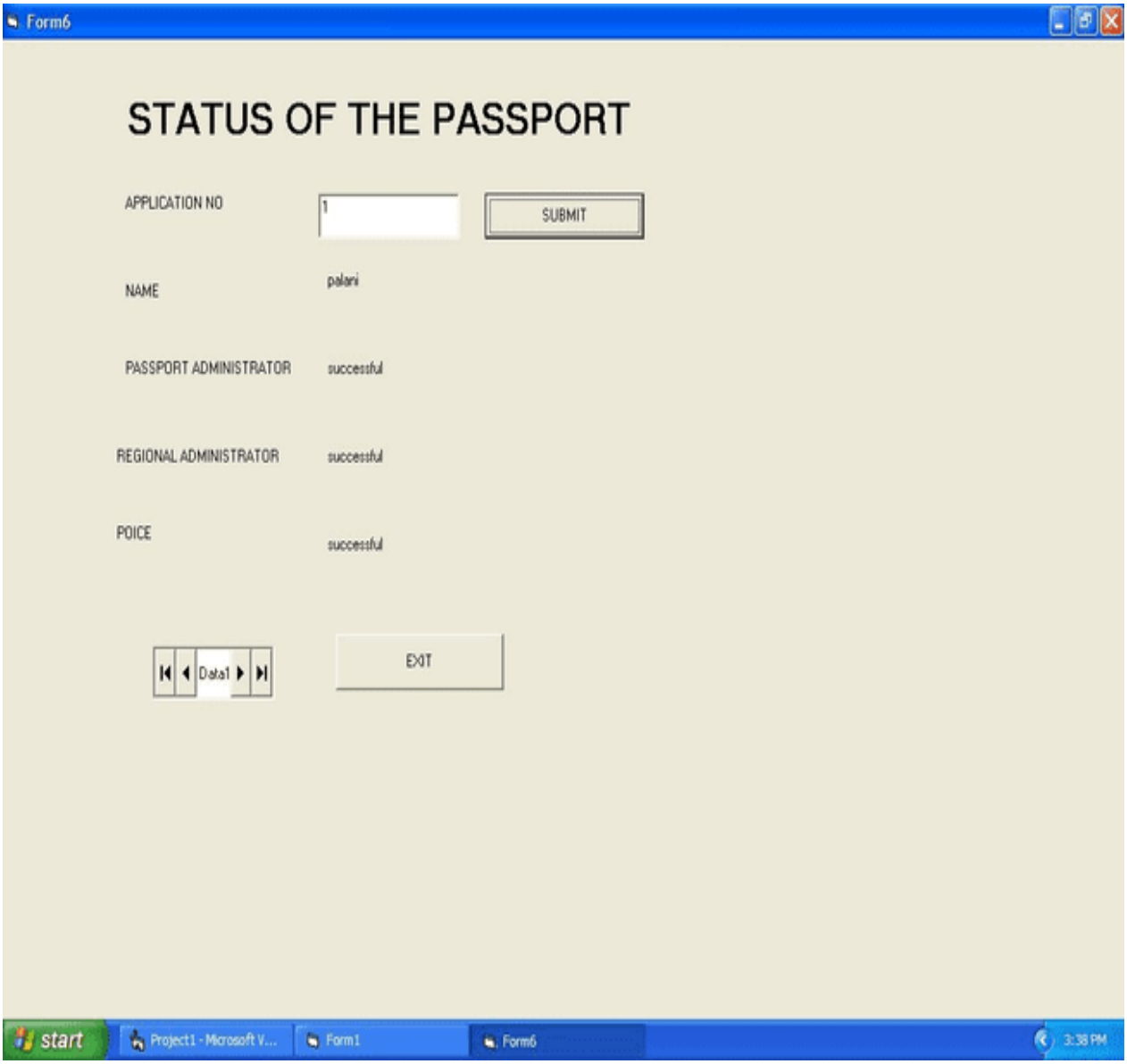
FORM4:


Form4
REGIONAL ADMINSTRATOR
APPLICATION NO
1
PAN
1000
NAME
palani
FATHER NAME
sarathi
DOB
2/27/1990
PERMANENT ADDRESS
neelangarai
NAME
palani
FATHER NAME
sarathi
DOB
2/27/1990
PERMANENT ADDRESS
neelangarai
SEARCH
VERIFY
GRANT
DONOT GRANT
PREVIOUS
NEXT
FIRST
LAST
Data1
CLOSE
Data2
start
Project1 - Microsoft V...
Form1
Form4
3:36 PM

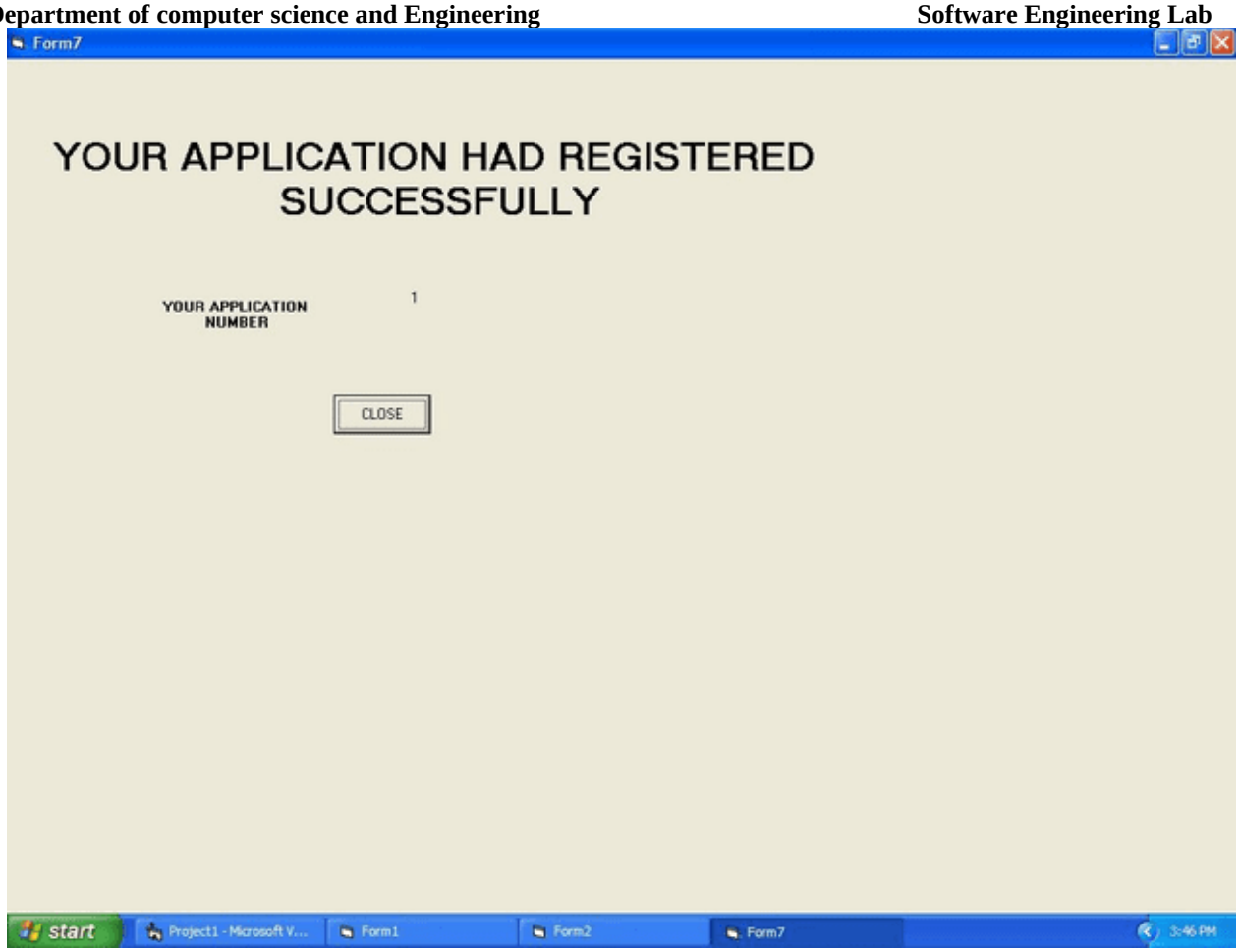
FORM5:


Form5
POLICE
PAN
1000
APPLICATION NO
1
NAME
palani
PanNo Name FatherName DateOfBirth PermanentA FIR
1000 palani parthasarath 2/27/1990 neelangarai Allowed
1001 natraj murali 11/2/1990 mambalam Allowed
1002 pandi raja 4/3/1990 madurai Allowed
1003 prem murugan 8/9/1991 ennore Allowed
1004 karthi rajendran 3/28/1990 madipakam Allowed
1005 anand sathish 8/6/1990 kovai Notallowed
SEARCH
GRANT
DONT GRANT
PREVIOUS
NEXT
FIRST
LAST
CLOSE
start
Project1 - Microsoft V...
Form1
Form5
3:45 PM

FORM6:


Form6
STATUS OF THE PASSPORT
APPLICATION NO
1
SUBMIT
NAME
palani
PASSPORT ADMINISTRATOR
successful
REGIONAL ADMINISTRATOR
successful
POICE
successful
Data1
EXIT
start
Project1 - Microsoft V...
Form1
Form6
3:38 PM

FORM7:



RESULT:

Thus the project to develop passport automation system was developed using Rational Rose Software and to implement the software in Visual Basic is done successfully.

Experiment: 1b

PASSPORT AUTOMATION SYSTEM

AIM

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b. The authority concerned with the issue of passport can use this system to reduce his workload and process the application in a speedy manner. • Provide a communication platform between the applicant and the administrator. Transfer of data between the Passport Issuing Authority and the Local Police for verification of applicant's information.

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The PAS acts as an interface between the 'applicant' and the 'administrator'. This system tries to make the interface as simple as possible and at the same time not risking the security of data stored in. This minimizes the time duration in which the user receives the passport.

SOFTWARE INTERFACE

a. **Front End Client** - The applicant and Administrator online interface is built using Java
b. **Back End** – MS Access database.

HARDWARE INTERFACE

The server is directly connected to the client systems. The client systems have access to the database in the server.

SYSTEM FUNCTIONS

c. Secure Registration of information by the Applicants.
d. Message box for Passport Application Status Display by the Administrator.
e. Administrator can generate reports from the information and is the only authorized personnel to add the eligible application information to the database.

USER CHARACTERISTICS

f. Applicant - They are the people who desires to obtain the passport and submit the information to the database.
g. Administrator - He has the certain privileges to add the passport status and to approve the issue of passport. He may contain a group of persons under him to verify the documents and give suggestion whether or not to approve the dispatch of passport.
h. Police - He is the person who upon receiving intimation from the PAS, perform a personal verification of the applicant and see if he has any criminal case against him before or at present. He has been vetoed with the power to decline an application by suggesting it to the Administrator if he finds any discrepancy with the applicant. He communicates via this PAS.

CONSTRAINTS

- The applicants require a computer to submit their information.
- Although the security is given high importance, there is always a chance of intrusion in the web world which requires constant monitoring.
- The user has to be careful while submitting the information. Much care is required.

ASSUMPTIONS AND DEPENDENCIES

- The Applicants and Administrator must have basic knowledge of computers and English Language.

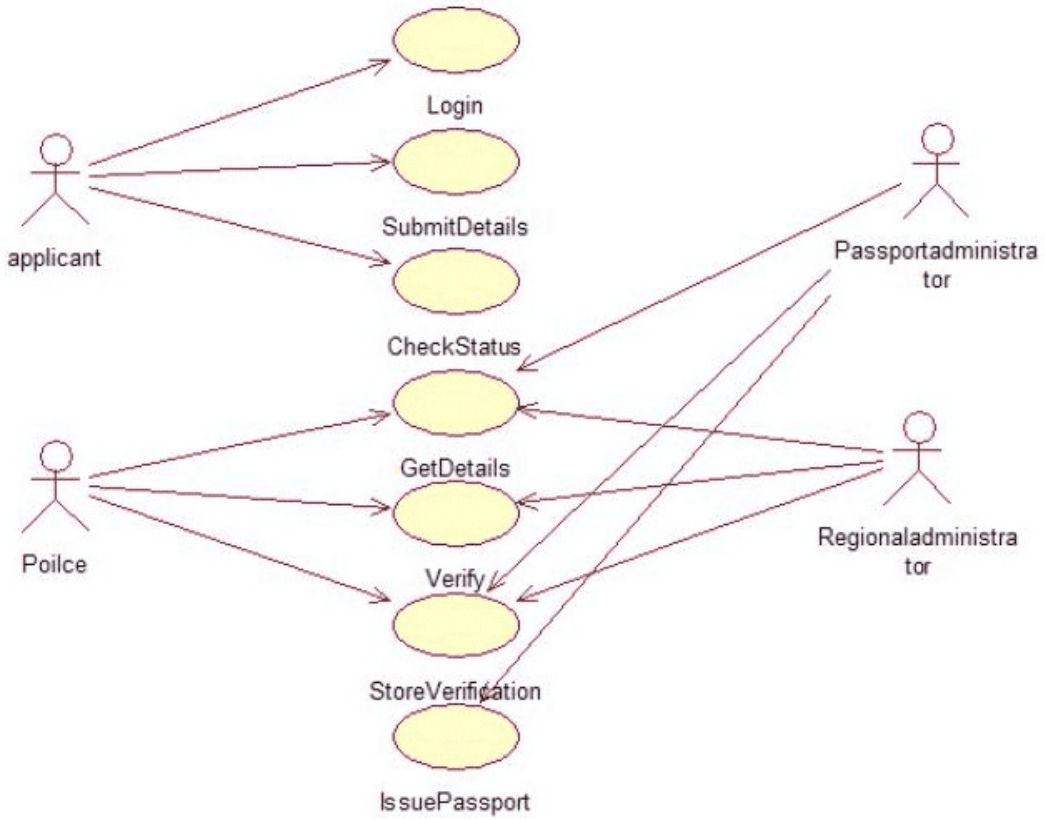
- The applicants may be required to scan the documents and send.

UML DIAGRAMS

Sno	UML DIAGRAMS
1	Use Case diagram
2	Class diagram
3	Interaction diagram
4	Sequence diagram
5	Collaboration diagram
6	State Chart diagram
7	Activity diagram
8	Component diagram
9	Deployment diagram
10	Package diagram

USE CASE DIAGRAM

Use case is shown as an ellipse containing the name of use case .An actor is shown as a stick figure with the name below it. Use case diagram is a graph of actors.



DOCUMENTATION OF USECASE DIAGRAM

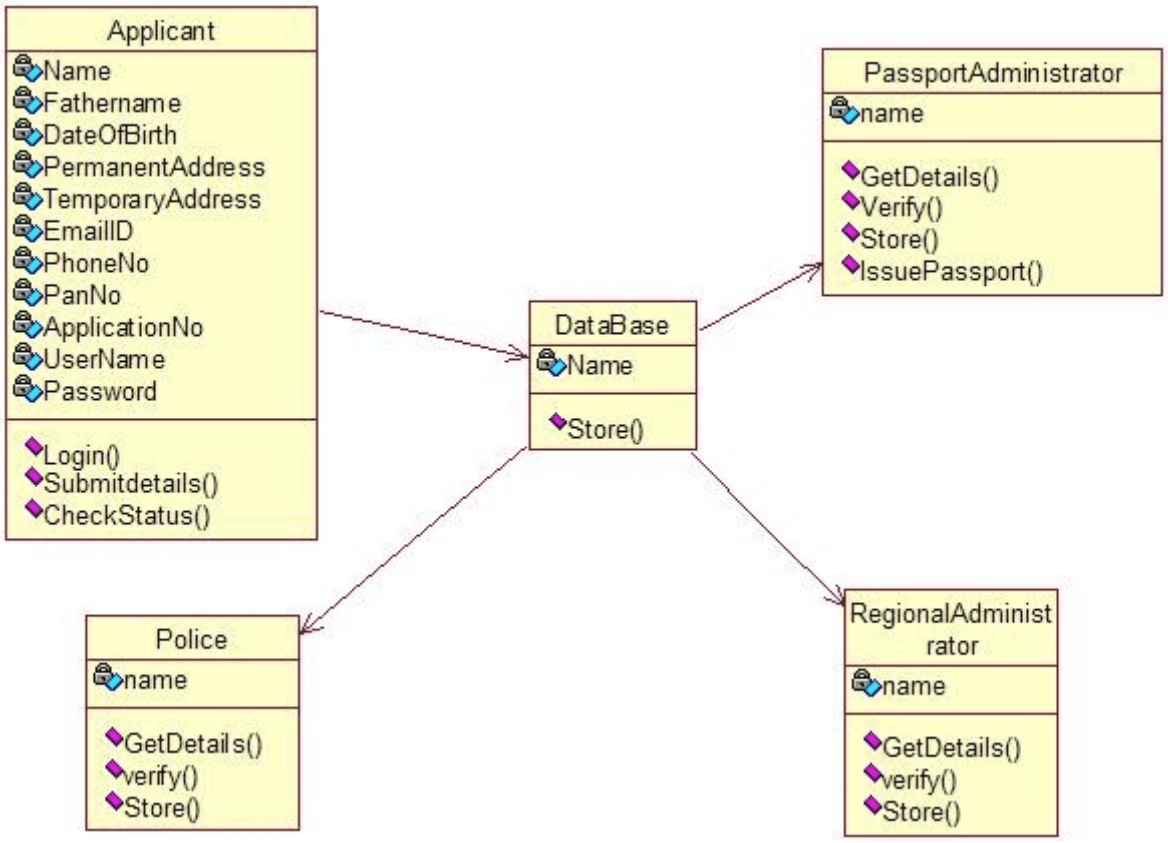
a. The actors in use case diagram are Applicant, regional administrator, database, passport Administrator, Police.

b. The use cases are Login, givedetails, logout, collectdetails, verification, issue.

c. The actors use the use case are denoted by the arrow

CLASSDIAGRAM

A class is drawn as rectangle box with three compartments or components separated by horizontal lines. The top compartment holds the class name and middle compartment holds the attribute and bottom compartment holds list of operations.



DOCUMENTATION OF CLASS DIAGRAM

- The classes are Applicant, database, regional administrator, passport administrator, and police.

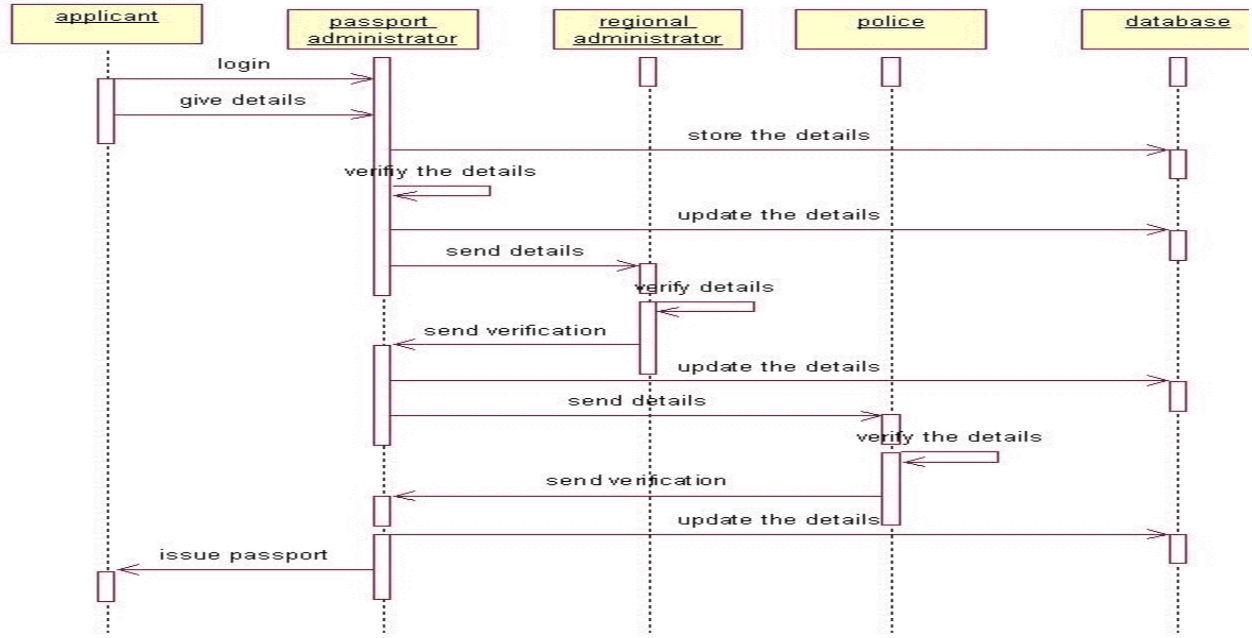
- The applicant has attribute such as name and password and operations are login, givedetails and logout.

- The database has attribute such as name and operation is store.
- The regional administrator has attribute such as name and operation are get details, verify details and send.
- The passport administrator has attribute such as name and operation are get details, verify details and issue.
- The police has attribute such as name and operation are get details, verify details and send.

SEQUENCE DIAGRAM

A sequence diagram shows an interaction arranged in time sequence,

It shows object participating in interaction by their lifeline by the message they exchange arranged in time sequence. Vertical dimension represent time and horizontal dimension represent object.



DOCUMENTATION OF SEQUENCE DIAGRAM.

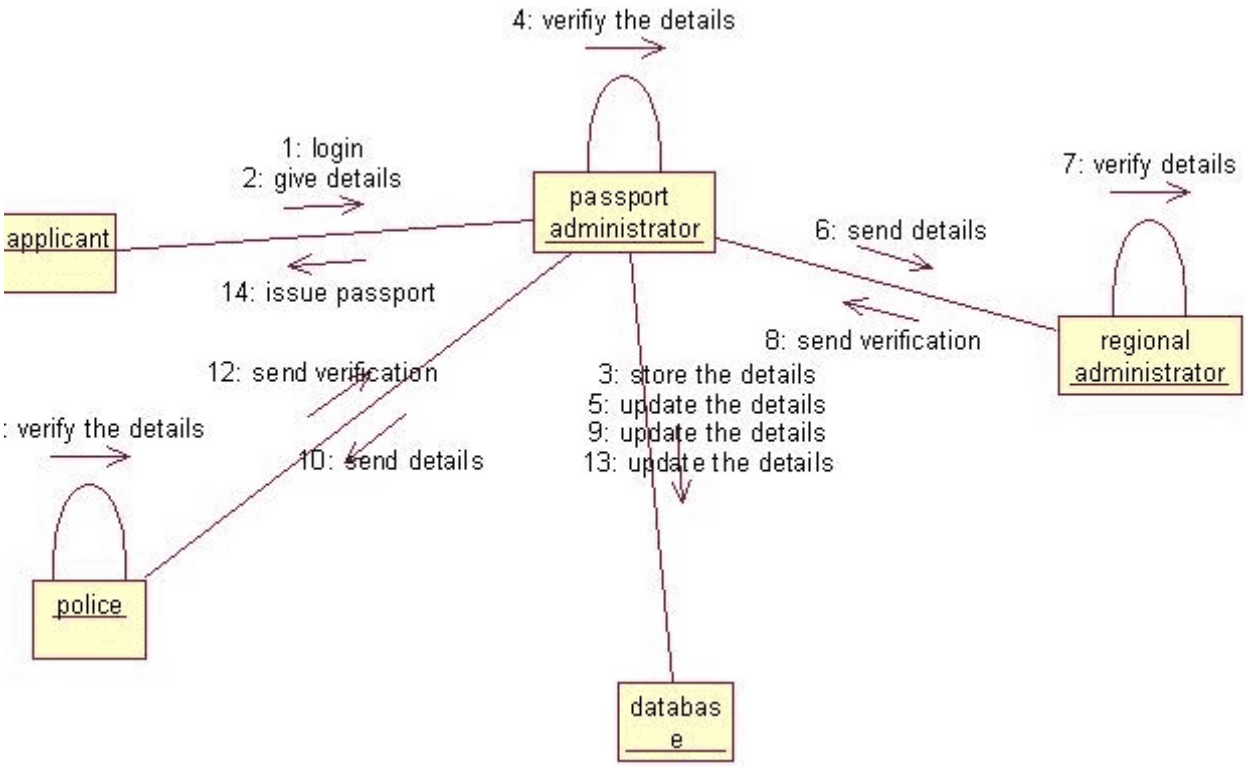
- The applicant login the database and give his details and database store the details.
- The passport administrator get the details from the database and do verification and the forward to regional administrator.

- The regional administrator get details form passport administrator and perform verification and send report to passport administrator.

- The police get the details form passport administrator and perform verification and send report to passport administrator.

COLLABORATION DIAGRAM

A collaboration diagram is similar to sequence diagram but the message in number format. In a collaboration diagram sequence diagram is indicated by the numbering the message



DOCUMENTATION OF COLLABORATION DIAGRAM

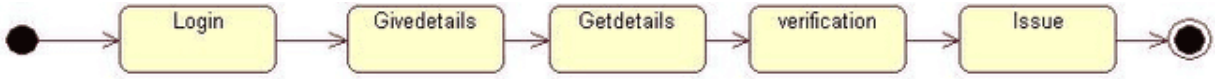
a. The applicant, passport administrator, regional administrator, police and database functions are show in sequence number

b. The applicant first login the passport automation system and submit his details the passport administrator, regional administrator and police verification are denoted.

STATE CHART DIAGRAM

The state chart diagram contains the states in the rectangle boxes and starts in indicated by the dot and finish is indicated by dot encircled. The purpose of state chart diagram is to

understand the algorithm in the performing method.



DOCUMENTATION OF STATE CHART DIAGRAM

a. The states of the passport automation system are denoted in the state chart diagram

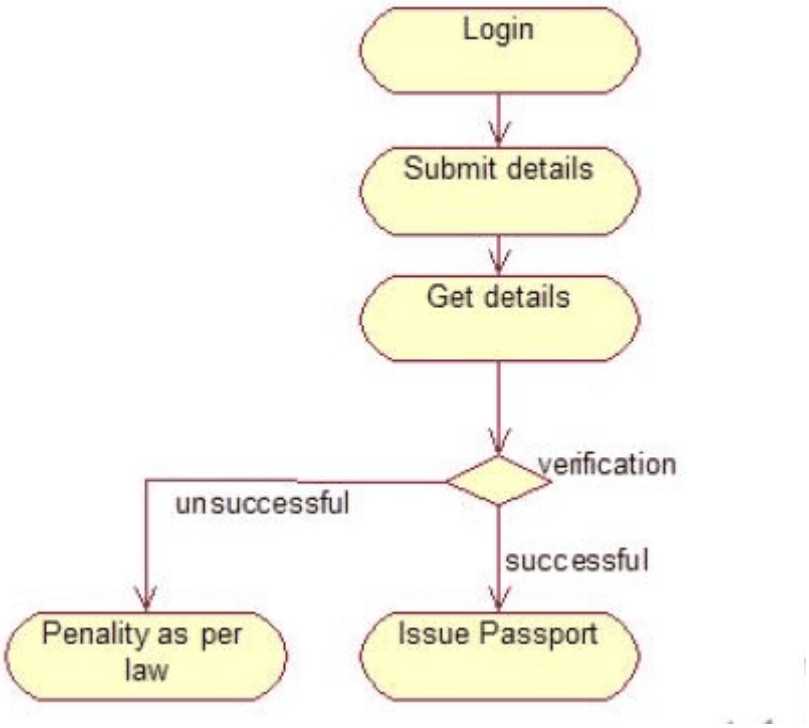
b. Login state represent authentication for login the passport automation system.

c. In this state, it checks whether the applicant has provided all the details that is required.

d. Police, regional administrator and passport administrator get necessary details and verification of the applicant are denoted from the Get detail state and verification state

ACTIVITY DIAGRAM

An activity diagram is a variation or special case of a state machine in which the states or activity representing the performance of operation and transitions are triggered by the completion of operation.
The purpose is to provide view of close and what is going on inside a use case or among several classes. An activity is shown as rounded box containing the name of operation.



DOCUMENTATION OF ACTIVITY DIAGRAM

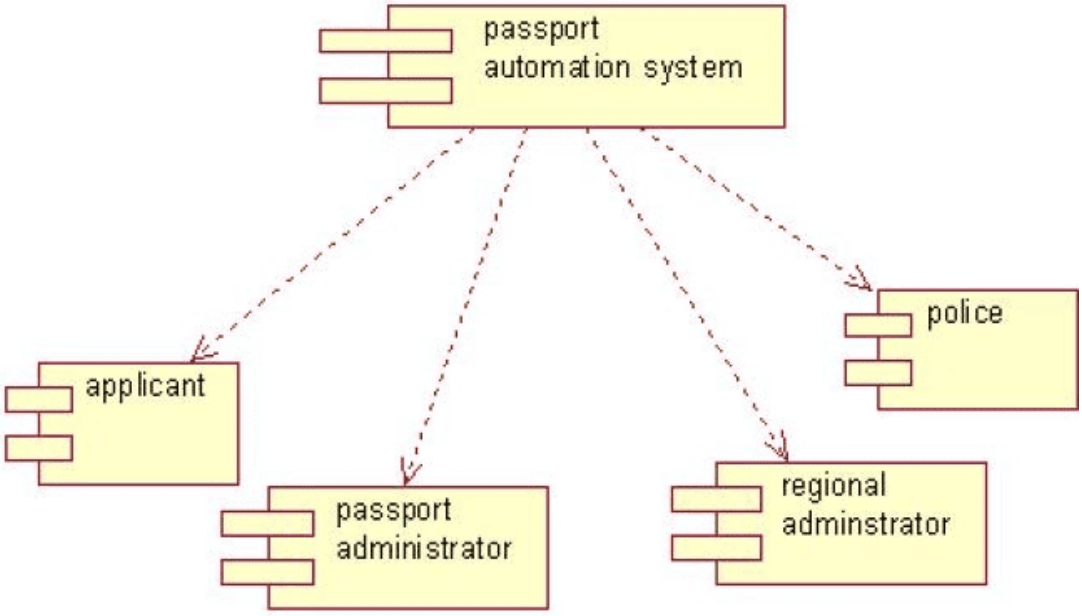
a. The activities in the passport automation system are login, submit details, get details, issue passport and penalty and verification.

b. In the login activity applicant give username and password and then login into the passport automation system after then fill the details that are required for application.

c. After the verification procedure completed successfully the passport is issued to the applicant.

COMPONENT DIAGRAM

The component diagram is represented by figure dependency and it is a graph of design of figure dependency.



DOCUMENTATION OF COMPONENT DIAGRAM

a. The components in the passport automation system are passport automation system, applicant, passport administrator, regional administrator, and police.

b. Applicant ,passport administrator, regional administrator and police are dependent on passport automation system are shown by the dotted arrow

DEPLOYMENT DIAGRAM

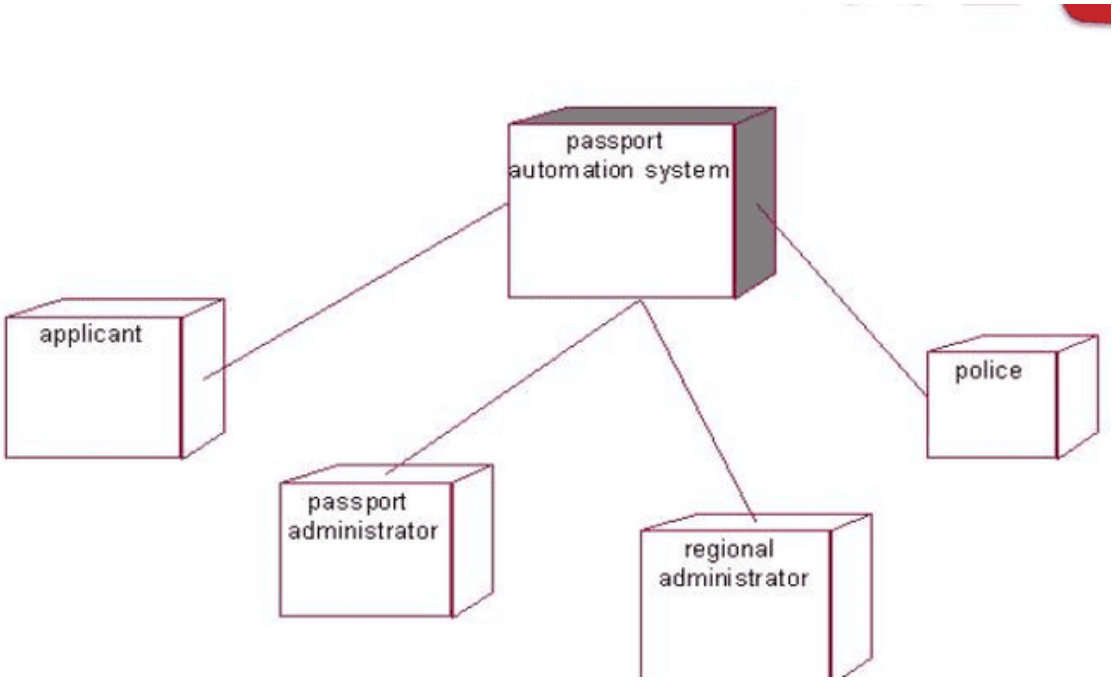
It is a graph of nodes connected by communication association. It is represented by a three dimensional box. The basic element of a deployment diagram is a node of two types

DEVICE NODE

A physical computing resource with processing and memory service to execute software, such as a typical computer or a mobile phone.

EXECUTION ENVIRONMENT NODE

This is a software computing resource that runs within an outer node and which itself provides a service to host an execute other executable software element.

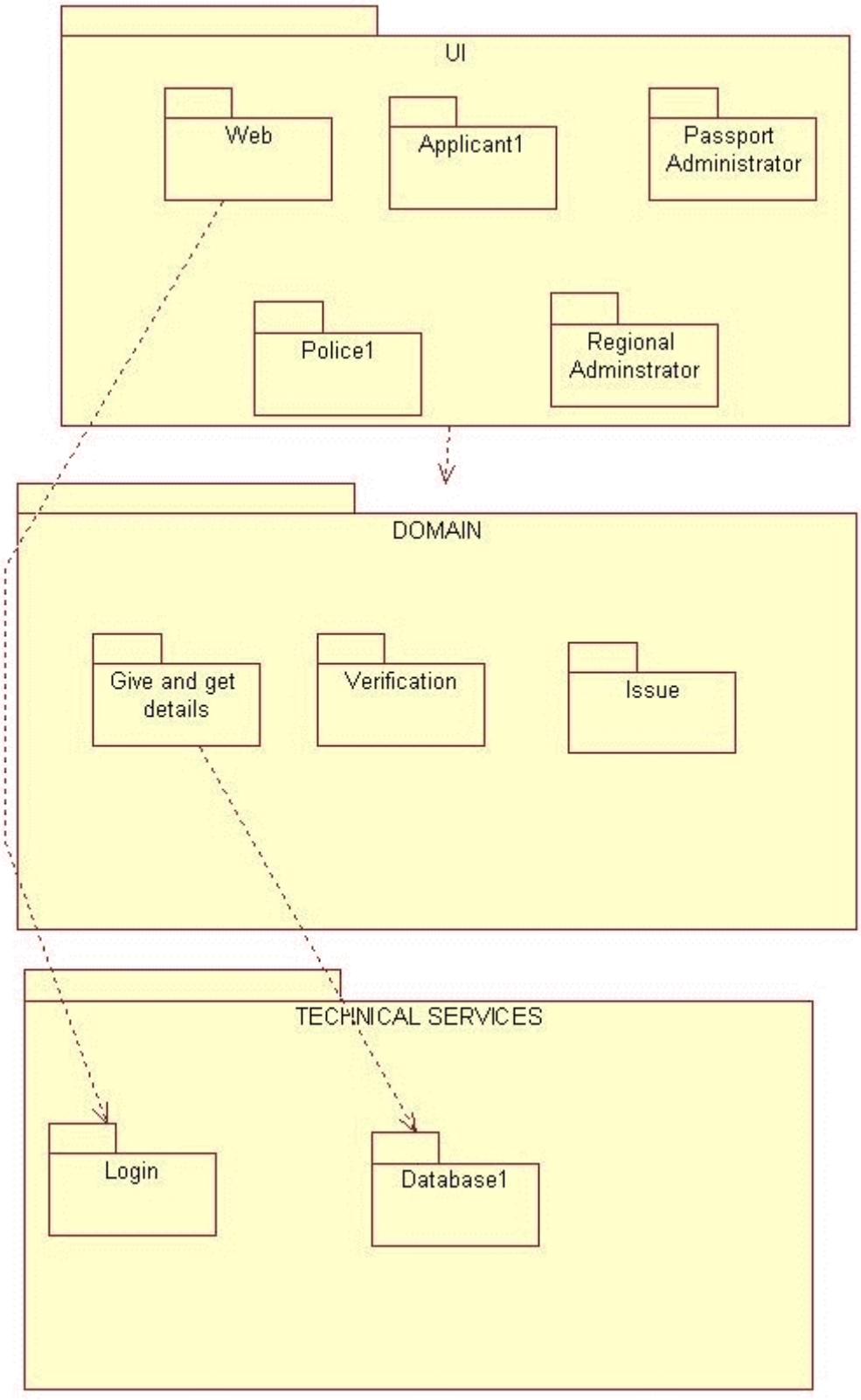


DOCUMENTATION OF DEPLOYMENT DIAGRAM

The device node is passport automation system and execution environment node are applicant passport administrator, regional administrator, and police.

PACKAGE DIAGRAM

A package diagram is represented as a folder shown as a large rectangle with a top attached to its upper left corner. A package may contain both sub ordinate package and ordinary model elements. All uml models and diagrams are organized into package


UI
Web
Applicant1
Passport Administrator
Police1
Regional Adminstrator
DOMAIN
Give and get details
Verification
Issue
TECHNICAL SERVICES
Login
Database1

DOCUMENTATION OF PACKAGE DIAGRAM

a. The three layer in the passport automation system are user interface layer, domain layer, technical service layer

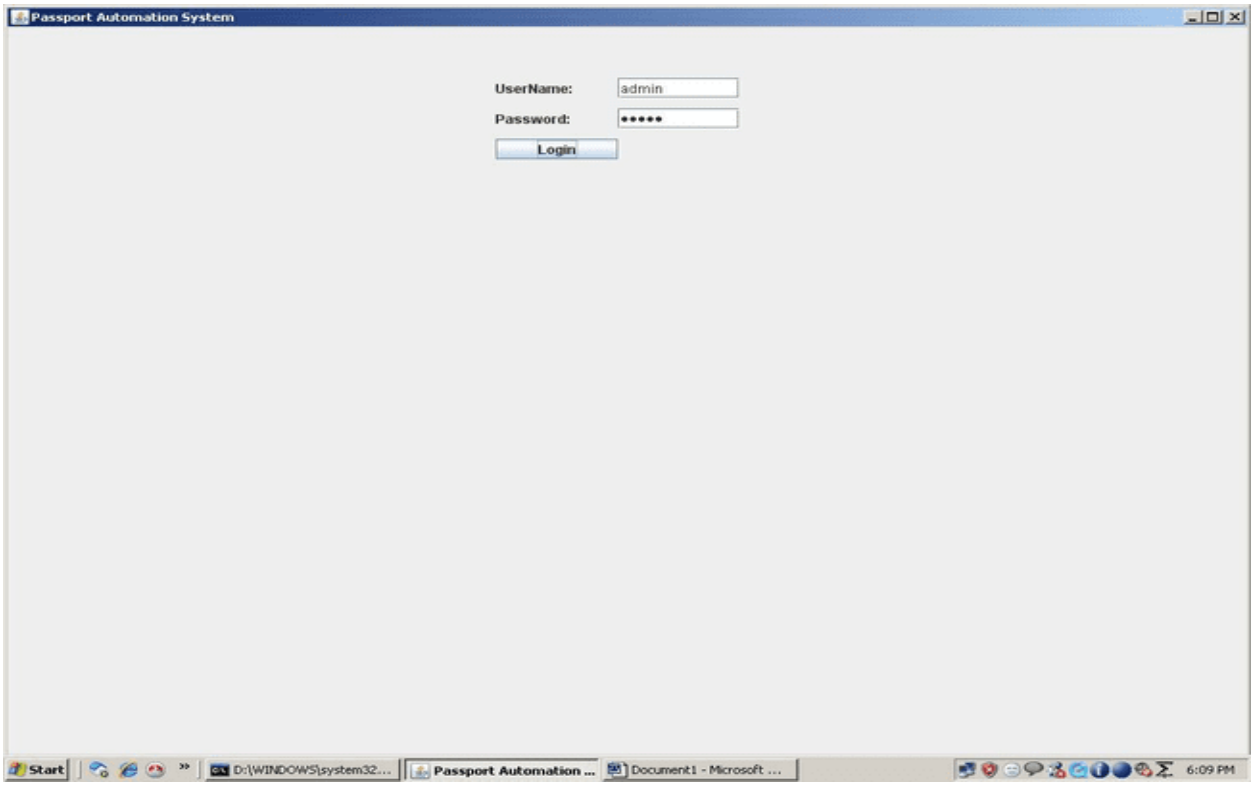
b. The user interface layer represents the user interface components such as web, applicant, passport administrator, police, and regional administrator.

c. The domain layer has major actions such as give and get details, verification and issues.

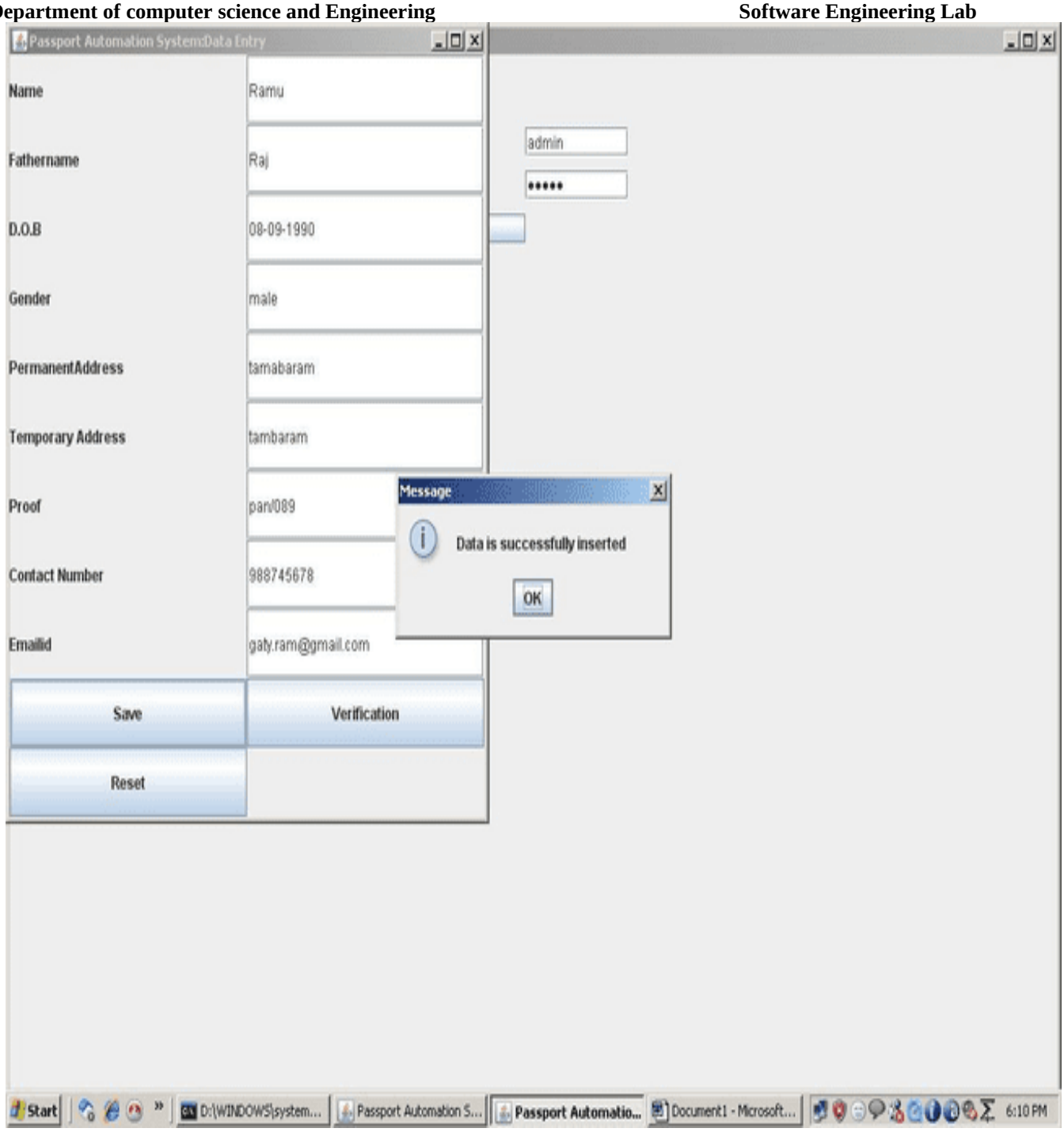
d. Technical service layer, authenticated user only can access the technical services.

FORMS

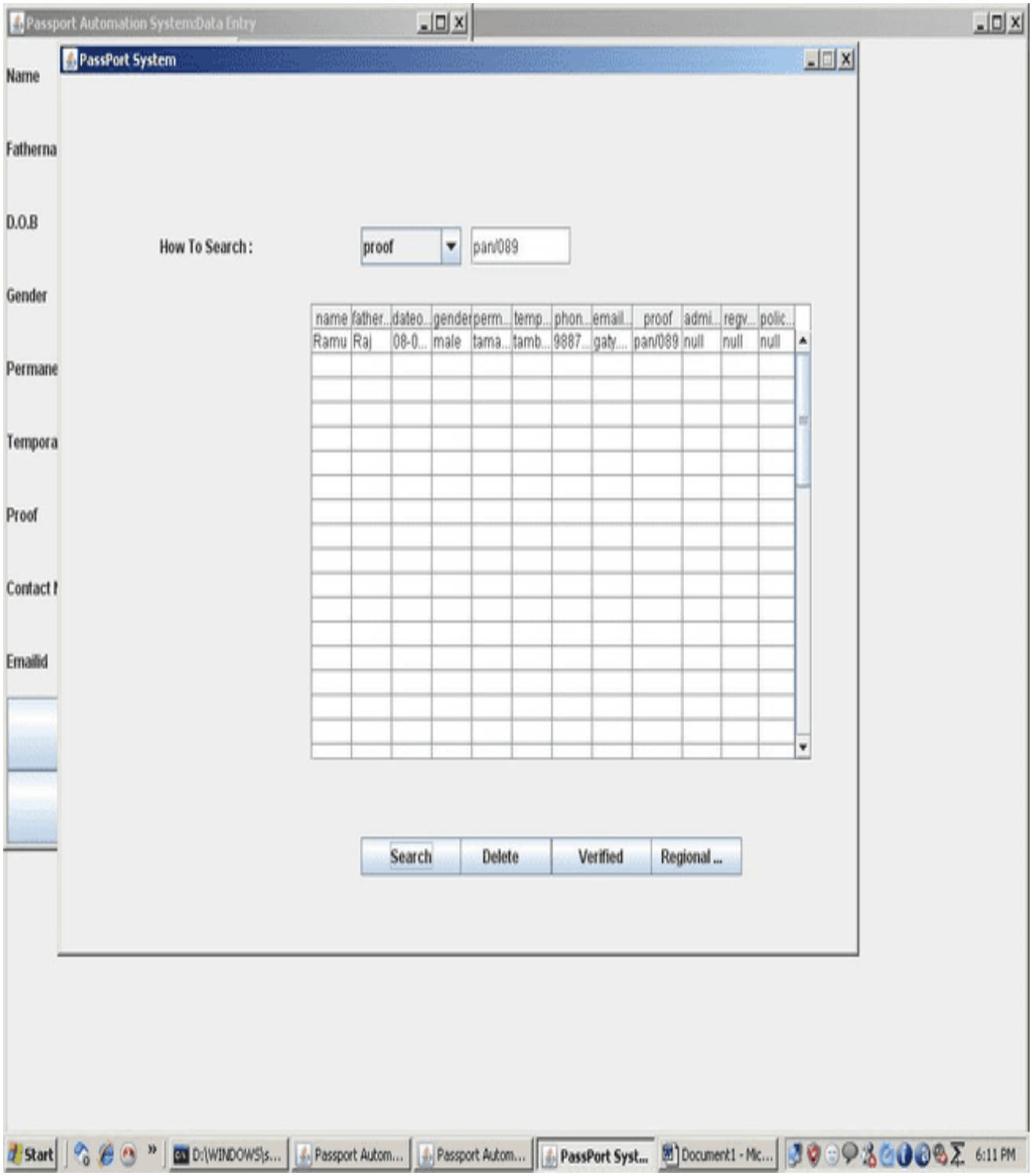
FORM 1



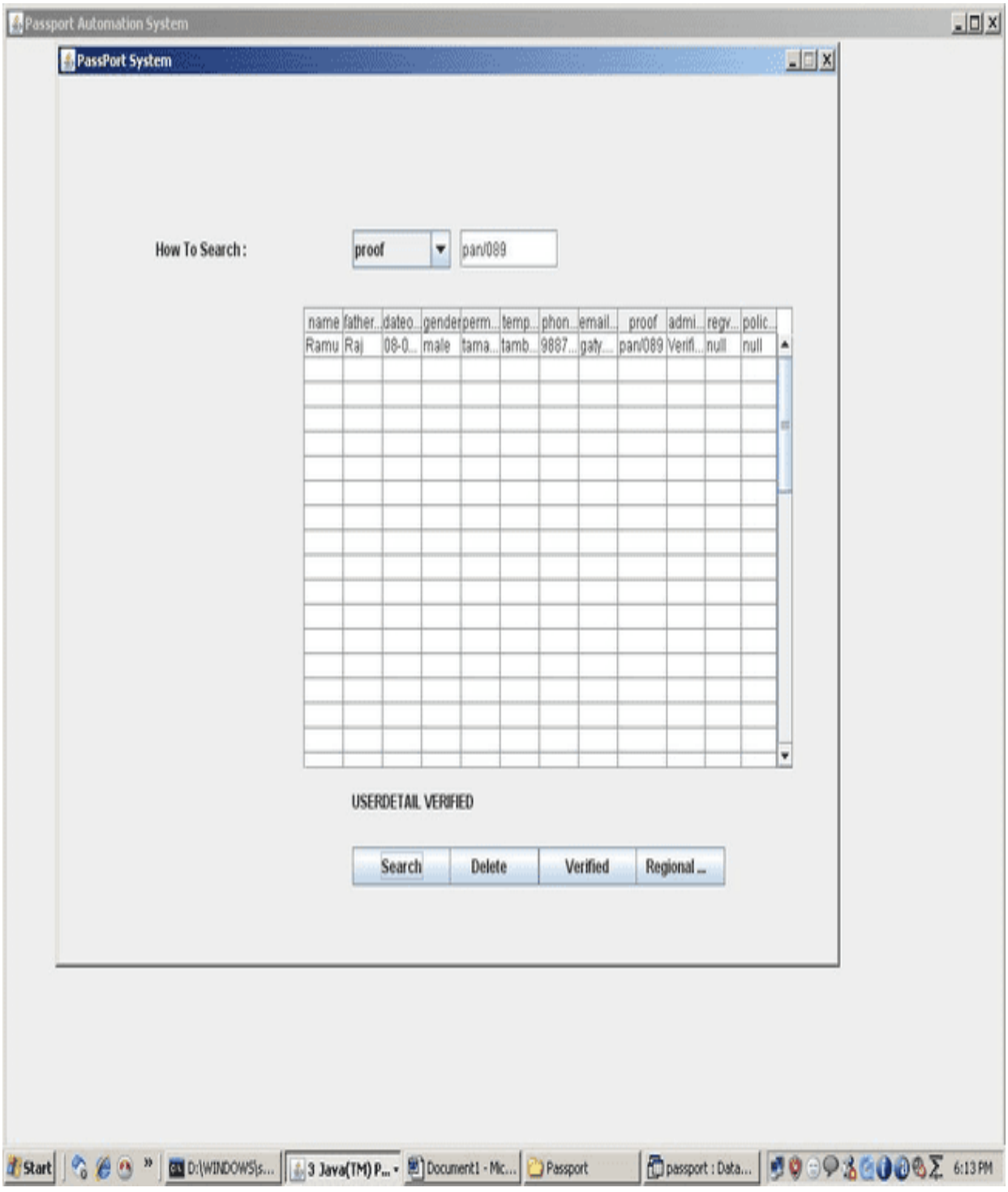
FORM 2


Passport Automation System:Data Entry
Name
Ramu
Fathername
Raj
D.O.B
08-09-1990
Gender
male
PermanentAddress
tamabaram
Temporary Address
tambaram
Proof
pan/089
Contact Number
988745678
Emailid
gaty.ram@gmail.com
Save
Verification
Reset
admin
Message
Data is successfully inserted
OK
Start
Passport Automatio...
Document1 - Microsoft...
6:10 PM

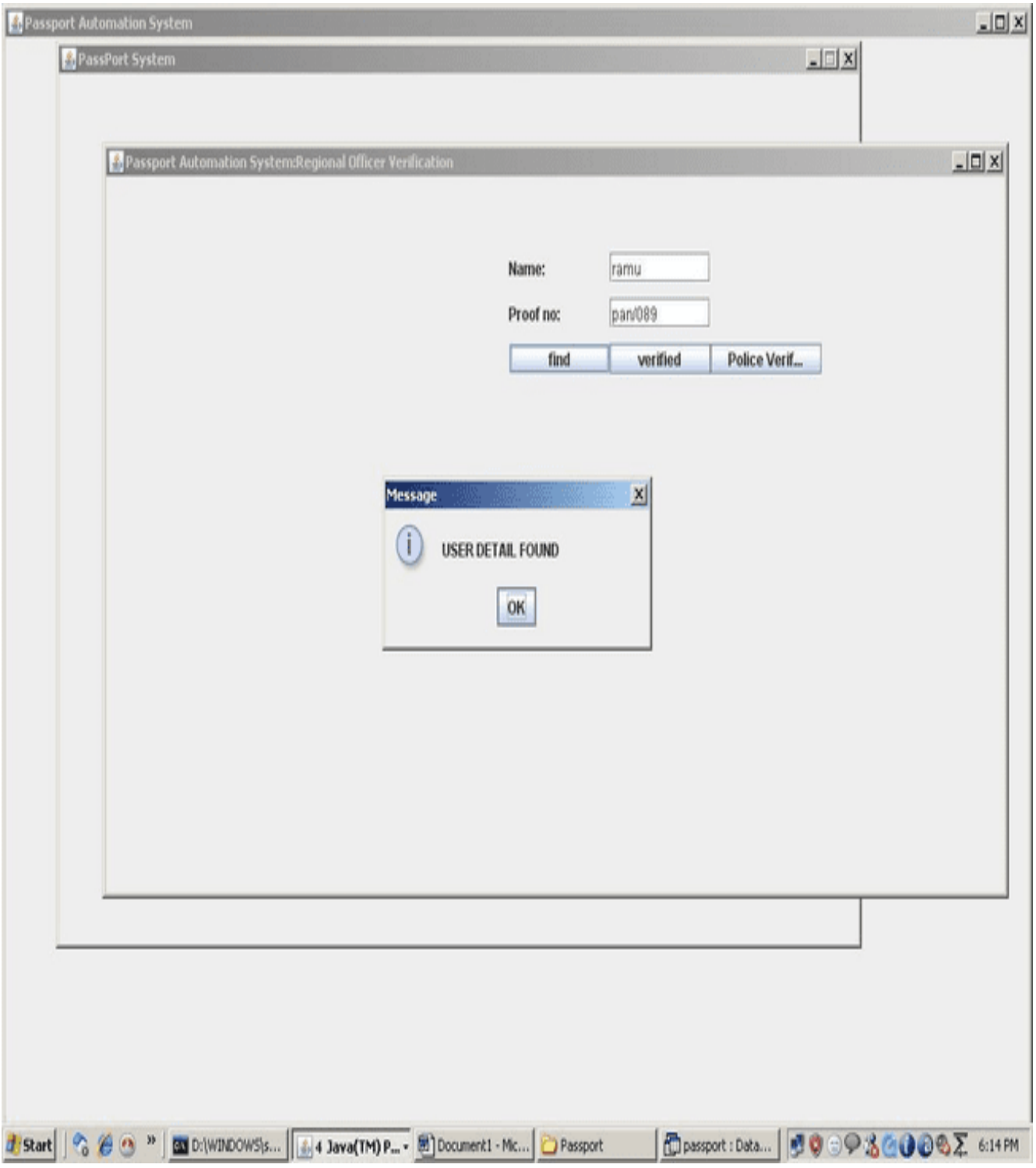
FORM 3


Passport Automation System:Data Entry
PassPort System
Name
Fatherna
D.O.B
Gender
Permane
Tempora
Proof
Contact
Emailid
How To Search :
proof
pan/089
name father... dateo... gender perm... temp... phon... email... proof admi... regv... polic...
Ramu Raj 08-0... male tama... tamb... 9887... gaty.... pan/089 null null null
Search
Delete
Verified
Regional ...
Start
D:\WINDOWS\s...
Passport Autom...
Passport Autom...
PassPort Syst...
Document1 - Mic...
6:11 PM

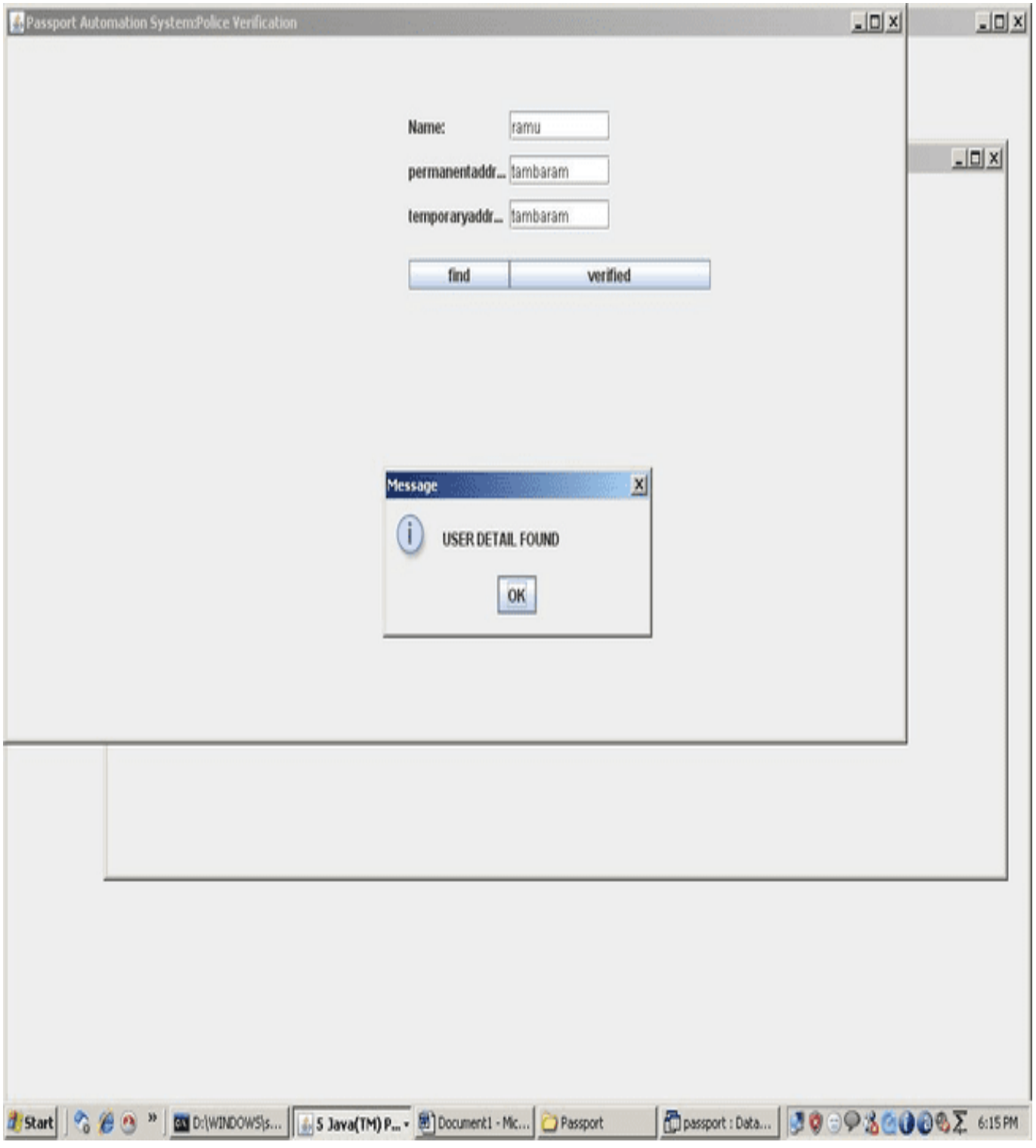
FORM 4


Passport Automation System
PassPort System
How To Search:
proof
pan/089
name father... dateo... gender perm... temp... phon... email... proof admi... regv... polic...
Ramu Raj 08-0... male tama... tamb... 9887... gaty... pan/089 Verifi... null null
USERDETAIL VERIFIED
Search
Delete
Verified
Regional ...
Start
D:\WINDOWS\s...
3 Java(TM) P...
Document1 - Mic...
Passport
passport : Data...
6:13 PM

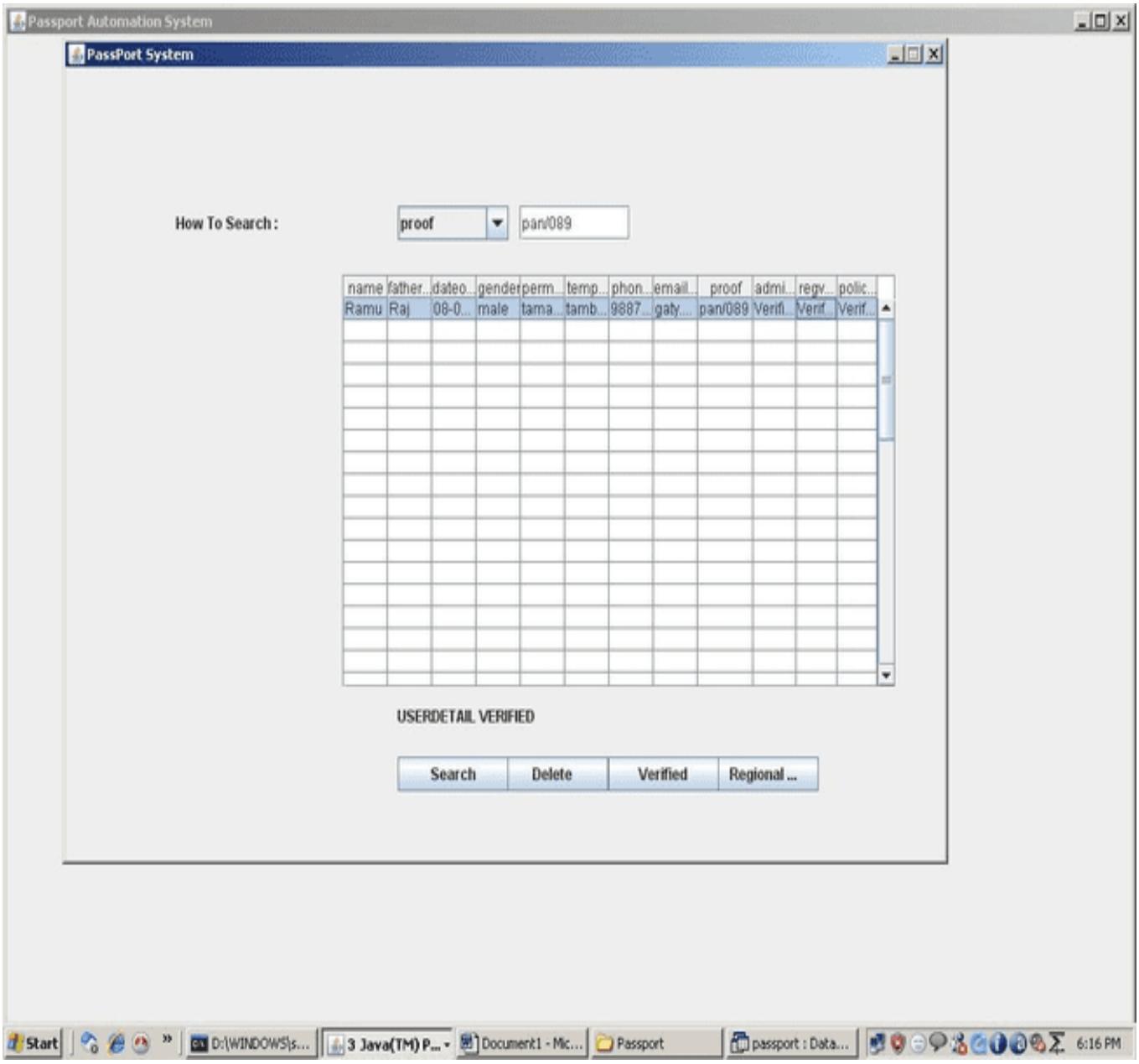
FORM 5


Passport Automation System
PassPort System
Passport Automation System:Regional Officer Verification
Name:
ramu
Proof no:
pan/089
find
verified
Police Verif...
Message
USER DETAIL FOUND
OK
Start
D:\WINDOWS\s...
4 Java(TM) P...
Document1 - Mc...
Passport
passport : Data...
6:14 PM

FORM 6


Passport Automation System:Police Verification
Name:
ramu
permanentaddr...
tambaram
temporaryaddr...
tambaram
find
verified
Message
USER DETAIL FOUND
OK
Start
D:\WINDOWS\s...
5 Java(TM) P...
Document1 - Mic...
Passport
passport : Data...
6:15 PM

FORM 7



RESULT:

Thus the project to implement Passport Automation System using java has been successfully designed.

EXPERIMENT :2
BOOK BANK

AIM

To develop a project of Book bank management system using Rational Rose Software /StarUML

PROBLEM ANALYSIS AND PROJECT DESIGN

The book bank management system is an software in which a member can register themselves and then he can borrow books from the book bank. It mainly concentrates on providing books for engineering students.

PROBLEM STATEMENT

The process of members registering and purchasing books from the book bank are described sequentially through following steps:

a. First the member registers himself if he was new to the book bank.

b. Old members will directly select old member button..

c. They select their corresponding year.

d. After selecting the year they fill the necessary details and select the book and he will be directed towards administrator

e. The administrator will verify the status and issue the book.

1. INTRODUCTION

This system would be used by members who are students of any college to check the availability of the books and borrow the books, and then the databases are updated. The purpose of this document is to analyze and elaborate on the high- level needs and features of the book bank management system**.** It also tells the usability, reliability defined in use case specification.

2. OBJECTIVE

The main objective of the system are was to design an online book-bank monitoring system to enable a central monitoring mechanism of the book-bank be more faster and less error prone. Apart from this,

a. To help the students acquire the right books for the syllabus at the right time.

b. To ensure availability of basic textbooks to students against limited funds and To develop students ability to handle property loaned to them

3. OVERVIEW

The overview of this project is to design a tool for book bank so that it can be used by any book banks to lend their books as well as colleges.

4. GLOSSARY

TERMS	DESCRIPTION
MEMBER	The one who registers himself and purchase books from the bank.
DATABASE	Database is used to store the details of members and books.
ADMINISTRATOR	The one who verifies the availability of book and issue them
USER	Member

SOFTWARE REQUIREMENT SPECIFICATION

This software specification documents full set of features and function for online recruitment system that is performed in company website.

5. PURPOSE

The purpose of the book bank management system is to reduce the manual intervention .

6. SCOPE

The scope of this book bank management system is to act as a tool for book bank administrator for quick reference, availability of the books.

7. FUNCTIONALITY

Many members will be waiting to take the book from the book bank at a single day. To serve all the members

8. USABILITY

User interface makes the Recruitment system to be efficient. That is the system will help the member to register easily and helps them to get their books easily. The system should be user friendly.

9. PERFORMANCE

It describes the capability of the system to perform the recruitment process of the applicant without any error and performing it efficiently.

10. RELIABILITY

The book bank management system should be able to serve the applicant withcorrect information and day-to-day update of information.

11. FUNCTIONAL REQUIREMENTS

Functional requirements are those refer to the functionality of the system. That is the services that are provided to the member who borrows book.

12. EXTERNAL INTERFACE

REQUIREMANTS SOFTWARE

REQUIREMENTS

1. **Front end:** IBM rational rose enterprise edition.
2. **Back end:** visual basic 8.0.

HARDWARE REQUIREMENTS

1. **Processor :** pentium 4.
2. **RAM : 256** mb
3. **Operating syatem :** Microsoft windows xp.
4. **Free disk space : 1**gb

UML DIAGRAMS

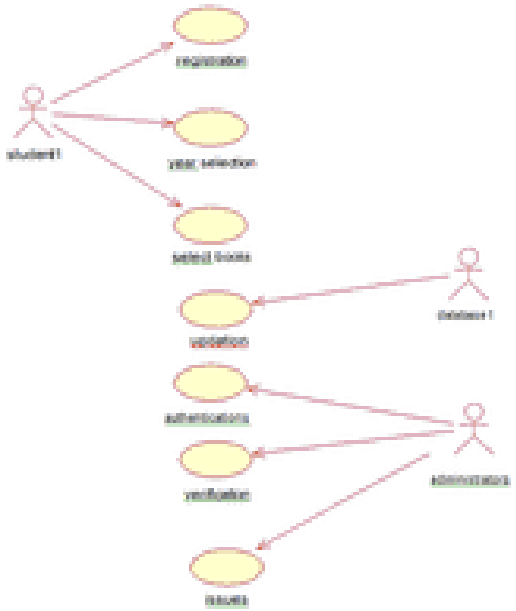
The following UML diagrams describe the process involved in the online recruitment system

a. Use case diagram
b. Class diagram
c. Sequence diagram
d. Collaboration diagram
e. State chart diagram
f. Activity diagram
g. Component diagram
h. Deployment diagram
i. Package diagram

USE CASE DIAGRAM

A use case is a methodology used in system analysis to identify, clarify, and organize system requirements. The use case is made up of a set of possible sequences of interactions between systems and users in a particular environment and related to a particular goal. It is represented using ellipse.

Actor is any external entity that makes use of the system being modeled. It is represented using stick figure.



DOCUMENTATION OF USE CASE DIAGRAM

The actors in this use case diagram are member and database. The use cases are the activities performed by actors.

a. The member will register himself in the book bank.

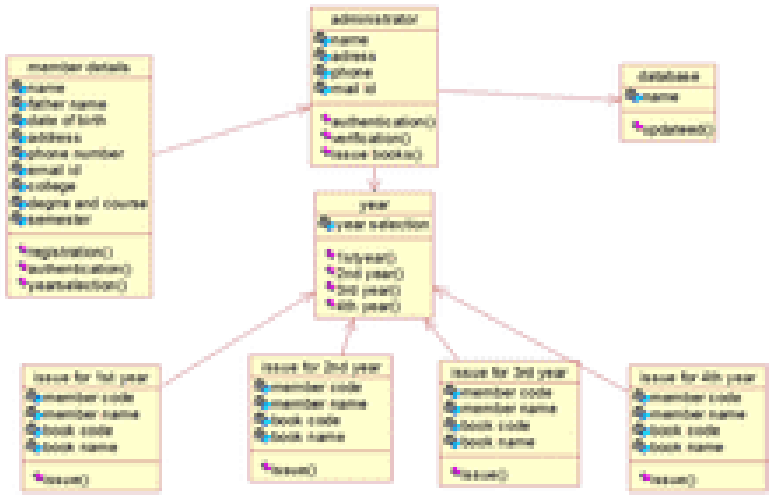
b. After registration he will select the year to which he belongs

c. After selecting he will select books

d. Database will verify the status of book and the books will be given.

CLASS DIAGRAM

A class diagram in the unified modeling language (UML) is a type of static structure diagram that describes the structure of a system by showing the system's classes, their attributes, and the relationships between the classes. It is represented using a rectangle with three compartments. Top compartment have the class name, middle compartments the attributes and the bottom compartment with operations.



DOCUMENTATION OF CLASS DIAGRAM

This class diagram has 8 classes:

- **Member details class**- is the class name. Its attributes are name, father
- **Administrator-** is the class name. Its attributes are name, address, phone, mail id. Its operations are authentication, verification and issue books.
- **Year-**is the class name. Its attribute is year selection. Its operations are 1st year,2nd year, 3rd year,4th year.
- **Issue for 1st year-**is the class name. Its attributes are member code, member name, book code, book name, and quantity. Its operation is issue

Issue for 2nd year-is the class name. Its attributes are member code, member name, book code, book name, and quantity. Its operation is issue

- **Issue for 3rd year-**is the class name. Its attributes are member code, member name, book code, book name, and quantity. Its operation is issue

SEQUENCE DIAGRAM

A sequence diagram in Unified Modeling Language (UML) is a kind of interaction diagram that shows how processes operate with one another and in what order. It is a construct of a Message Sequence Chart. There are two dimensions.

1. Veritcal dimension-represent time.
2. Horizontal dimension-represent different objects.

DOCUMENTATION OF SEQUENCE DIAGRAM

The sequence diagram describes the sequence of steps to show

a. The member registers himself in book bank

b. He will select the year

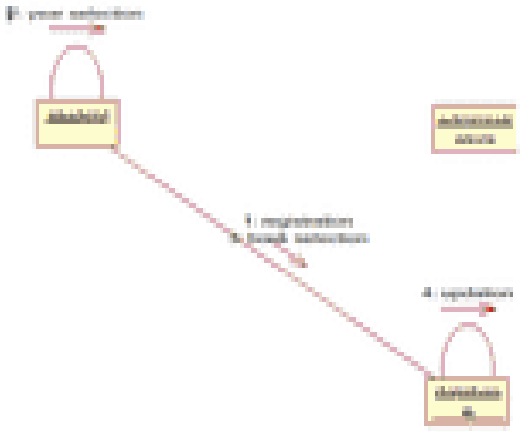
c. He select the books given and the database will update the status of book.

d. Then administrator will log in and verify the status of books.

e. If the book is available he will issue the book.

COLLABRATION DIAGRAM

A collaboration diagram, also called a communication diagram or interaction diagram,. A sophisticated modeling tool can easily convert a collaboration diagram into a sequence diagram and the vice versa. A collaboration diagram resembles a flowchart that portrays the roles, functionality and behavior of individual objects as well as the overall operation of the system in real time



DOCUMENTATION OF COLLABORATION DIAGRAM

The collaboration diagram is to show how the member registers himself and borrow the book from the book bank. Here the sequence is numbered according to the flow of execution.

STATE CHART DIAGRAM

The purpose of state chart diagram is to understand the algorithm involved in performing a method. It is also called as state diagram. A state is represented as a round box, which may contain one or more compartments. An initial state is represented as small dot. An final state is represented as circle surrounding a small dot.

DOCUMENTATION OF STATE CHART DIAGRAM

This state diagram describes the behavior of the system.

a. In the first state the member registers himself in book bank

b. After that he will select the year in next state.

c. In the next state he will select the books.

d. In the next state database will update the status of book.

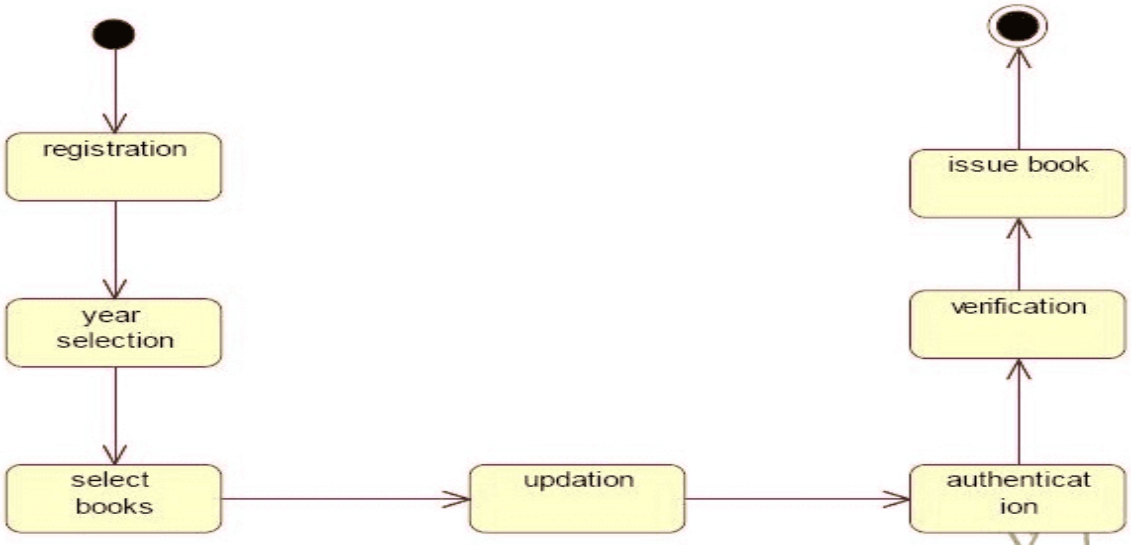
e. In the next state administrator will log in.

f. After authentication he will verify the availability of book.

g. If available he will issue the book.

ACTIVITY DIAGRAM

Activity diagrams are graphical representations of workflows of stepwise activities and actions with support for choice, iteration and concurrency. In the Unified Modeling Language, activity diagrams can be used to describe the business and operational step-by-step workflows of components in a system. An activity diagram shows the overall flow of control. An activity is shown as an rounded box containing the name of the operation



DOCUMENTATION OF ACTIVITY DIAGRAM

This activity diagram flow of stepwise activities performed in book bank management system.

a. The member registers himself in book bank

b. After that he will select the year.

c. He will select the books.

d. Database will update the status of book.

e. Database will update the details

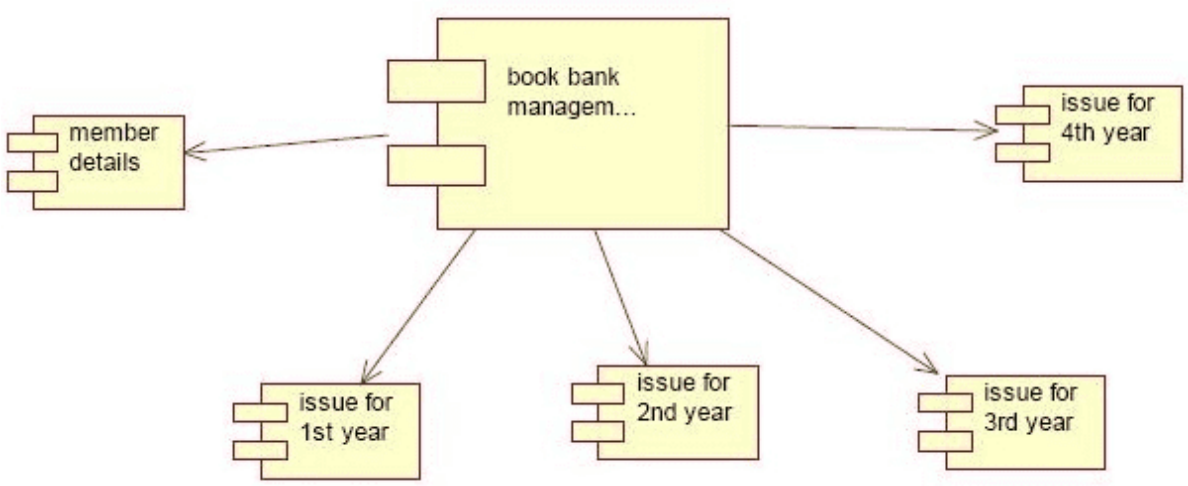
f. Then the administrator will log in to his account.

g. After authentication he will verify the availability of book.

h. If available he will issue the book.

COMPONENT DIAGRAM

The component diagram's main purpose is to show the structural relationships between the components of a system. It is represented by boxed figure. Dependencies are represented by communication association

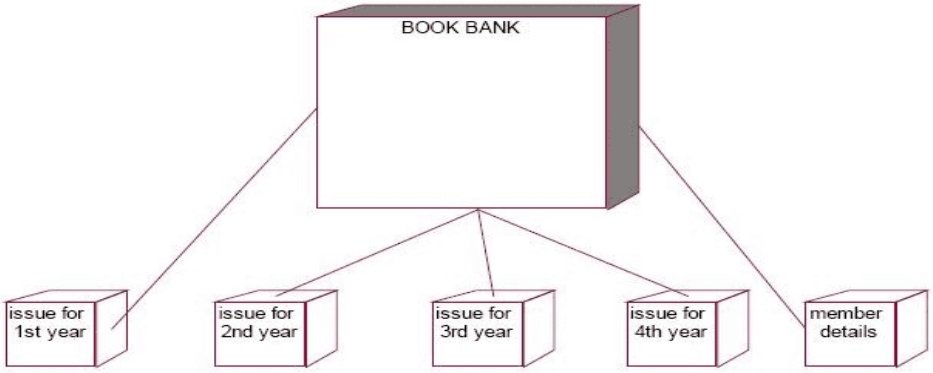


DOCUMENTATION OF COMPONENT DIAGRAM

The main component in this component diagram is online book bank management systems. And member details, issue for first year, issue for second year issue for third year and issue for fourth year are components comes under the main component

DEPLOYMENT DIAGRAM

A deployment diagram in the unified modeling language serves to model the physical deployment of artifacts on deployment targets. Deployment diagrams show "the allocation of artifacts to nodes according to the Deployments defined between them. It is represented by 3-dimentional box. Dependencies are represented by communication association.



DOCUMENTATION OF DEPLOYMENT DIAGRAM

The processor in this deployment diagram is the book bank which is the main part and which are the some of the main activities performed in the system. And issue for first year, issue for second year issue for third year and issue for fourth year are some activities performed in this system.

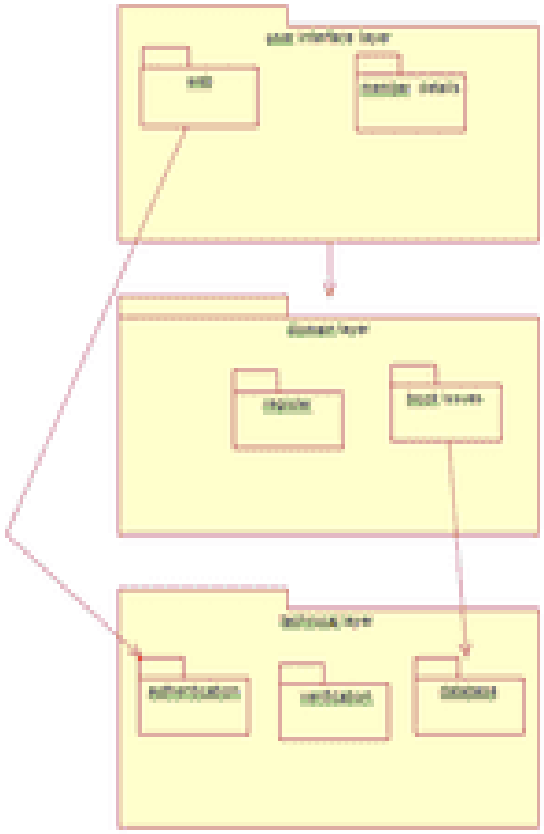
PACKAGE DIAGRAM

A package diagram in unified modeling language that depicts the dependencies between the packages that make up a model. A Package Diagram (PD) shows a grouping of elements in

the OO model, and is a Cradle extension to UML. PDs can be used to show groups of classes in Class Diagrams (CDs), groups of components or processes in Component Diagrams (CPDs), or groups of processors in Deployment Diagrams (DPDs).

There are three types of layer. They are

- User interface layer
- Domain layer
- Technical services layer



DOCUMENTATION OF PACKAGE DIAGRAM

The three layers in the online recruitment system are

a. **The User interface layer** - consists of the web and member details. This layer describes how the member goes to book bank and registers himself..

b. **The Domain layer** – shows the activities that are performed in the book bank management system. The activities are register and book issues..

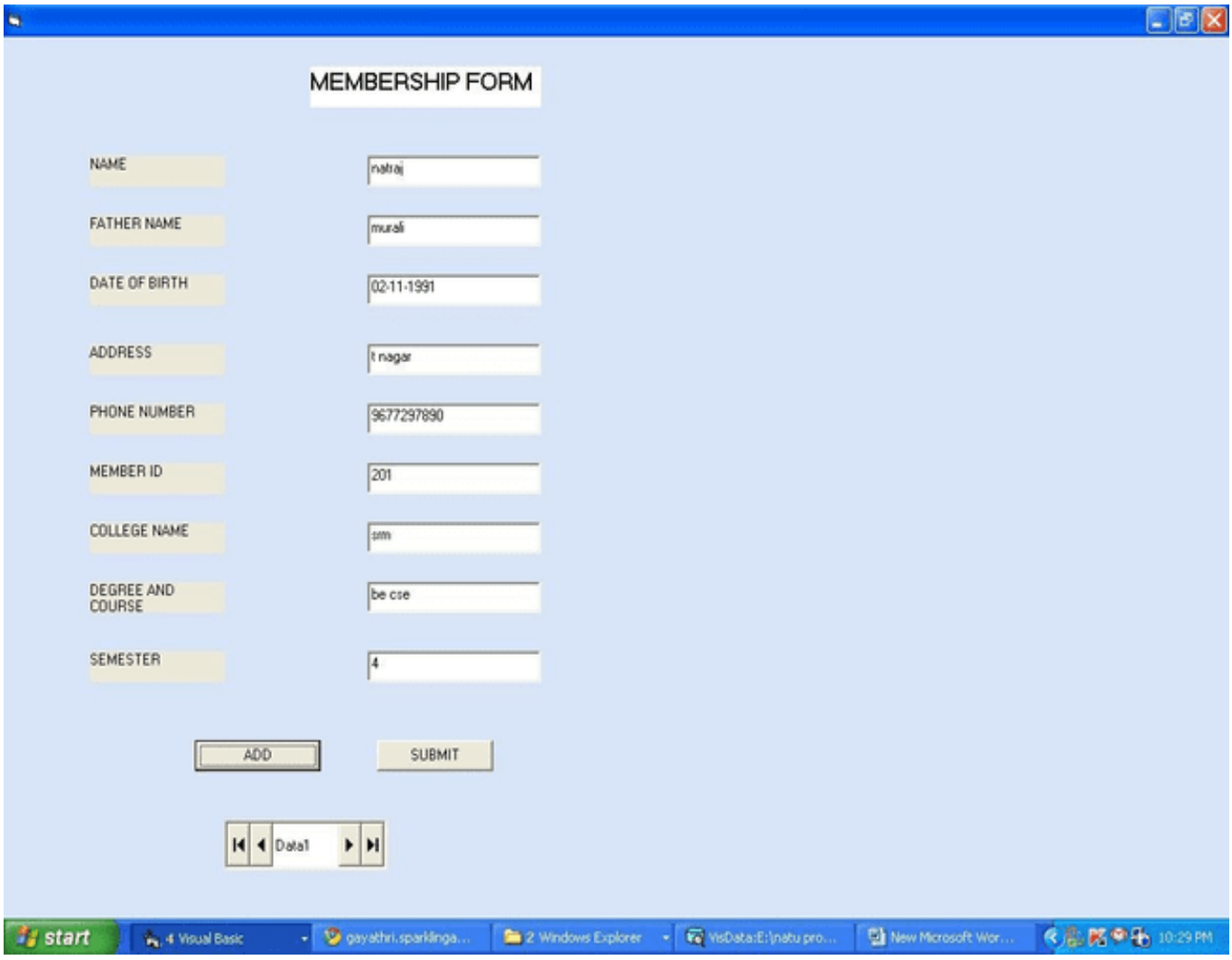
c. **The Technical service layer -** the member details and verification details are stored in the database.

FOR

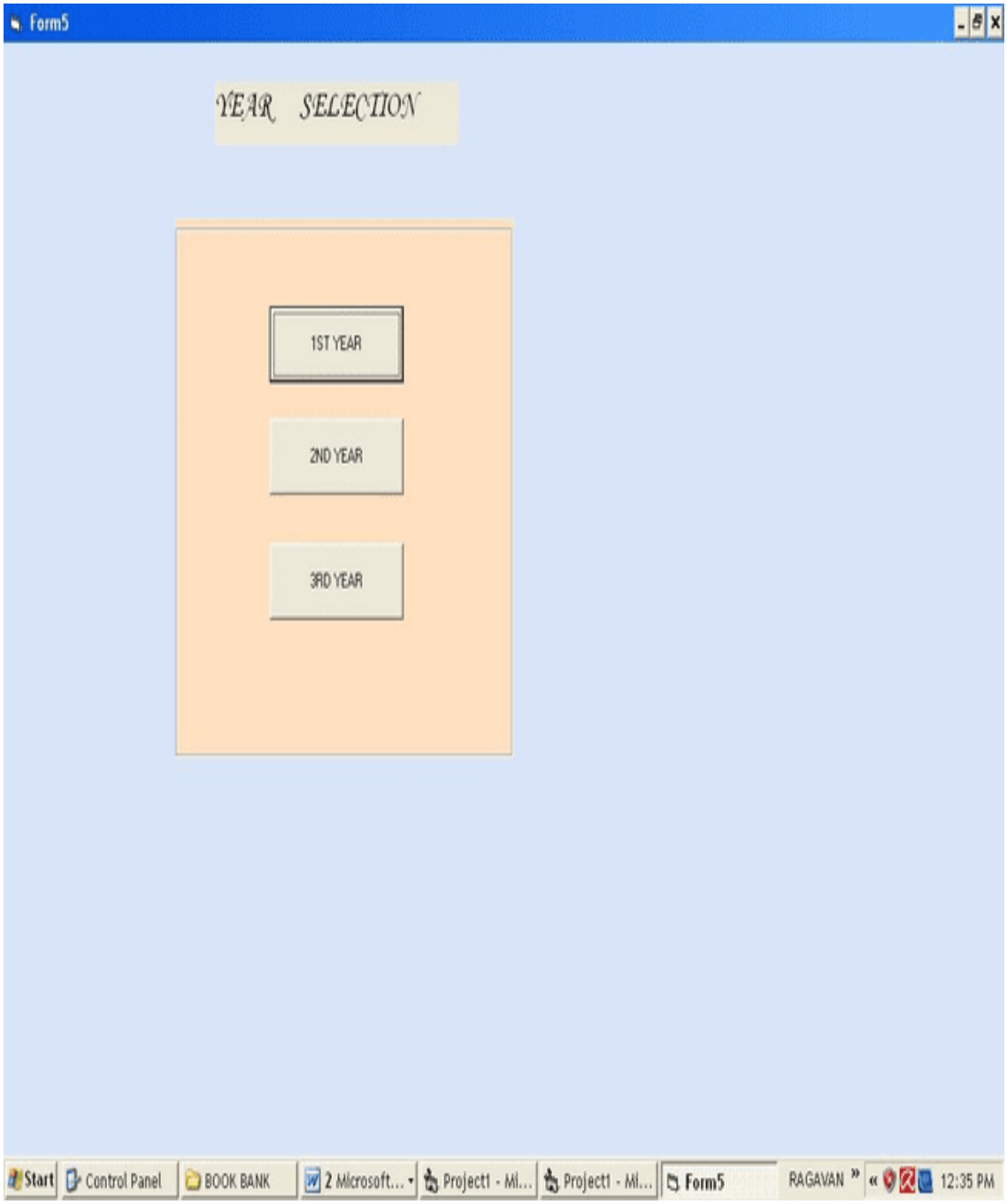
MS

FOR

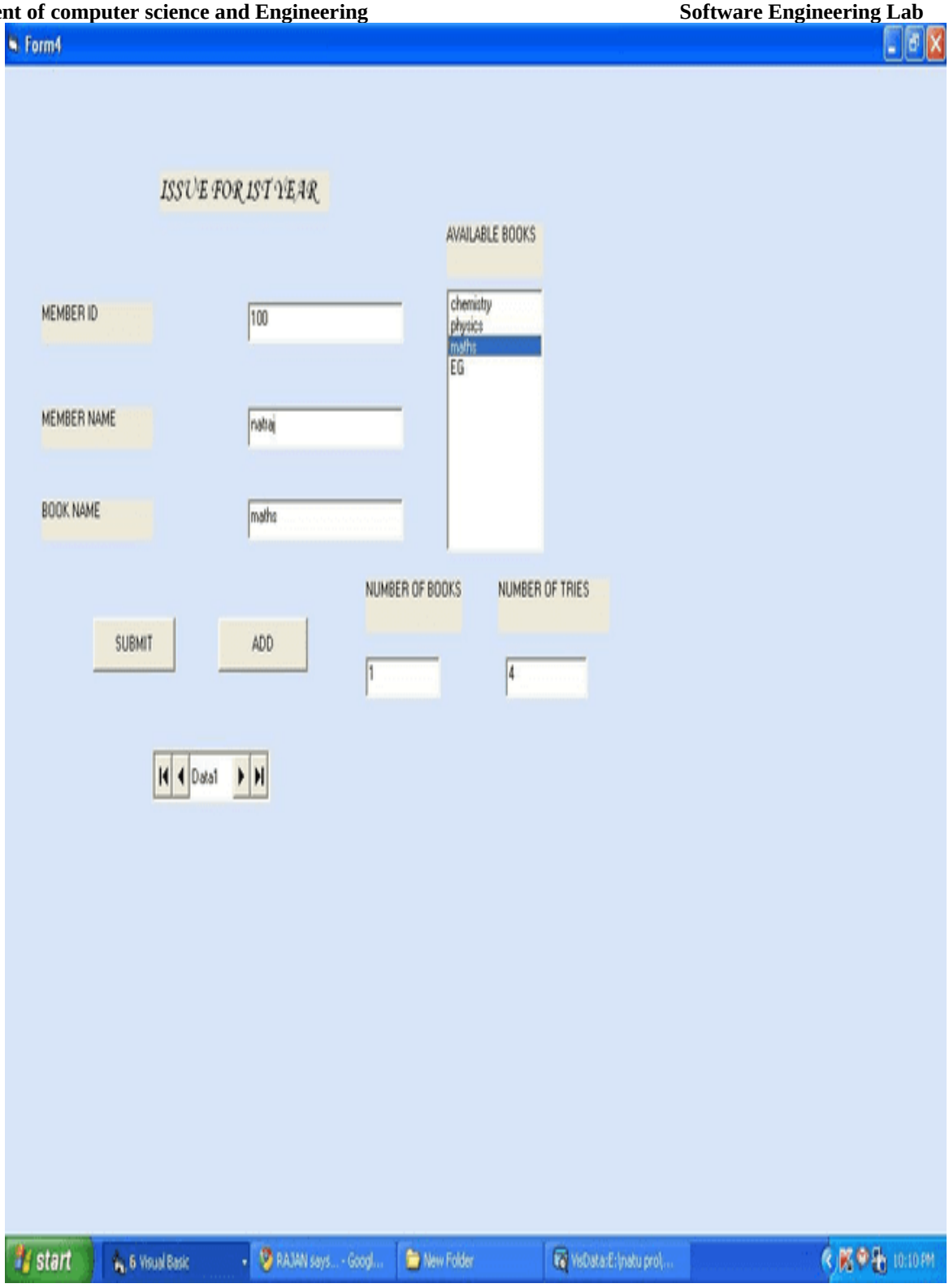
M 1



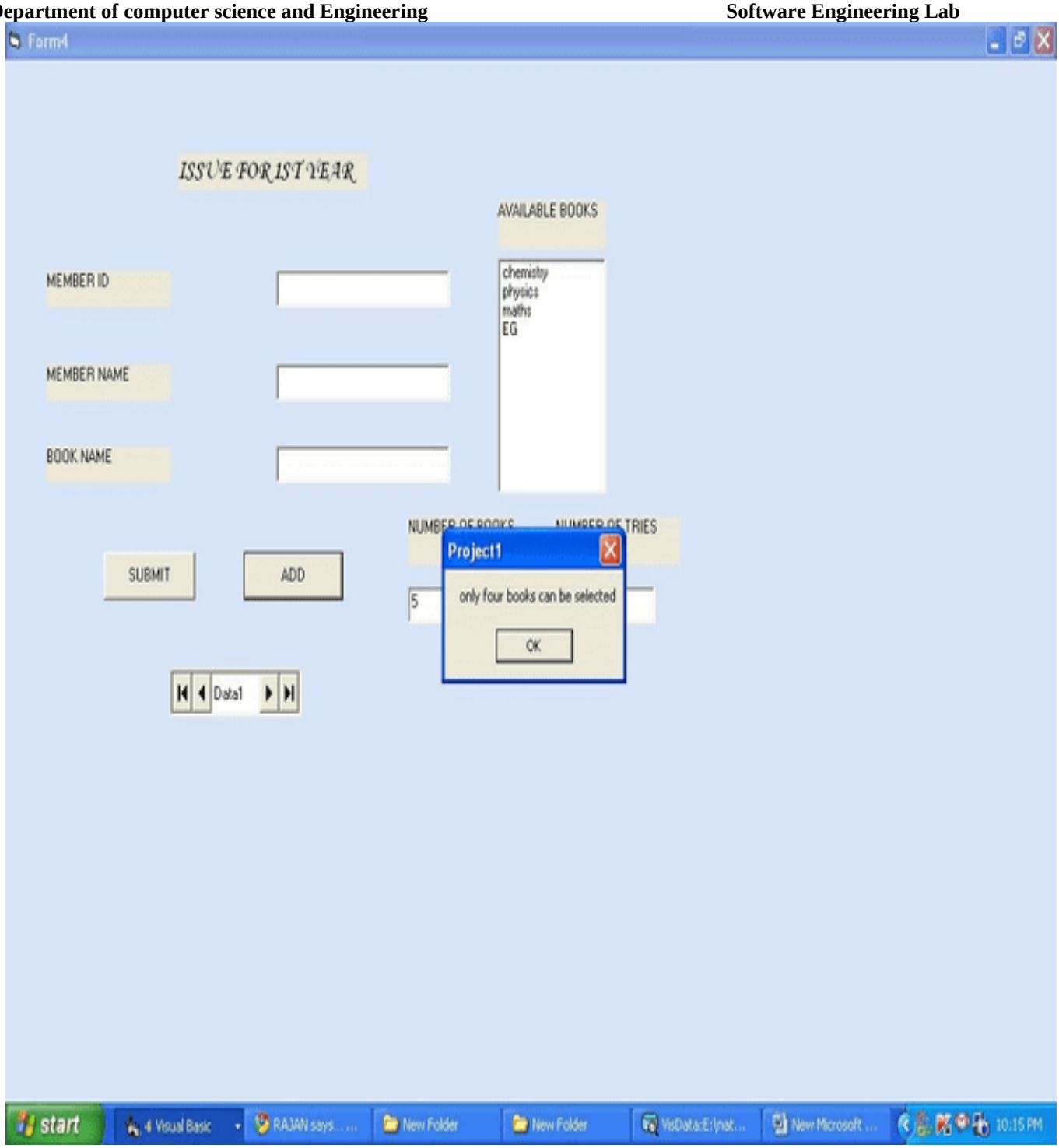
FORM 2


Form5
YEAR SELECTION
1ST YEAR
2ND YEAR
3RD YEAR
Start
Control Panel
BOOK BANK
2 Microsoft...
Project1 - Mi...
Project1 - Mi...
Form5
RAGAVAN
12:35 PM

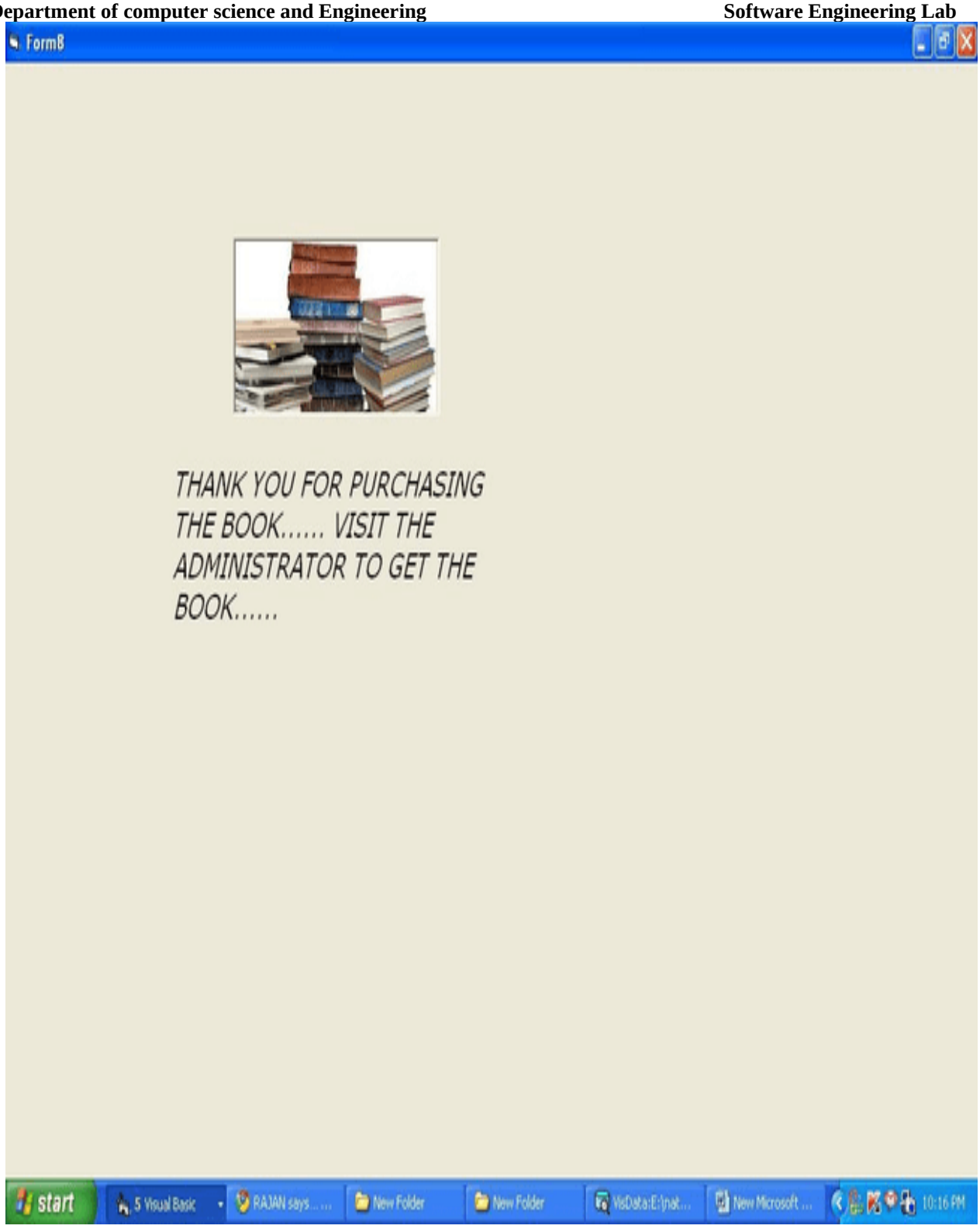
FORM 3


Form4
ISSUE FOR IST YEAR
AVAILABLE BOOKS
MEMBER ID
100
chemistry
physics
maths
EG
MEMBER NAME
BOOK NAME
maths
NUMBER OF BOOKS
NUMBER OF TRIES
SUBMIT
ADD
1
4
Data1
start
6 Visual Basic
RAJAN says... - Googl...
New Folder
10:10 PM

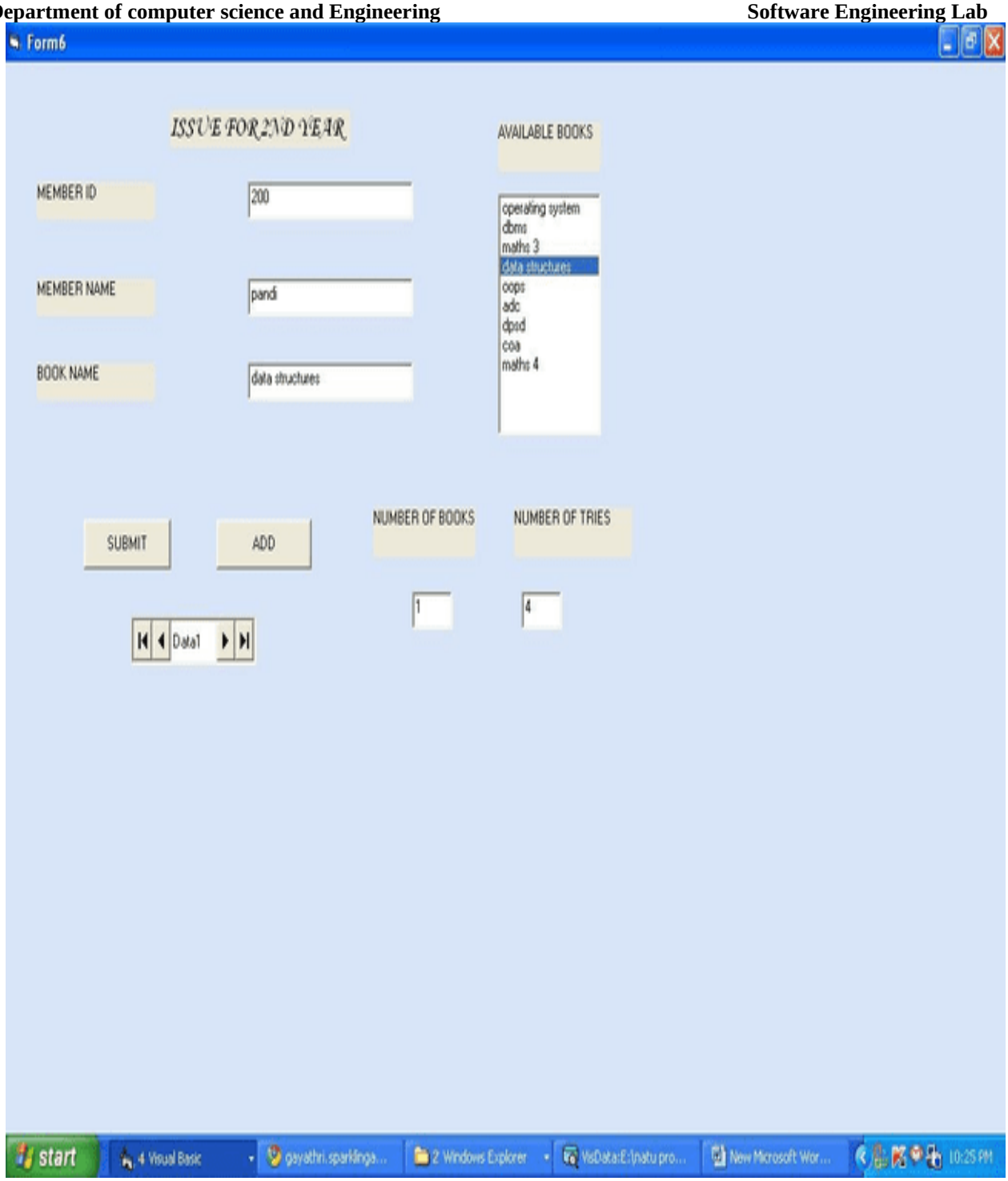
FORM 4


Form4
ISSUE FOR IST YEAR
AVAILABLE BOOKS
MEMBER ID
chemistry
physics
maths
EG
MEMBER NAME
BOOK NAME
NUMBER OF BOOKS
NUMBER OF TRIES
SUBMIT
ADD
5
Project1
only four books can be selected
OK
Data1
start
4 Visual Basic
RAJAN says... ...
New Folder
New Folder
VisData:E:\nat...
New Microsoft ...
10:15 PM

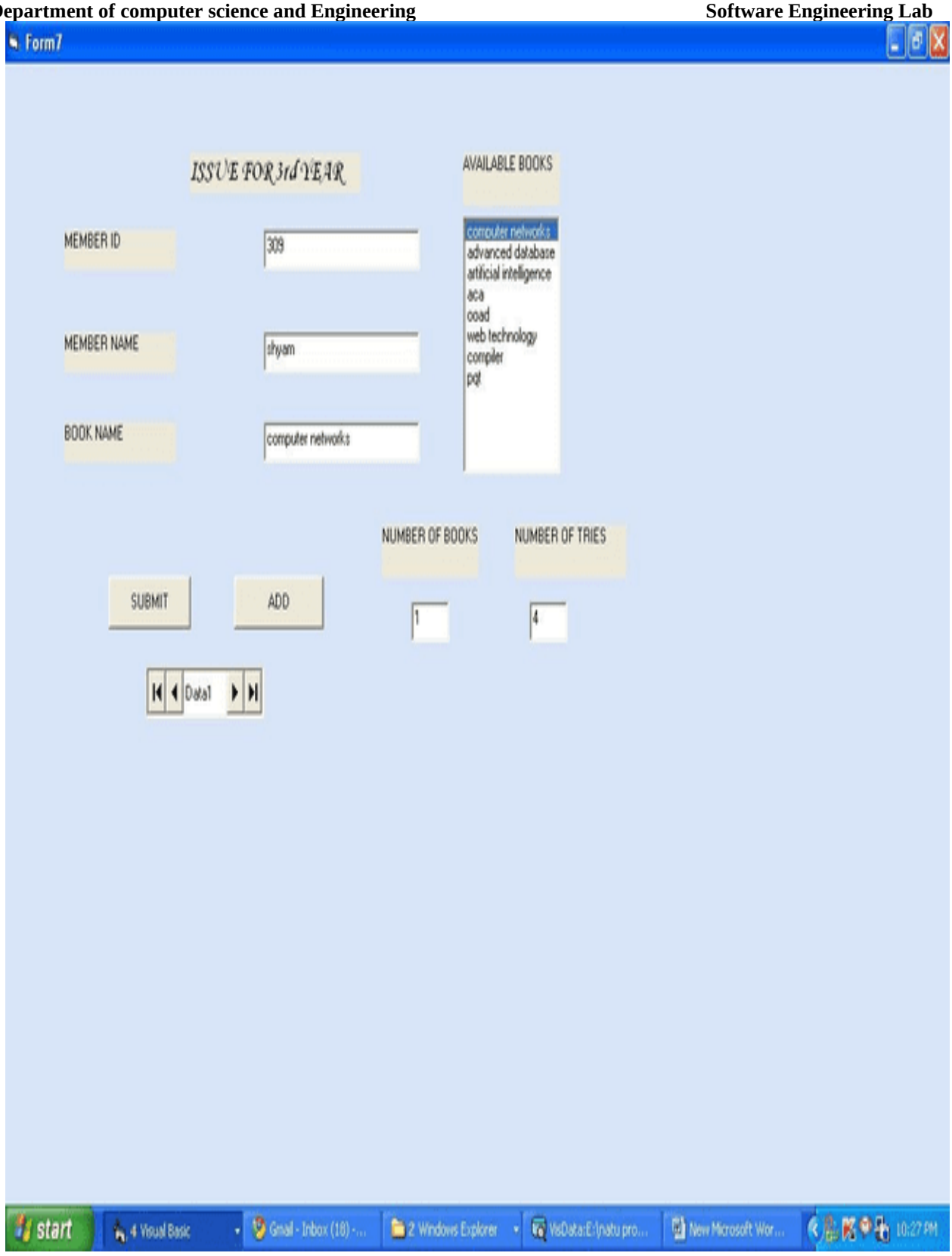
FORM 5


Form8
THANK YOU FOR PURCHASING THE BOOK..... VISIT THE ADMINISTRATOR TO GET THE BOOK.....
start
5 Visual Basic
RAJAN says ....
New Folder
New Folder
VisData:E:\jnak...
New Microsoft ...
10:16 PM

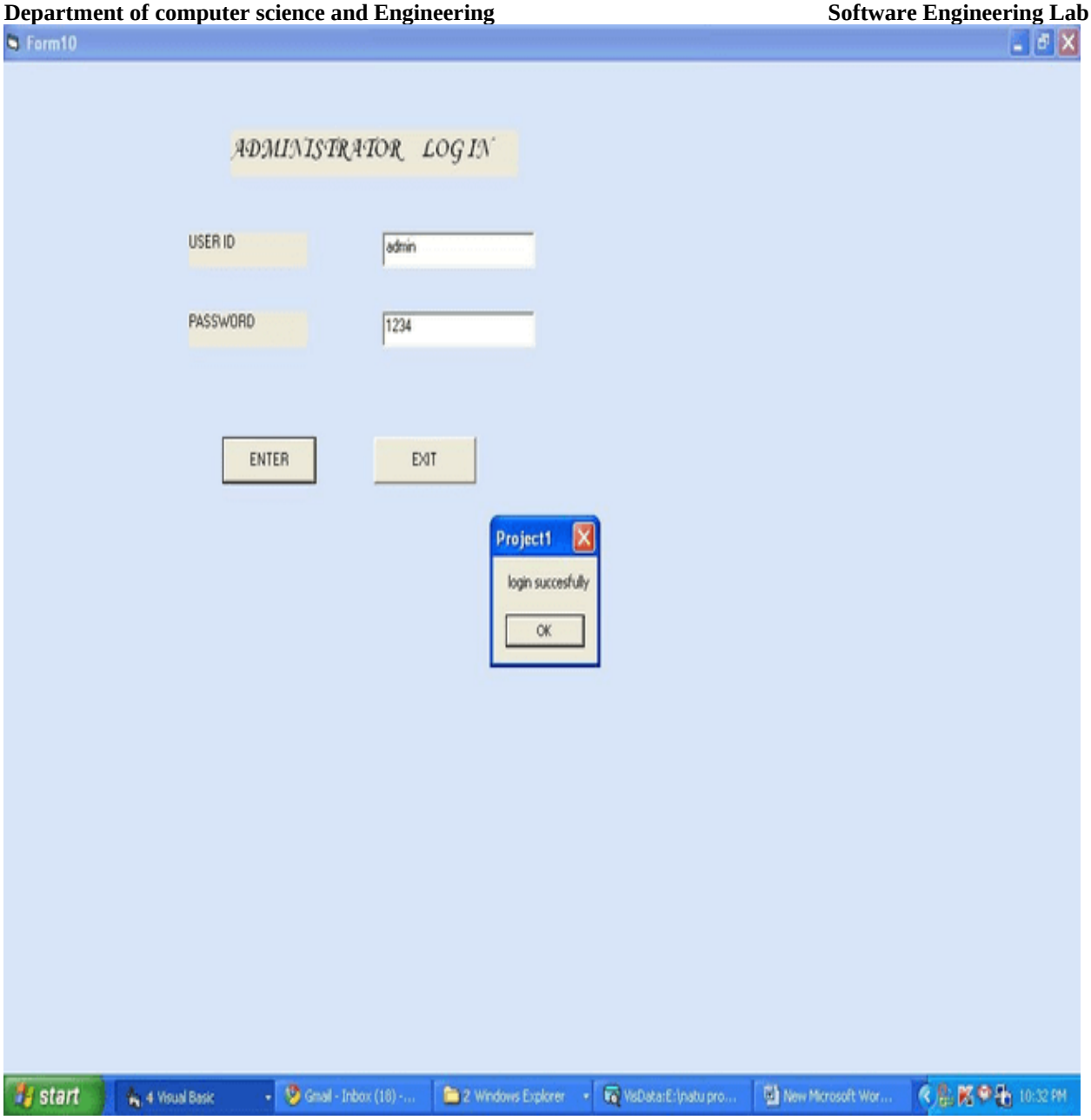
FORM 6


Form6
ISSUE FOR 2ND YEAR
AVAILABLE BOOKS
MEMBER ID
200
operating system
dbms
maths 3
data structures
oops
adc
dpsd
coa
maths 4
MEMBER NAME
pandi
BOOK NAME
data structures
SUBMIT
ADD
NUMBER OF BOOKS
NUMBER OF TRIES
1
4
Data1
start
4 Visual Basic
gayathri.sparklinga...
2 Windows Explorer
VisData:E:\jnatu pro...
New Microsoft Wor...
10:25 PM

FORM 7


Form7
ISSUE FOR 3rd YEAR
AVAILABLE BOOKS
MEMBER ID
309
computer networks
advanced database
artificial intelligence
aca
oaad
web technology
compiler
pqt
MEMBER NAME
shyam
BOOK NAME
computer networks
NUMBER OF BOOKS
NUMBER OF TRIES
SUBMIT
ADD
1
4
Data1
start
4 Visual Basic
Gmail - Inbox (18) - ...
2 Windows Explorer
VisData:E:\jnatu pro...
New Microsoft Wor...
10:27 PM

FORM 8



RESULT

Thus the project to develop book bank management system using Rational Rose Software and to implement the software in Visual Basic was done successfully

EXPERIMENT 3
ONLINE EXAM REGISTRATION

AIM

To develop a project Exam Registration using Rational Rose Software and to implement the software in Visual Basic.

PROBLEM ANALYSIS AND PROJECT PLANNING

The Exam Registration is an application in which applicant can register themselves for the exam. The details of the students who have registered for the examination will be stored in a database and will be maintained. The registered details can then be verified for any fraudulent or duplication and can be removed if found so. The database which is verified can be used to issue hall tickets and other necessary materials to the eligible students.

PROBLEM STATEMENT

The process of students accessing the registration application and applying for the examination by filling out the form with proper details and then the authorities verify those details given for truth and correctness are sequenced through steps

a. The students access exam registration application.

b. They fill out the form with correct and eligible details.

c. They complete the payment process.

d. The authorities verify or check the details.

e. After all verification the exam registration database is finalized.

1. INTRODUCTION

Exam Registration application is an interface between the Student and the Authority responsible for the Exams. It aims at improving the efficiency in the registration of exams and reduces the complexities involved in it to the maximum possible extent.

2. OBJECTIVE

The main objective of Exam Registration System is to make applicants register themselves and apply for the exam. Exam Registration System provides easy interface to all the users to apply for the exam easily.

3. OVERVIEW

The overview of the project is to design an exam registration tool for the registration process

which makes the work easy for the applicant as well as the Authorities of Exam. Authorities of the exam can keep track of and maintain the database of the registered applicants for the exams.

4. GLOSSARY

TERMS	DESCRIPTION
APPLICANT OR STUDENT	Applicant can register himself by filling out the registration form and finally paying the payment for attending the exam.
DATABASE	Database is used to maintain and store the details of registered applicants.
SOFTWARE REQUIREMENT SPECIFICATION	This software specification documents full set of features and function for online recruitment system that is performed in company website.

5. PURPOSE

The purpose of exam registration system is to register for the exam in an easier way and to maintain the registered details in an effective manner.

6. SCOPE

The scope of this Exam Registration process is to provide an easy interface to the applicants where they can fill their details and the authorities maintain those details in an easy and effective way.

7. FUNCTIONALITY

The main functionality of registration system is to make the registration and database for it to be maintained in an efficient manner.

8. USABILITY

User interface makes the Exam Registration system to be efficient. That is the system will help the applicant to register easily and helps the authorities to maintain details effectively. The system should be user friendly.

9. PERFORMANCE

It describes the capability of the system to perform the registration process of the applicant without any error and performing it efficiently.

10.RELIABILITY

The Exam Registration system should be able to serve the applicant with correct information

and day-to-day update of information.

11. FUNCTIONAL REQUIREMENTS

Functional requirements are those refer to the functionality of the system. That is the services that are provided to the applicant who apply for the Exam.

12. EXTERNAL INTERFACE

REQUIREMANTS SOFTWARE

REQUIREMENTS

1. **Front end:** IBM rational rose enterprise edition.
2. **Back end:** visual basic 8.0.

HARDWARE REQUIREMENTS

1. **Processor :** pentium 4.
2. **RAM : 256** mb
3. **Operating syatem :** Microsoft windows xp.
4. **Free disk space : 1**gb **UML**

DIAGRAMS

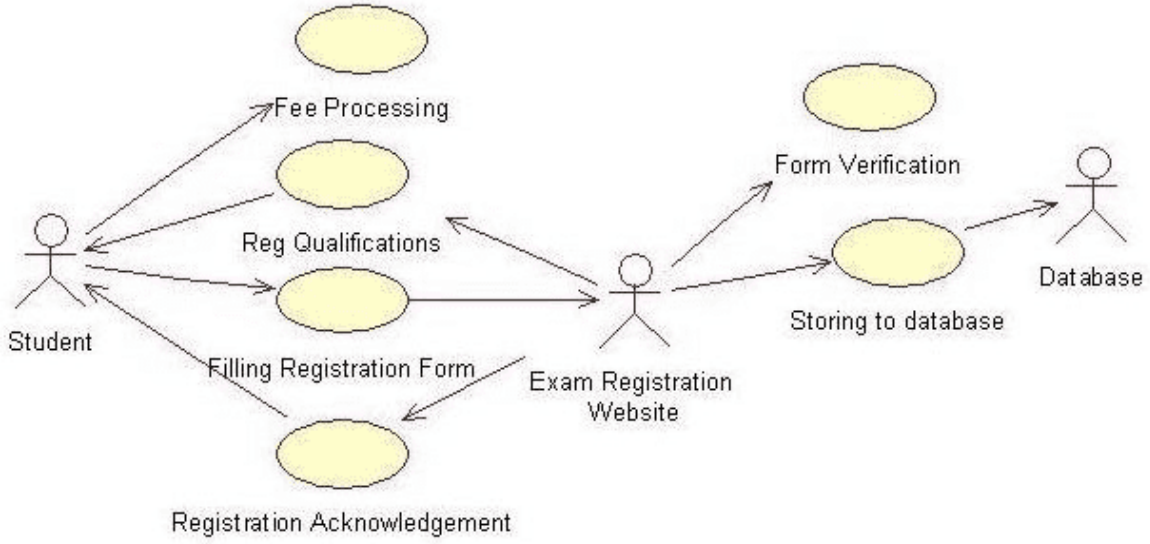
The following UML diagrams describe the process involved in the online recruitment system

a. Use case diagram
b. Class diagram
c. Sequence diagram
d. Collaboration diagram
e. State chart diagram
f. Activity diagram
g. Component diagram
h. Deployment diagram
i. Package diagram

USE CASE DIAGRAM

A use case is a methodology used in system analysis to identify, clarify, and organize system requirements. The use case is made up of a set of possible sequences of interactions between systems and users in a particular environment and related to a particular goal. It is represented using ellipse.

Actor is any external entity that makes use of the system being modelled. It is represented using stick figure



DOCUMENTATION OF USE CASE DIAGRAM

The actors in this use case diagram are Student, Interface and Database. The usecases are the activities performed by actors.

a. Student Fills out the form in the form filling process.

b. The interface checks and validates registered details.

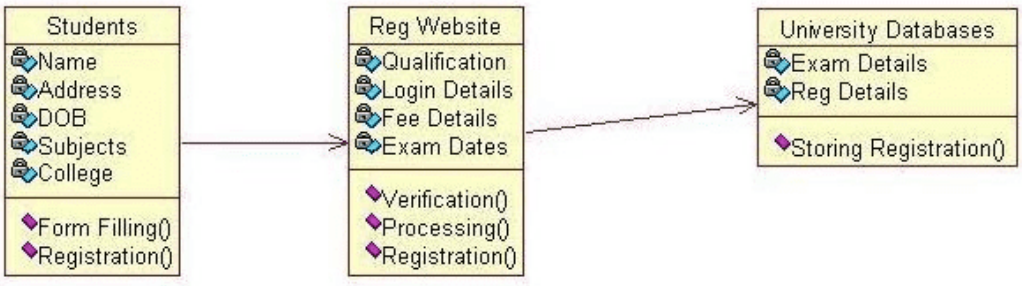
c. Then the database is searched for details and verified.

d. Database stores the details and returns acknowledgement.

e.

CLASS DIAGRAM

A class diagram in the unified modeling language (UML) is a type of static structure diagram that describes the structure of a system by showing the system's classes, their attributes, and the relationships between the classes. It is represented using a rectangle with three compartments. Top compartment have the class name, middle compartment the attributes and the bottom compartment with operations.



DOCUMENTATION OF CLASS DIAGRAM

This class diagram has three classes applicant, recruiter and database.

a. **Students** – is the class name. Its attributes are name, Address, DOB, Gender, College, Subjects, Semester, Year, Degree, Branch and Payment. The operations performed in the students class are form filling, search database and receiving acknowledgement.

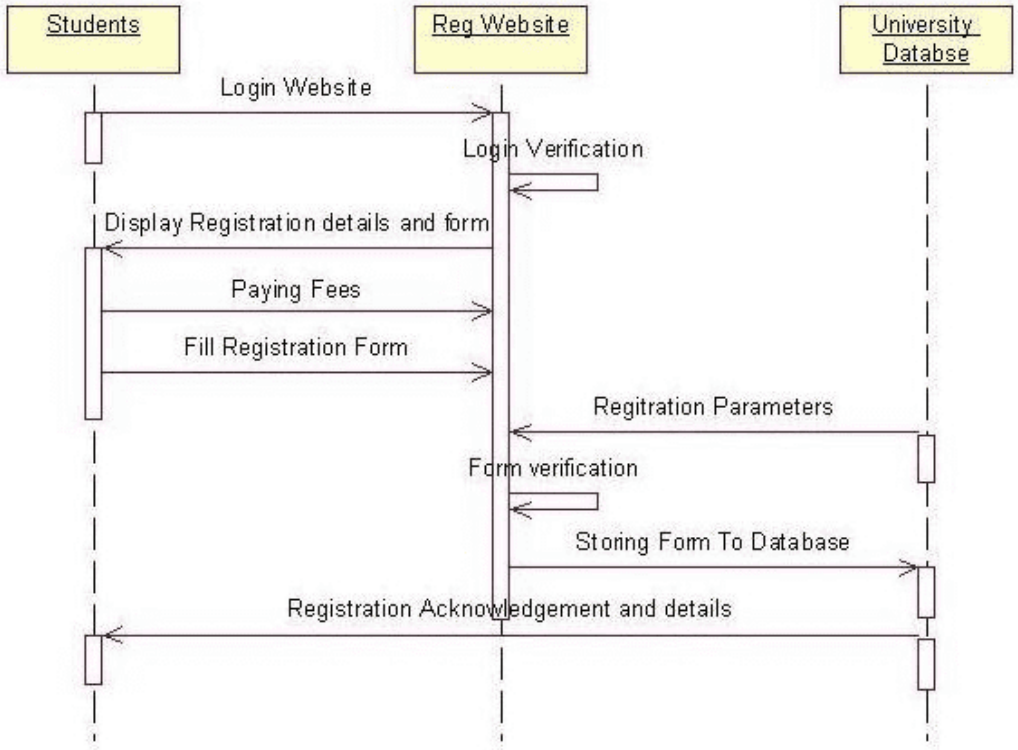
b. **Registrations Interface** – is the class name. Its attributes are Login, Password and database. The operations performed are form verification, store in database and send acknowledgement.

c. **Database** – is the class name. The operations performed are storing Search and storing the values.

SEQUENCE DIAGRAM

A sequence diagram in Unified Modeling Language (UML) is a kind of interaction diagram that shows how processes operate with one another and in what order. It is a construct of a Message Sequence Chart. There are two dimensions.

1. Veritcal dimension-represent time.
2. Horizontal dimension-represent different objects.



DOCUMENTATION OF SEQUENCE DIAGRAM

The sequence diagram describes the sequence of steps to show

a. The applicant filling form and registering for exam.

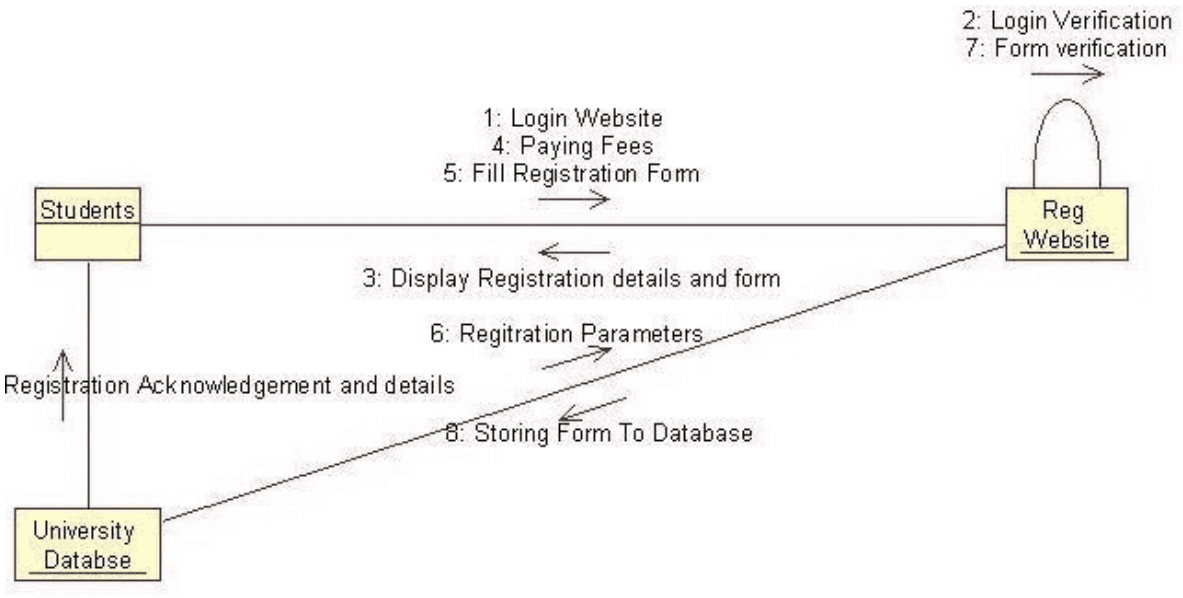
b. The verification done by the interface and sending acknowledgement for registration.

c. Searching the database with login and displaying it for maintenance.

COLLABRATION DIAGRAM

A collaboration diagram, also called a communication diagram or interaction diagram,. A sophisticated modeling tool can easily convert a collaboration diagram into a sequence diagram and the vice versa. A collaboration diagram resembles a

flowchart that portrays the roles, functionality and behavior of individual objects as well as the overall operation of the system in real time

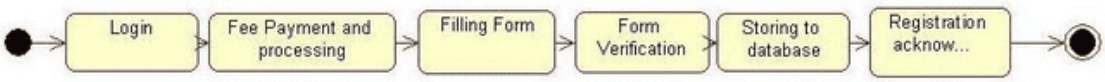


DOCUMENTATION OF COLLABRATION DIAGRAM

The collaboration diagram is to show how the Student registers and the authorities maintains the details of the registered students in the registration system. Here the sequence is numbered according to the flow of execution.

STATE CHART DIAGRAM

The purpose of state chart diagram is to understand the algorithm involved in performing a method. It is also called as state diagram. A state is represented as a round box, which may contain one or more compartments. An initial state is represented as small dot. A final state is represented as circle surrounding a small dot.



DOCUMENTATION OF STATE CHART DIAGRAM

This state diagram describes the behaviour of the system.

a. First state is form filling where the student fill the form to registration system.

b. The next state is form verification by the interface.

c. Then store the details in the database.

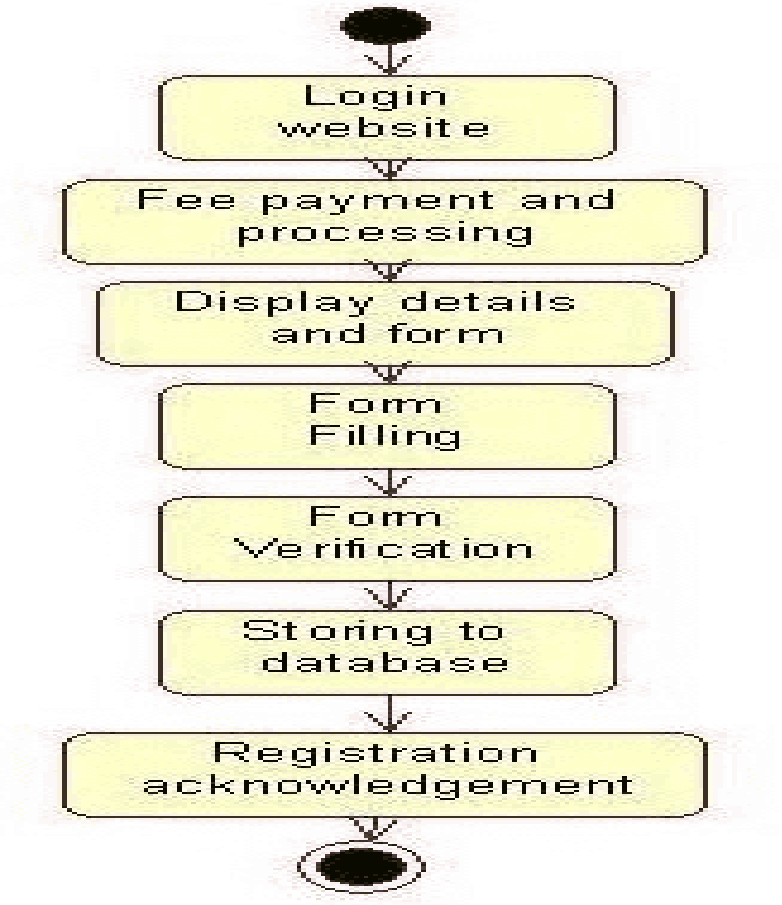
d. The student receives acknowledgement for registering.

e. Search database with login information.

f. Display the searched data in the interface.

ACTIVITY DIAGRAM

Activity diagrams are graphical representations of workflows of stepwise activities and actions with support for choice, iteration and concurrency. In the Unified Modeling Language, activity diagrams can be used to describe the business and operational step-by-step workflows of components in a system. An activity diagram shows the overall flow of control. An activity is shown as an rounded box containing the name of the operation.



DOCUMENTATION OF ACTIVITY DIAGRAM

This activity diagram flow of stepwise activities performed in recruitmnet system.

a. First the student fills the form.

b. The student details are verified and stored in database.

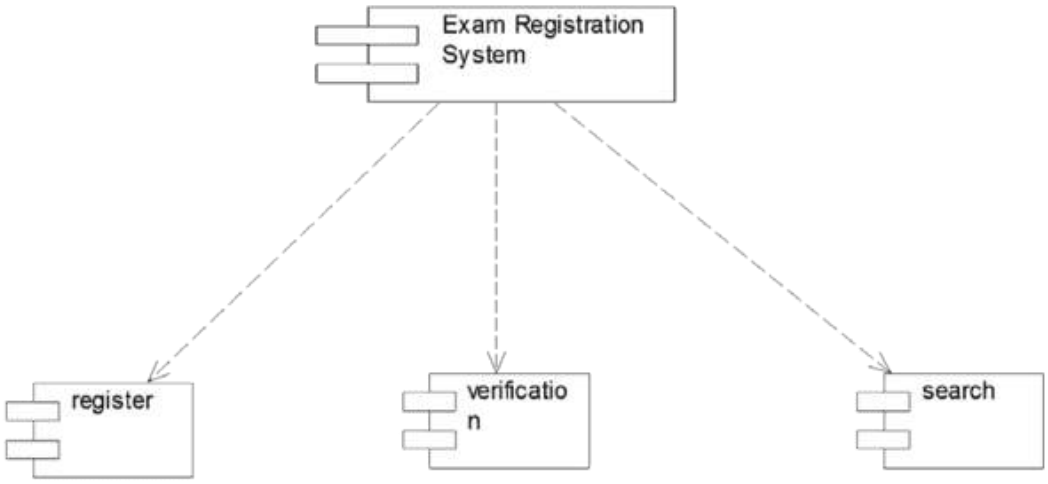
c. Acknowledgement sent is received by student.

d. Search database with login and if data present in the database.

e. The searched data is displayed if available.

COMPONENT DIAGRAM

The component diagram's main purpose is to show the structural relationships between the components of a system. It is represented by boxed figure. Dependencies are represented by communication association.



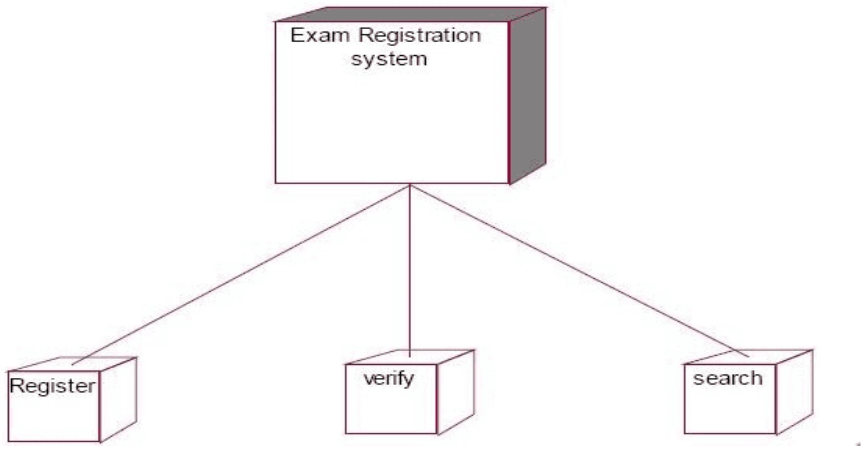
DOCUMENTATION OF COMPONENT DIAGRAM

The main component in this component diagram is Exam Registration system. And register, verification and search details are the components comes under the main component.

DEPLOYMENT DIAGRAM

A deployment diagram in the unified modeling language serves to model the physical deployment of artifacts on deployment targets. Deployment diagrams show "the allocation of artifacts to nodes according to the Deployments defined between them. It is represented by 3-

dimentional box. Dependencies are represented by communication assosiation.



DOCUMENTATION OF DEPLOYMENT DIAGRAM

The processor in this deployment diagram is the Exam Registration system which is the main part and the devices are the register, verify and search which are the some of the main activities performed in the system.

PACKAGE DIAGRAM

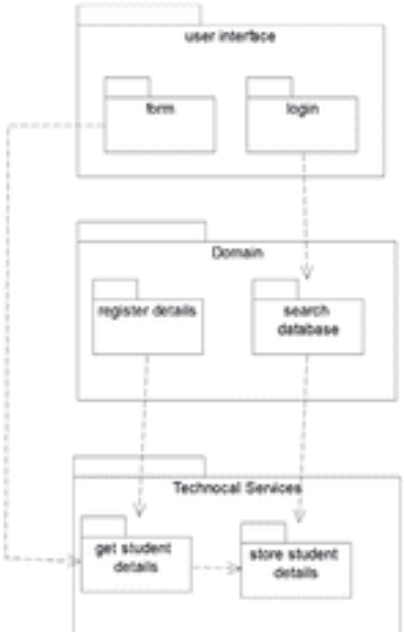
A package diagram in unified modeling language that depicts the dependencies between the packages that make up a model. A Package Diagram (PD) shows a grouping of elements in the OO model, and is a Cradle extension to UML. PDs can be used to show groups of classes in Class Diagrams (CDs), groups of components or processes in Component Diagrams (CPDs), or groups of processors in Deployment Diagrams (DPDs).

There are three types of layer. They are

a. User interface layer

b. Domain layer

c. Technical services layer



DOCUMENTATION OF PACKAGE DIAGRAM

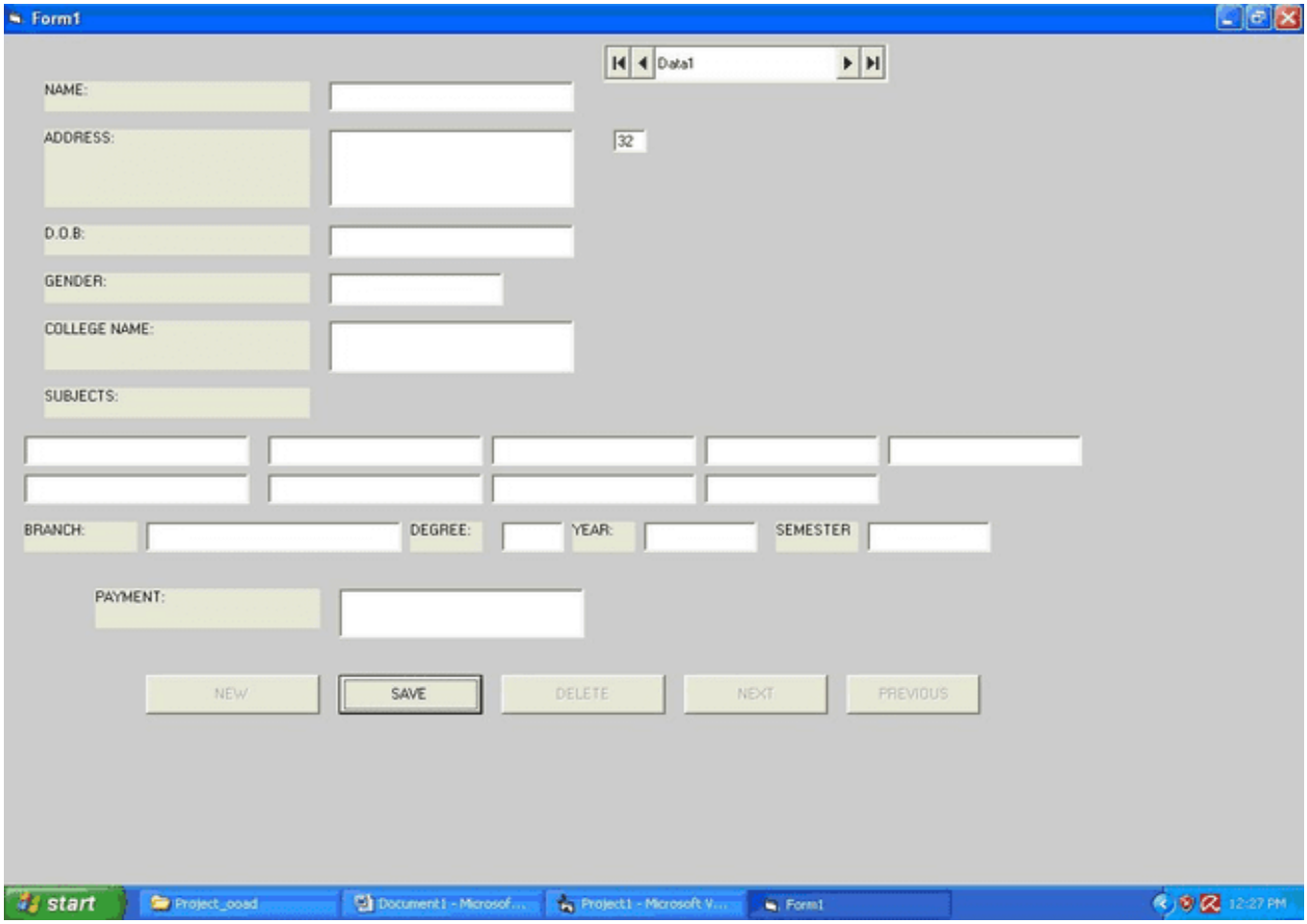
The three layers in the online recruitment system are

a. **The User interface layer** - consists of the form and login. This layer describes how the applicant logins to the search and apply for the exam.

b. **The Domain layer** – shows the activities that are performed in the Exam Registration system. The activities are register and search the database.

c. **The Technical service layer –** get student details and the selected applicant details are stored in the database.

FORMS



RESULT

Thus the project to develop Exam Registration system using Rational Rose Software and to implement the software in Visual Basic is done successfully.

EXPERIMENT 3b

EXAM REGISTRATION SYSTEM

AIM

To develop a project Exam Registration using Rational Rose Software and to implement the software in Java.

PROBLEM ANALYSIS AND PROJECT PLANNING

The Exam Registration is an application in which applicant can register themselves for the exam. The details of the students who have registered for the examination will be stored in a database and will be maintained. The registered details can then be verified for any fraudulent or duplication and can be removed if found so. The database which is verified can be used to issue hall tickets and other necessary materials to the eligible students.

PROBLEM STATEMENT

The process of students accessing the registration application and applying for the examination by filling out the form with proper details and then the authorities verify those details given for truth and correctness are sequenced through steps

- The students access exam registration application.
- They fill out the form with correct and eligible details.
- They complete the payment process.
- The authorities verify or check the details.
- After all verification the exam registration database is finalized.

SOFTWARE REQUIREMENT SPECIFICATION

1. INTRODUCTION

Exam Registration application is an interface between the Student and the Authority responsible for the Exams. It aims at improving the efficiency in the registration of exams and reduces the complexities involved in it to the maximum possible extent.

2. OBJECTIVE

The main objective of Exam Registration System is to make applicants register themselves and apply for the exam. Exam Registration System provides easy interface to all the users to apply for the exam easily.

3. OVERVIEW

The overview of the project is to design an exam registration tool for the registration process which makes the work easy for the applicant as well as the Authorities of Exam. Authorities of the exam can keep track of and maintain the database of the registered applicants for the exams.

4. GLOSSARY

TERMS	DESCRIPTION
APPLICANT OR STUDENT	Applicant can register himself by filling out the registration form and finally paying the payment for attending the exam.
DATABASE	Database is used to maintain and store the details of registered applicants.
SOFTWARE REQUIREMENT SPECIFICATION	This software specification documents full set of features and function for online recruitment system that is performed in company website.

5. PURPOSE

The purpose of exam registration system is to register for the exam in an easier way and to maintain the registered details in an effective manner.

6. SCOPE

The scope of this Exam Registration process is to provide an easy interface to the applicants where they can fill their details and the authorities maintain those details in an easy and effective way.

7. FUNCTIONALITY

The main functionality of registration system is to make the registration and database for it to be maintained in an efficient manner.

8. USABILITY

User interface makes the Exam Registration system to be efficient. That is the system will

help the applicant to register easily and helps the authorities to maintain details effectively. The system should be user friendly.

9. PERFORMANCE

It describes the capability of the system to perform the registration process of the applicant without any error and performing it efficiently.

10. RELIABILITY

The Exam Registration system should be able to serve the applicant with correct information and day-to-day update of information.

11. FUNCTIONAL REQUIREMENTS

Functional requirements are those refer to the functionality of the system. That is the services that are provided to the applicant who apply for the Exam.

UML DIAGRAMS

The following UML diagrams describe the process involved in the online recruitment system

a. Use case diagram
b. Class diagram
c. Sequence diagram
d. Collaboration diagram
e. State chart diagram
f. Activity diagram
g. Component diagram
h. Deployment diagram
i. Package diagram

USE CASE DIAGRAM

A use case is a methodology used in system analysis to identify, clarify, and organize system requirements. The use case is made up of a set of possible sequences of interactions between systems and users in a particular environment and related to a particular goal. It is represented using ellipse.
Actor is any external entity that makes use of the system being modelled. It is represented using stick figure.

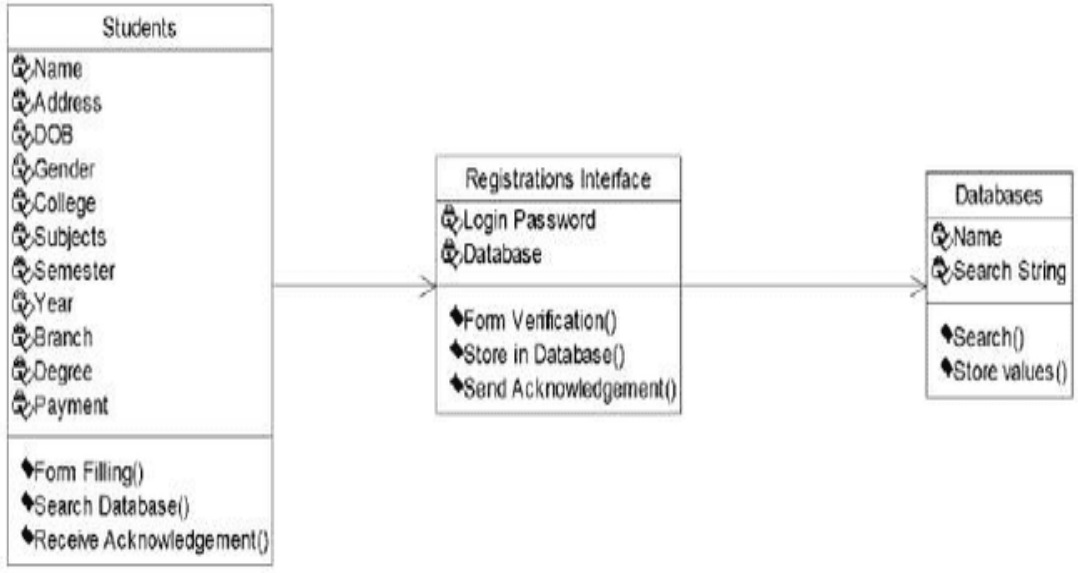
DOCUMENTATION OF USE CASE DIAGRAM

The actors in this use case diagram are Student, Interface and Database. The usecases are the activities performed by actors.

- Student Fills out the form in the form filling process.
- The interface checks and validates registered details.
- Then the database is searched for details and verified.
- Database stores the details and returns acknowledgement.

CLASS DIAGRAM

A class diagram in the unified modeling language (UML) is a type of static structure diagram that describes the structure of a system by showing the system's classes, their attributes, and the relationships between the classes. It is represented using a rectangle with three compartments. Top compartment have the class name, middle compartment the attributes and the bottom compartment with operations.



DOCUMENTATION OF CLASS DIAGRAM

This class diagram has three classes applicant, recruiter and database.

a. **Students** – is the class name. Its attributes are name, Address, DOB, Gender, College, Subjects, Semester, Year, Degree, Branch and Payment. The operations performed in the students class are form filling, search database and receiving acknowledgement.

b. **Registrations Interface** – is the class name. Its attributes are Login, Password and database. The operations performed are form verification, store in database and send acknowledgement.

c. **Database** – is the class name. The operations performed are storing Search and storing the values.

SEQUENCE DIAGRAM

A sequence diagram in Unified Modeling Language (UML) is a kind of interaction diagram that shows how processes operate with one another and in what order. It is a construct of a Message Sequence Chart. There are two dimensions.

1. Veritcal dimension-represent time.
2. Horizontal dimension-represent different objects.

DOCUMENTATION OF SEQUENCE DIAGRAM

The sequence diagram describes the sequence of steps to show

a. The applicant filling form and registering for exam.

b. The verification done by the interface and sending acknowledgement for registration.

c. Searching the database with login and displaying it for maintenance.

COLLABRATION DIAGRAM

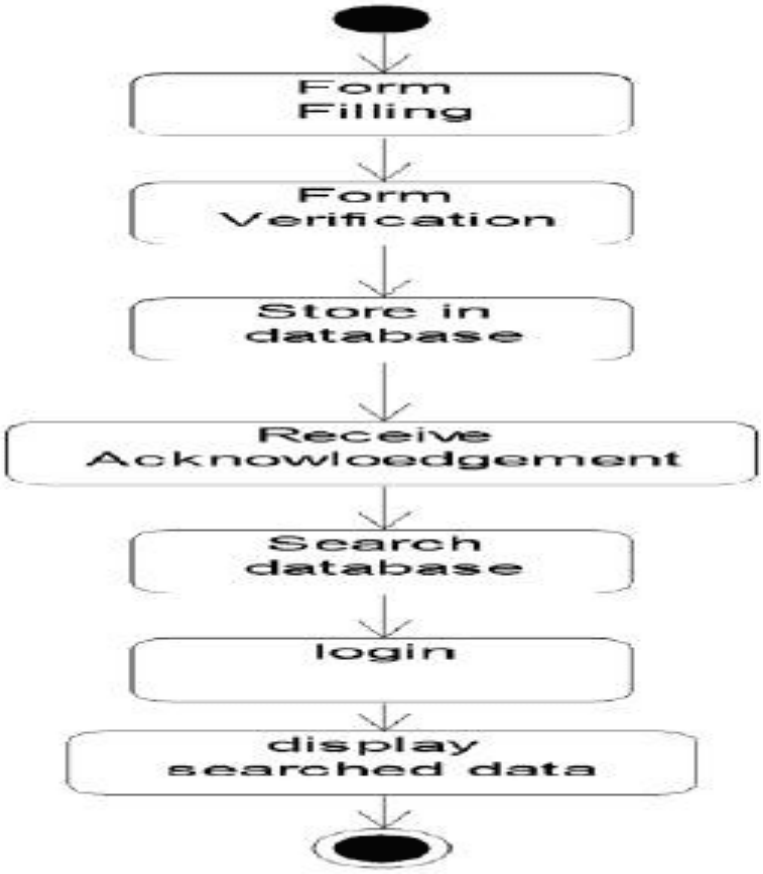
A collaboration diagram, also called a communication diagram or interaction diagram,. A sophisticated modeling tool can easily convert a collaboration diagram into a sequence diagram and the vice versa. A collaboration diagram resembles a flowchart that portrays the roles, functionality and behavior of individual objects as well as the overall operation of the system in real time

DOCUMENTATION OF COLLABRATION DIAGRAM

The collaboration diagram is to show how the Student registers and the authorities maintains the details of the registered students in the registration system. Here the sequence is numbered according to the flow of execution.

STATE CHART DIAGRAM

The purpose of state chart diagram is to understand the algorithm involved in performing a method. It is also called as state diagram. A state is represented as a round box, which may contain one or more compartments. An initial state is represented as small dot. A final state is represented as circle surrounding a small dot.



DOCUMENTATION OF STATE CHART DIAGRAM

This state diagram describes the behaviour of the system.

a. First state is form filling where the student fill the form to registration system.

b. The next state is form verification by the interface.

c. Then store the details in the database.

d. The student receives acknowledgement for registering.

e. Search database with login information.

f. Display the searched data in the interface.

ACTIVITY DIAGRAM

Activity diagrams are graphical representations of workflows of stepwise activities and actions with support for choice, iteration and concurrency. In the Unified Modeling Language, activity diagrams can be used to describe the business and operational step-by-step workflows of components in a system. An activity diagram shows the overall flow of control. An activity is shown as an rounded box containing the name of the operation.

DOCUMENTATION OF ACTIVITY DIAGRAM

This activity diagram flow of stepwise activities performed in recruitmnet system.

a. First the student fills the form.

b. The student details are verified and stored in database.

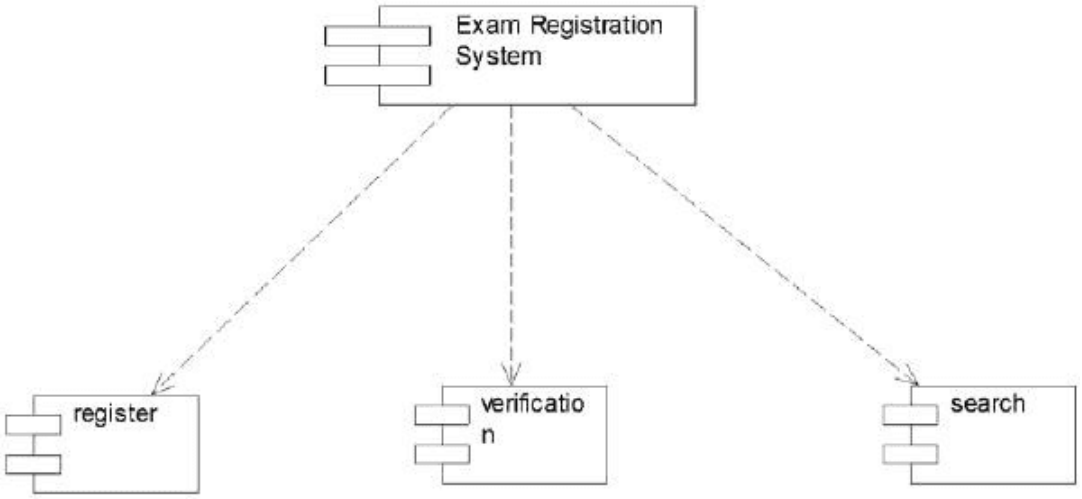
c. Acknowledgement sent is received by student.

d. Search database with login and if data present in the database.

e. The searched data is displayed if available.

COMPONENT DIAGRAM

The component diagram's main purpose is to show the structural relationships between the components of a system. It is represented by boxed figure. Dependencies are represented by communication association.



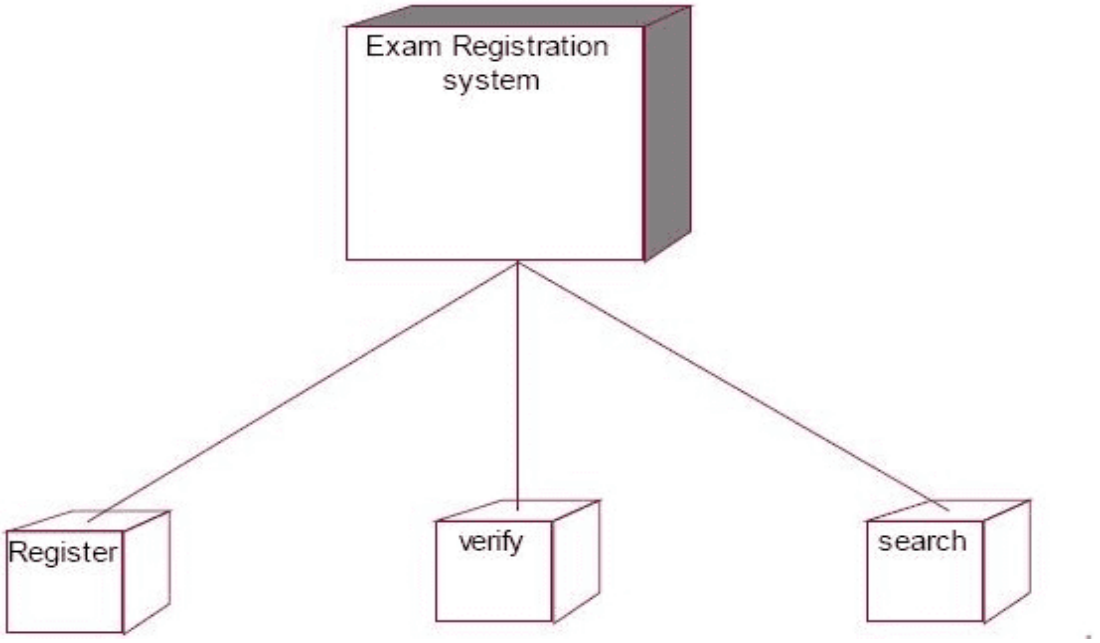
DOCUMENTATION OF COMPONENT DIAGRAM

The main component in this component diagram is Exam Registration system. And register, verification and search details are the components comes under the main component.

DEPLOYMENT DIAGRAM

A deployment diagram in the unified modeling language serves to model the physical deployment of artifacts on deployment targets. Deployment diagrams show "the allocation of artifacts to nodes according to the Deployments defined between them. It is represented by 3-dimentional box. Dependencies are represented by communication assosiation.

Exam Registration system Register verify search



DOCUMENTATION OF DEPLOYMENT DIAGRAM

The processor in this deployment diagram is the Exam Registration system which is the main part and the devices are the register, verify and search which are the some of the main activities performed in the system.

PACKAGE DIAGRAM

A package diagram in unified modeling language that depicts the dependencies between the packages that make up a model. A Package Diagram (PD) shows a grouping of elements in the OO model, and is a Cradle extension to UML. PDs can be used to show groups of classes in Class Diagrams (CDs), groups of components or processes in Component Diagrams (CPDs), or groups of processors in Deployment Diagrams (DPDs).
There are three types of layer. They are

- User interface layer
- Domain layer
- Technical services layer

DOCUMENTATION OF PACKAGE DIAGRAM

The three layers in the online recruitment system are

a. **The User interface layer** - consists of the form and login. This layer describes how the applicant logins to the search and apply for the exam.

b. **The Domain layer** – shows the activities that are performed in the Exam Registration system. The activities are register and search the database.

c. **The Technical service layer –** get student details and the selected applicant details are stored in the database.

FORMS

FORM 1


Exam Registration
EXAM REGISTRATION FORM
Name:
Address:
D.O.B:
Format:DD/MM/YYYY
Gender:
Male
Female
College:
Subjects:
Degree:
Branch:
Semester:
Year:
Payment:
Register
Reset
Search

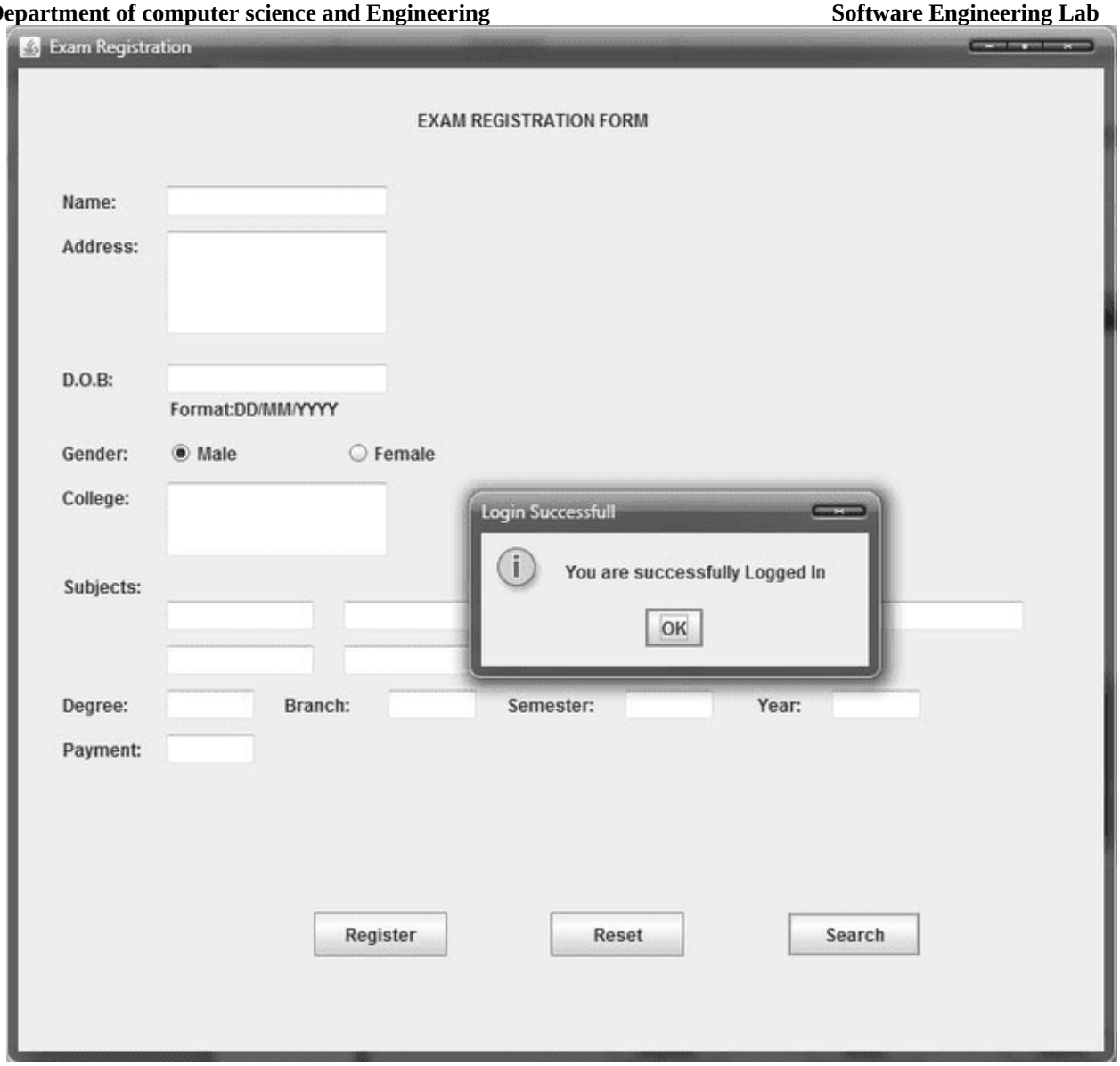
FORM 2


Exam Registration
EXAM REGISTRATION FORM
Name:
Address:
D.O.B:
Format:DD/MM/YYYY
Gender:
Male
Female
College:
Subjects:
Degree:
Branch:
Semester:
Year:
Payment:
Register
Reset
Search
Staff Login
Enter Password
OK
Cancel

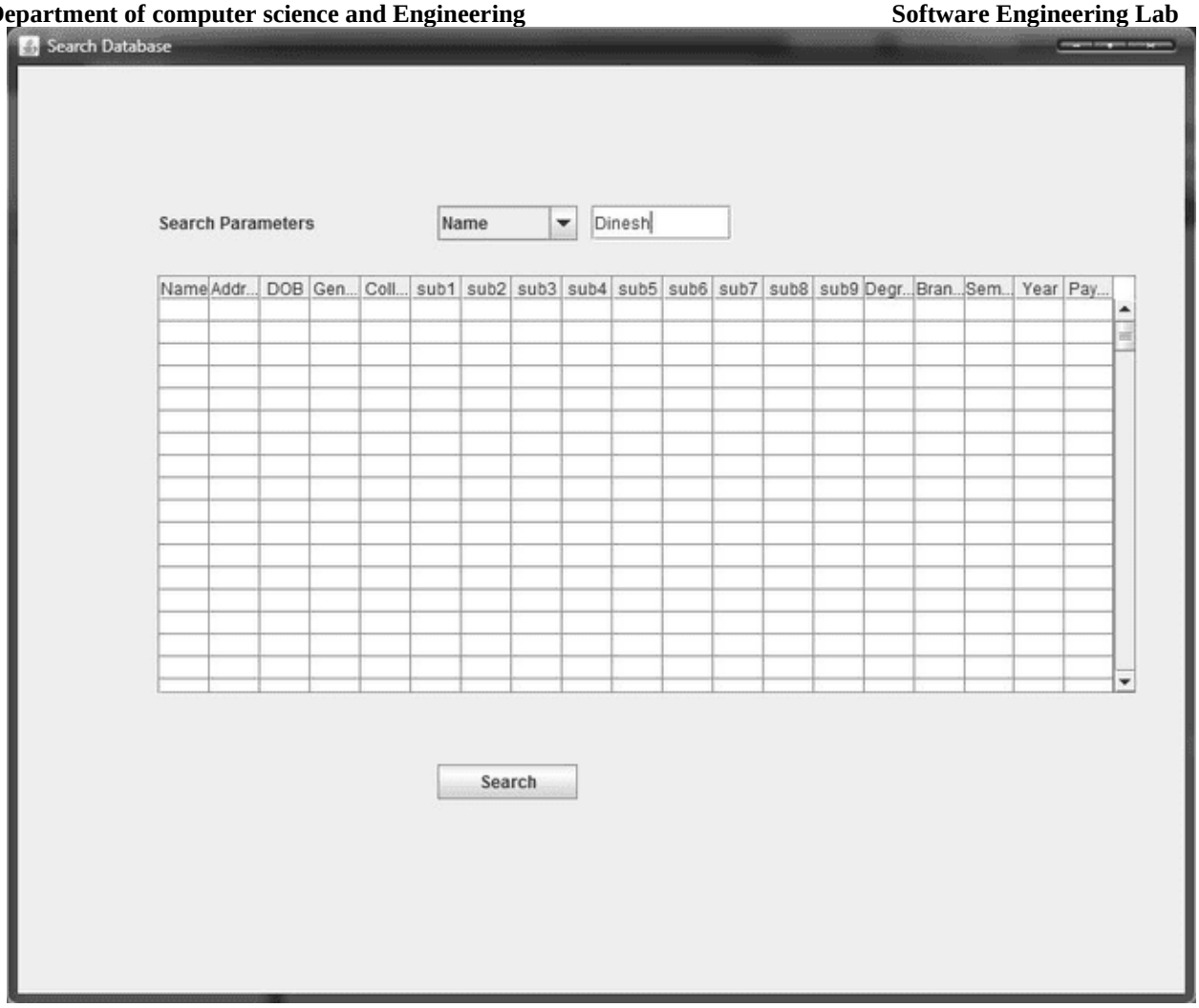
FORM 3


Exam Registration
EXAM REGISTRATION FORM
Name:
Address:
D.O.B:
Format:DD/MM/YYYY
Gender:
Male
Female
College:
Subjects:
Degree:
Branch:
Semester:
Year:
Payment:
Register
Reset
Search
Password Error
INVALID PASSWORD.
OK

FORM 4


Exam Registration
EXAM REGISTRATION FORM
Name:
Address:
D.O.B:
Format:DD/MM/YYYY
Gender:
Male
Female
College:
Subjects:
Degree:
Branch:
Semester:
Year:
Payment:
Register
Reset
Search
Login Successfull
You are successfully Logged In
OK

FORM 5



RESULT

Thus the project to develop Exam Registration system using Rational Rose Software and to implement the software in Java is done successfully.

EXPERIMENT 4

STOCK MAINTENANCE SYSTEM

AIM

To develop a project stock maintenance system using Rational Rose Software and to implement the software in Visual Basic.

PROBLEM ANALYSIS AND PROJECT PLANNING

The Stock Maintenance System, initial requirement to develop the project about the mechanism of the Stock Maintenance System is caught from the customer. The requirement are analyzed and refined which enables the end users to efficiently use Stock Maintenance System. The complete project is developed after the whole project analysis explaining about the scope and the project statement is prepared.

PROBLEM STATEMENT

The process of stock maintenance system is that the customer login to the particular site to place the order for the customer product. The stock maintenance system are described sequentially through steps

a. The customer login to the particular site.

b. They fill the customer details.

c. They place the orders for their product.

d. The vendor login and views the customer details and orders.

1. INTRODUCTION

This software specification documents full set of features and function for online stock maintenance system that is performed in company website. In this we give specification about the customer orders. It tells the usability, reliability defined in use case specification.

2. OBJECTIVE

The main objective of the stock maintenance system is to maintain the stock. It provides the vendor to maintain the stock in an precise manner.

3. OVERVIEW

The overview of the project is to design an online tool for the recruitment process which eases the work for the customer as well as the companies. Companies can create their company forms according to their wish in which the applicant can register.

4. GLOSSARY

TERMS	DESCRIPTION
CUSTOMER	The customer can have the username and password after login to the system. After login they directed to fill the customer details. And the customer places their order. After placing orders they lead to verify all the details in a single form. Then they places the order successfully.
VENDOR	Vendor has the login id. After login vendor verify the customer details and orders. And maintain the stocks.
DATABASE	Database is used to verify the customer details and orders.
SOFTWARE REQUIREMENT SPECIFICATION	This software specification documents full set of features and function for stock maintenance system that is performed in company website.

5. PURPOSE

The purpose of stock maintenance system is to maintain the stock in an precise manner.

6. SCOPE

The scope of this stock maintenance system is to maintain the stock.

7. FUNCTIONALITY

The main functionality of the stock maintenance system is to maintain the stock.

8. USABILITY

User interface makes the stock maintenance system to be efficient. That is the system will help the customer to place the details and orders easily and helps the vendor to maintain the stock accurate. The system should be user friendly.

9. PERFORMANCE

It describes the capability of the system to maintain the stock without any loss of stock and performing it efficiently.

10. RELIABILITY

The stock maintenance system should be able to maintain the stock with correct updates from day to day placement of new orders from customer.

11. FUNCTIONAL REQUIREMENTS

Functional requirements are those refer to the functionality of the system. That is the services that are provided to the customer who places the orders.

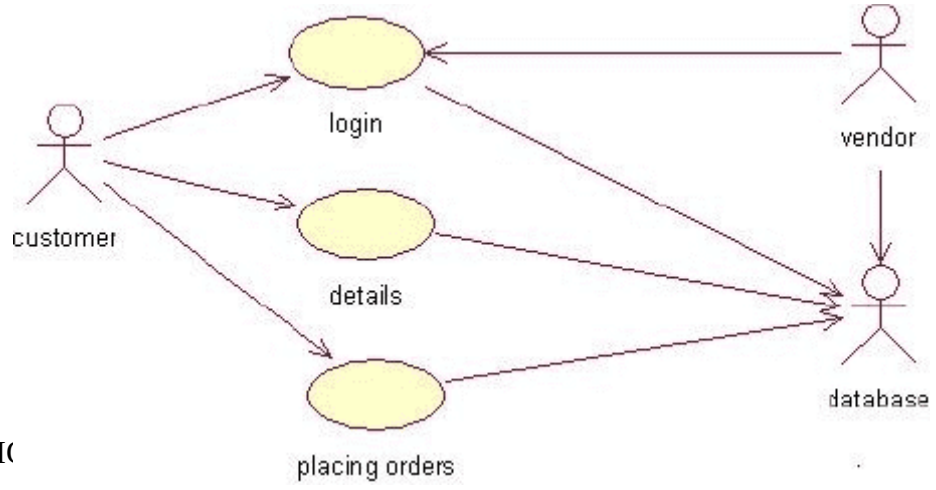
UML DIAGRAMS

The following UML diagrams describe the process involved in the online recruitment system

a. Use case diagram
b. Class diagram
c. Sequence diagram
d. Collaboration diagram
e. State chart diagram
f. Activity diagram
g. Component diagram
h. Deployment diagram
i. Package diagram

USE CASE DIAGRAM

A use case is a methodology used in system analysis to identify, clarify, and organize system requirements. The use case is made up of a set of possible sequences of interactions between systems and users in a particular environment and related to a particular goal. It is represented using ellipse.
Actor is any external entity that makes use of the system being modeled. It is represented using stick figure.



DOCUMENTATION OF USE CASE DIAGRAM

The actors in this use case diagram are customer, vendor and database. The use cases are the activities performed by actors.

1. CUSTOMER:

    a. Customer logins to the particular system and fills the customer details and places the orders.

2. DATABASE:

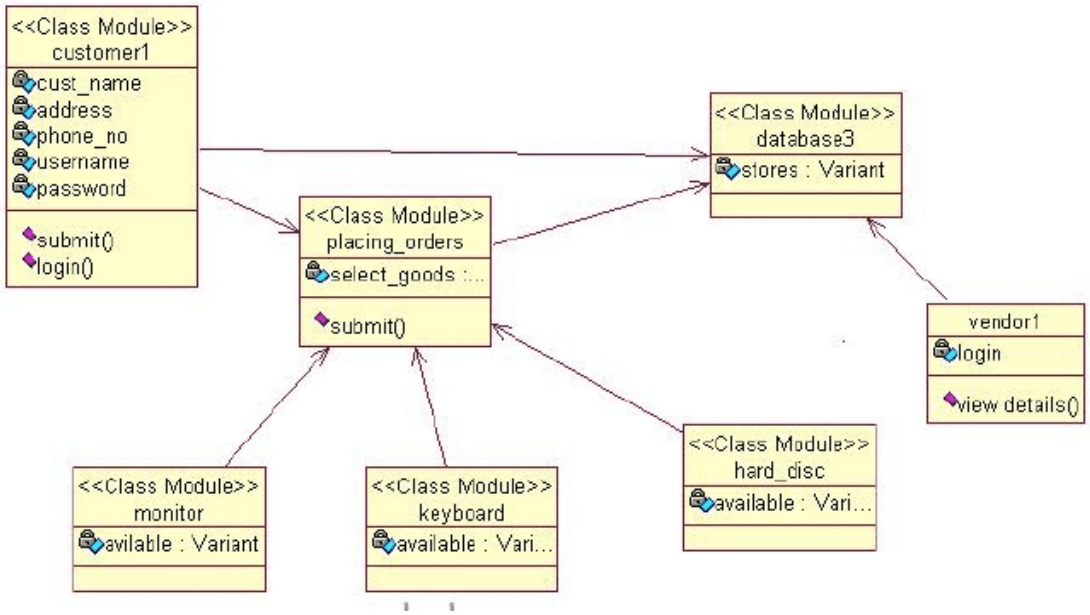
    a. All the details and orders given by customer are updated in the database.

3. VENDOR:

    a. Vendor logins and verify the customer orders and the stock details.

CLASS DIAGRAM

A class diagram in the unified modeling language (UML) is a type of static structure diagram that describes the structure of a system by showing the system's classes, their attributes, and the relationships between the classes. It is represented using a rectangle with three compartments. Top compartment have the class name, middle compartment the attributes and the bottom compartment with operations.



DOCUMENTATION OF CLASS DIAGRAM

1. This class diagram has three classes' customer, vendor and database.

    a. **Customer** – is the class name. Its attributes are username, password, name, phone no and address. The operations performed in the customer class are login and places the orders.

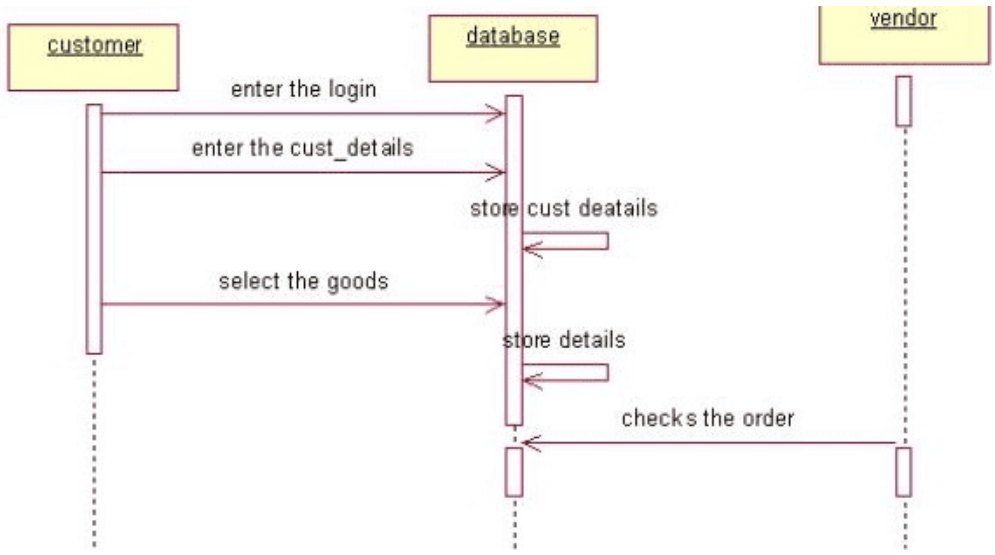
    b. **Vendor** – is the class name. Its attributes are views the database.

    c. **Database** – is the class name. The operations performed are storing customer details, and their orders.

SEQUENCE DIAGRAM

A sequence diagram in Unified Modeling Language (UML) is a kind of interaction diagram that shows how processes operate with one another and in what order. It is a construct of a Message Sequence Chart. There are two dimensions.

1. Veritcal dimension-represent time.
2. Horizontal dimension-represent different objects.



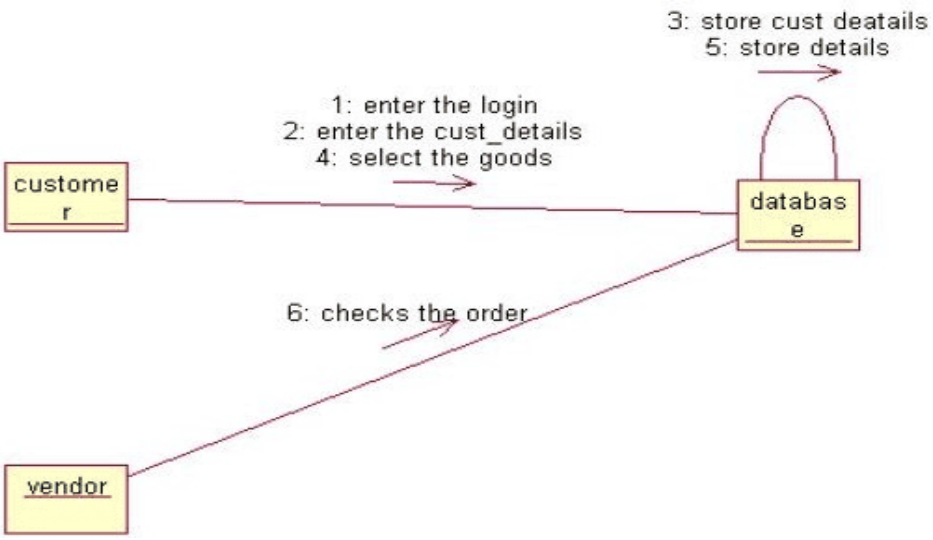
DOCUMENTATION OF SEQUENCE DIAGRAM

The sequence diagram describes the sequence of steps to show

- The customer login in to the system and fills the customer details.
- Then the customer places the order. It updated to the database.
- The vendor login to the system and views the customer orders and the stock details.

COLLABRATION DIAGRAM

A collaboration diagram, also called a communication diagram or interaction diagram,. A sophisticated modeling tool can easily convert a collaboration diagram into a sequence diagram and the vice versa. A collaboration diagram resembles a flowchart that portrays the roles, functionality and behavior of individual objects as well as the overall operation of the system in real time

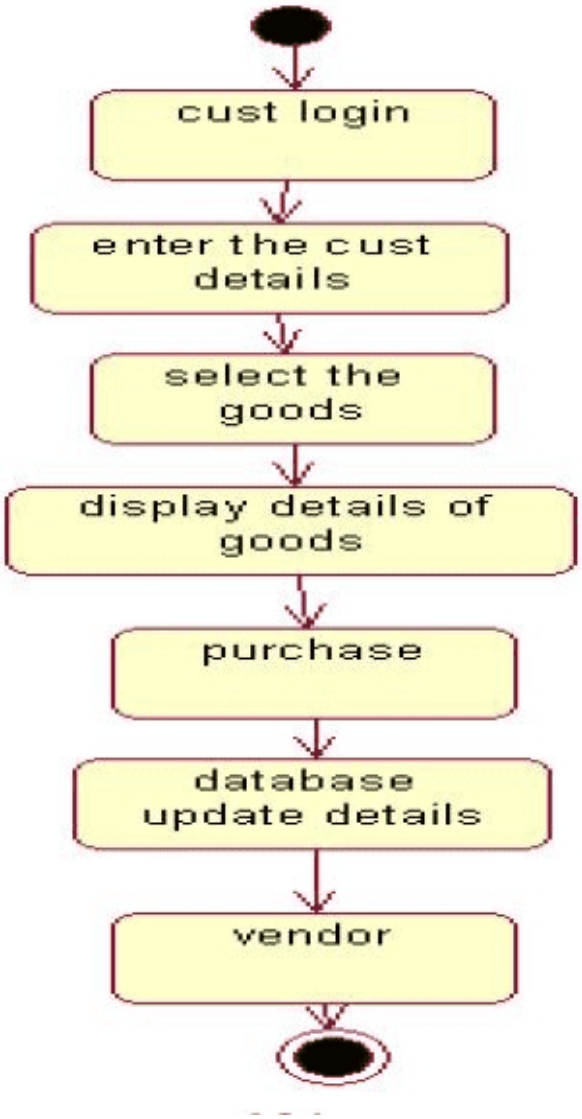


DOCUMENTATION OF COLLABRATION DIAGRAM

The collaboration diagram is to show how the customer login and places the orders in the system. Here the sequence is numbered according to the flow of execution.

STATE CHART DIAGRAM

The purpose of state chart diagram is to understand the algorithm involved in performing a method. It is also called as state diagram. A state is represented as a round box, which may contain one or more compartments. An initial state is represented as small dot. An final state is represented as circle surrounding a small dot.



DOCUMENTATION OF STATE CHART DIAGRAM

This state diagram describes the behavior of the system.

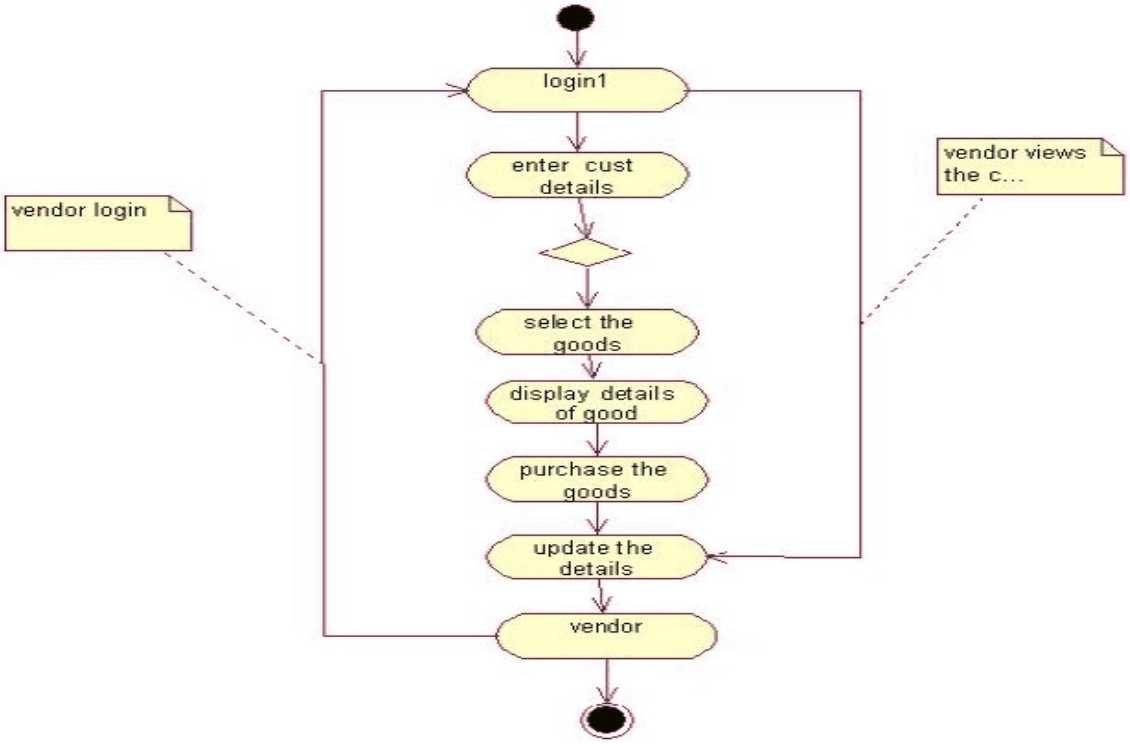
- First state is login where the customer login to the system.
- The next state is to fill the customer details.
- And the next state is to place the orders.

Update database with the orders and details of customer

ACTIVITY DIAGRAM

Activity diagrams are graphical representations of workflows of stepwise activities and actions with support for choice, iteration and concurrency. In the Unified Modeling Language, activity diagrams can be used to describe the business and operational step-by-step workflows of components in a system. An activity diagram shows the overall flow of control.

An activity is shown as an rounded box containing the name of the operation.



DOCUMENTATION OF ACTIVITY DIAGRAM

This activity diagram flow of stepwise activities performed in stock maintenance system. First the customer login then fills the details.

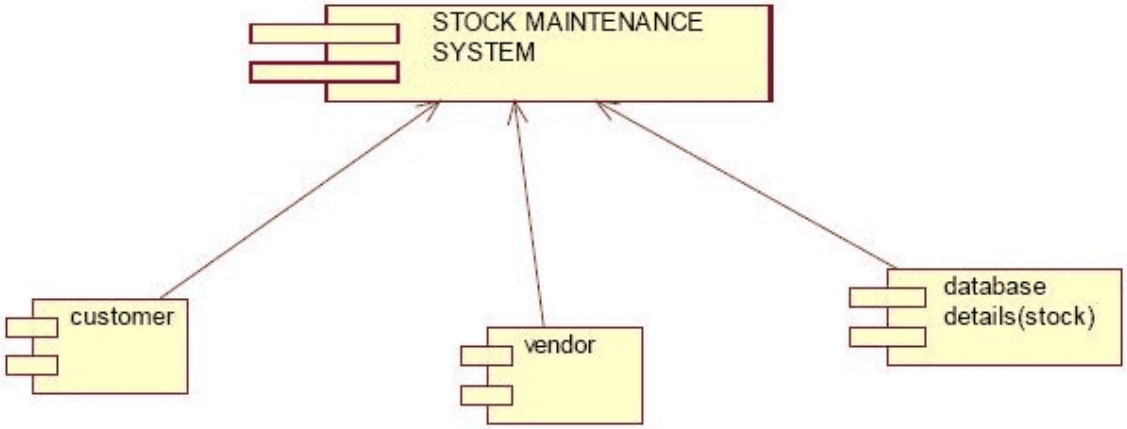
a. The customer places the order according to their needs.

b. After placing the order the database is updated.

c. Vendor login to the system and verifies the customer orders and stock details.

COMPONENT DIAGRAM

The component diagram's main purpose is to show the structural relationships between the components of a systems. It is represented by boxed figure. Dependencies are represented by communication assosiation.

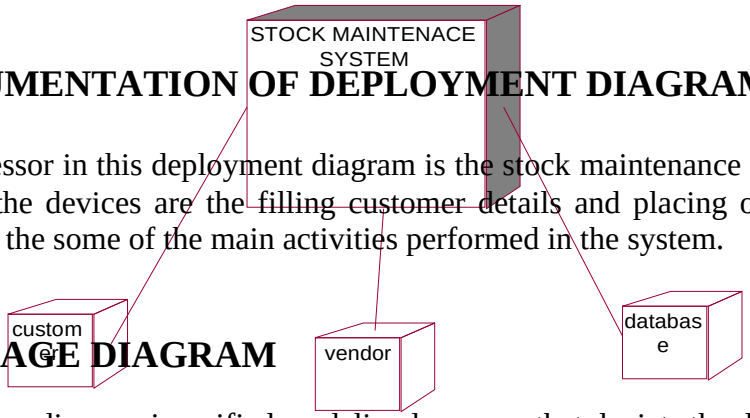


DOCUMENTATION OF COMPONENT DIAGRAM

The main component in this component diagram is stock maintenance systems. And customer database details and update database then vendor views the database are the components comes under the main component.

DEPLOYMENT DIAGRAM

A deployment diagram in the unified modeling language serves to model the physical deployment of artifacts on deployment targets. Deployment diagrams show "the allocation of artifacts to nodes according to the Deployments defined between them. It is represented by 3-dimentional box. Dependencies are represented by communication assosiation.



DOCUMENTATION OF DEPLOYMENT DIAGRAM

The processor in this deployment diagram is the stock maintenance system which is the main part and the devices are the filling customer details and placing orders then vendor views which are the some of the main activities performed in the system.

PACKAGE DIAGRAM

A package diagram in unified modeling language that depicts the dependencies between the packages that make up a model. A Package Diagram (PD) shows a grouping of elements in the OO model, and is a Cradle extension to UML. PDs can be used to show groups of classes in Class Diagrams (CDs), groups of components or processes in Component Diagrams (CPDs), or groups of processors in Deployment Diagrams (DPDs).
There are three types of layer. They are

1. **User interface layer**

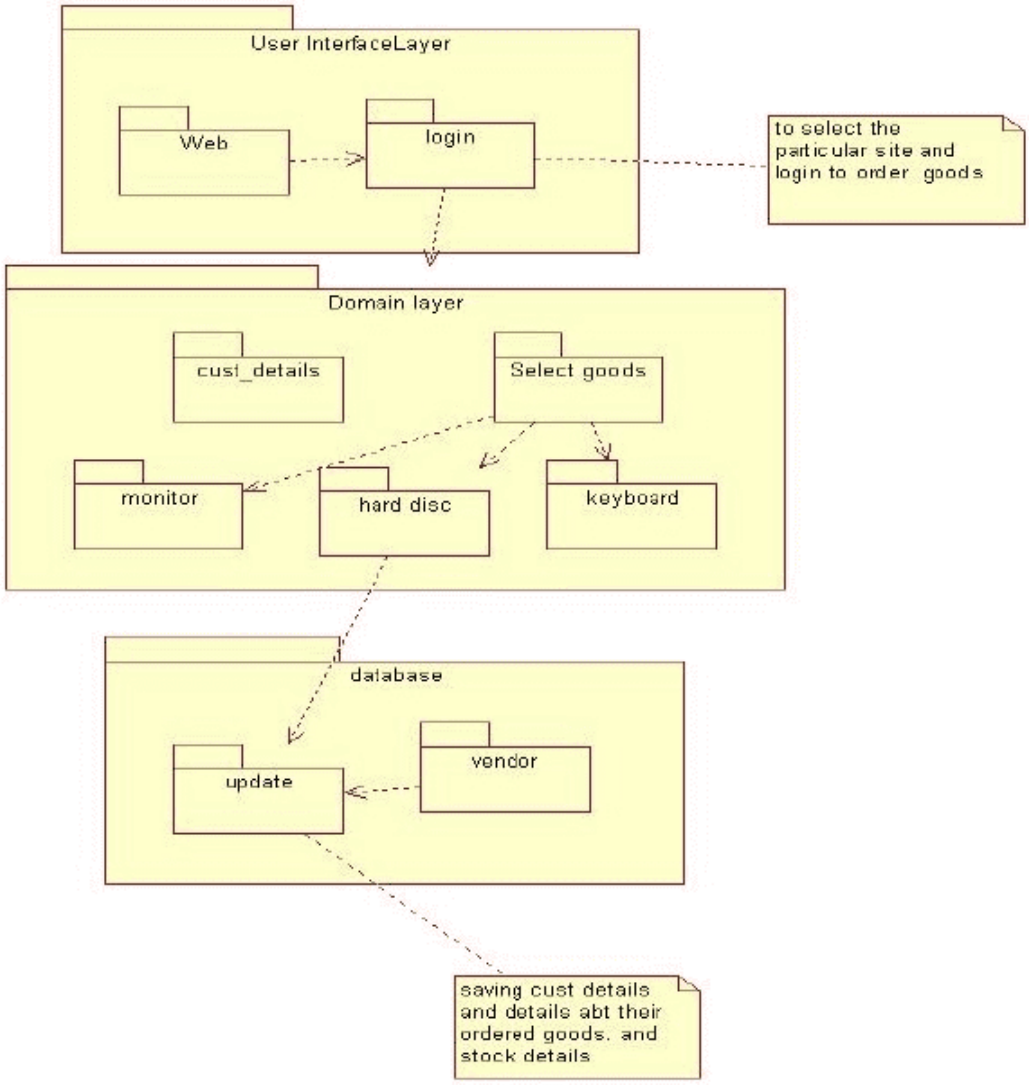
   Software objects representing domain concepts that fulfill application reqirements, such as calculation of a sale total.

2. Domain layer

Layer that contains domain objects to handle application logic work

3. Technical services layer

General purpose object and sub system that provide supporting technical services, such as interfacing with a database logging

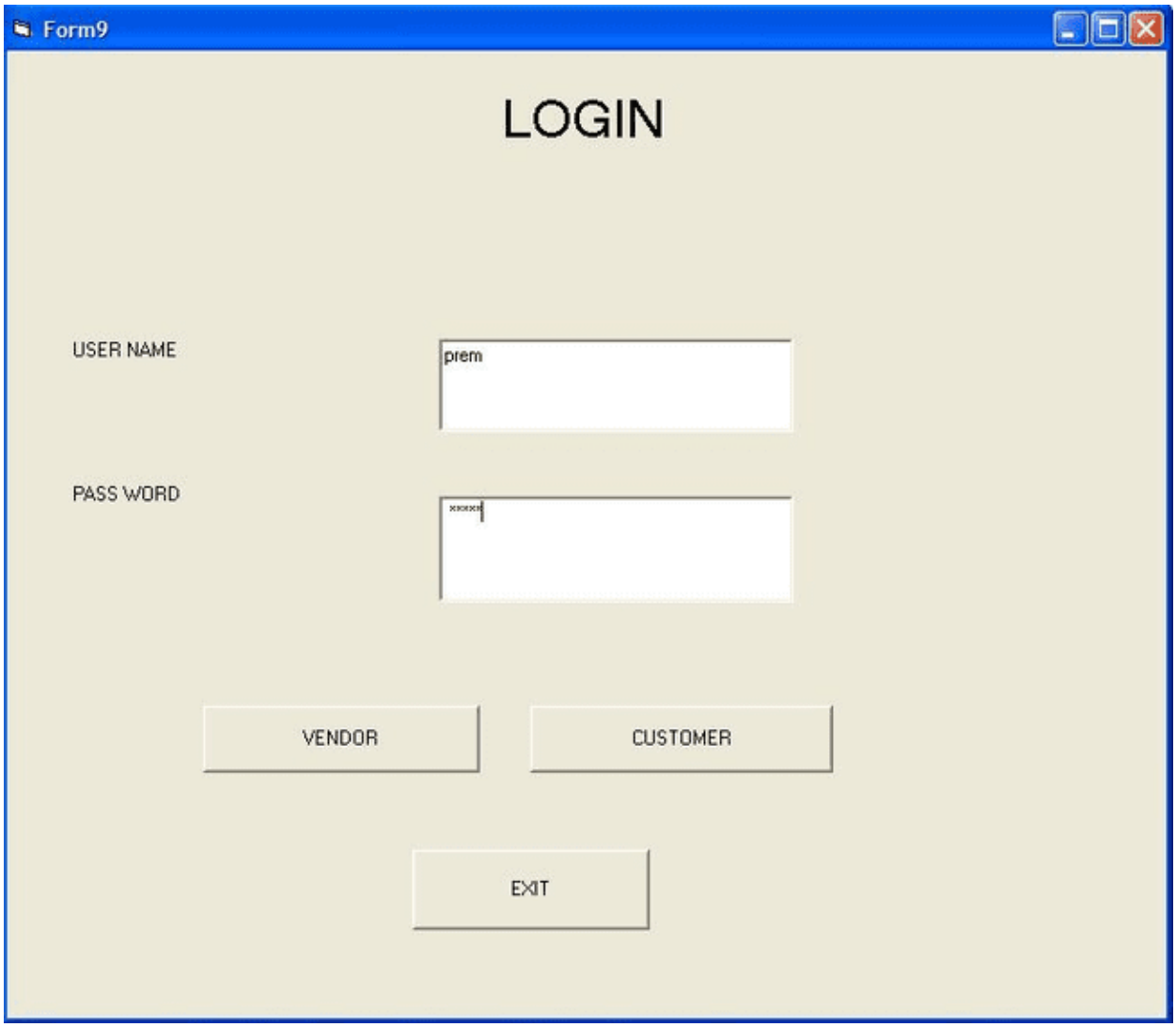


DOCUMENTATION OF PACKAGE DIAGRAM

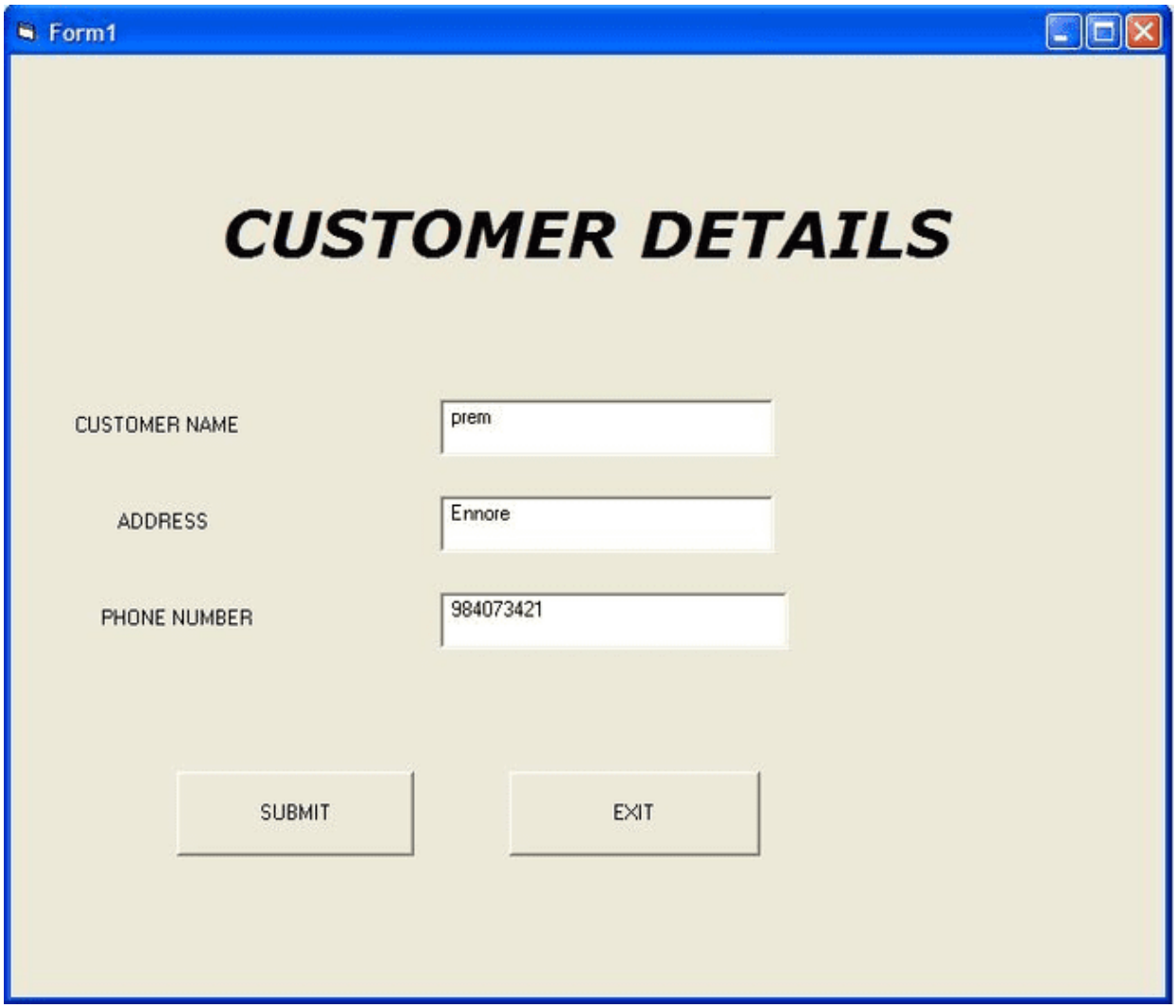
The three layers in the online recruitment system are

- **The User interface layer -** consists of the web and login. This layer decribes how the applicant logins to the website and places the order.
- **The Domain layer** – shows the activities that are performed by the customer to place the orders.
- **The Technical service layer -** the vendor logins and verifies the customer orders and stock details

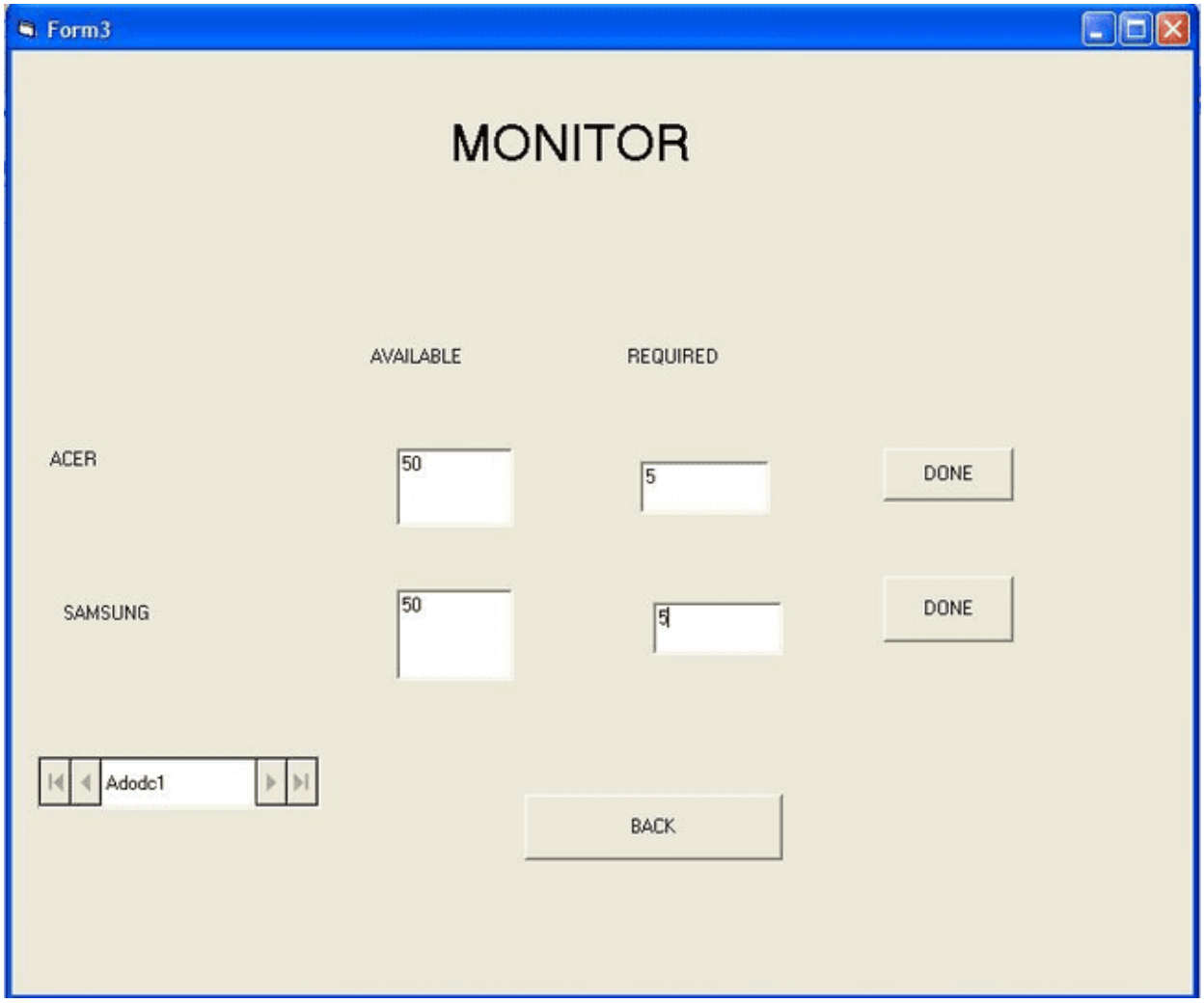
FOR MS FOR M 1



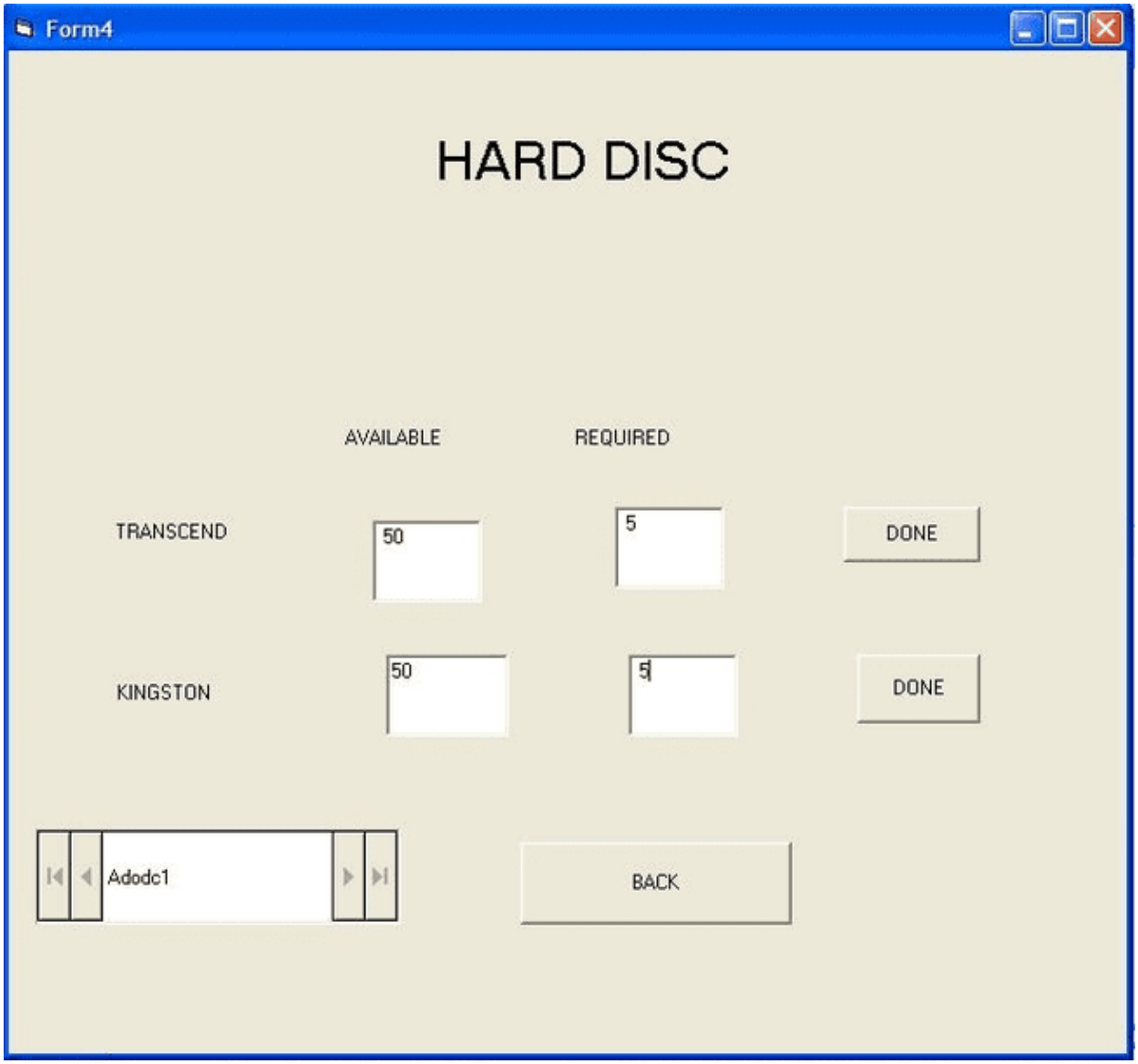
FORM 2


Form1
CUSTOMER DETAILS
CUSTOMER NAME
prem
ADDRESS
Ennore
PHONE NUMBER
984073421
SUBMIT
EXIT

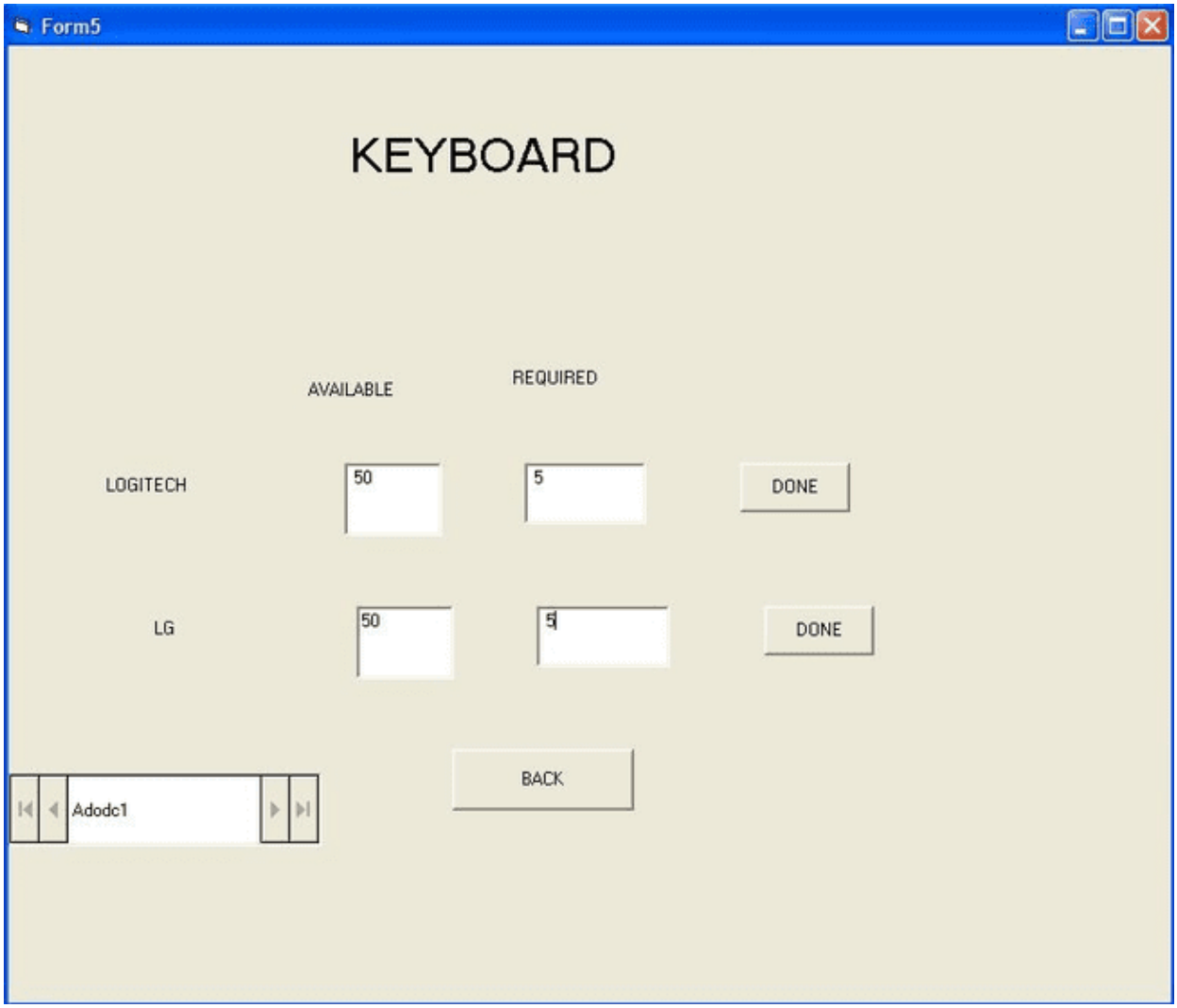
FORM 3


Form3
MONITOR
AVAILABLE
REQUIRED
ACER
50
5
DONE
SAMSUNG
50
5
DONE
Adodc1
BACK

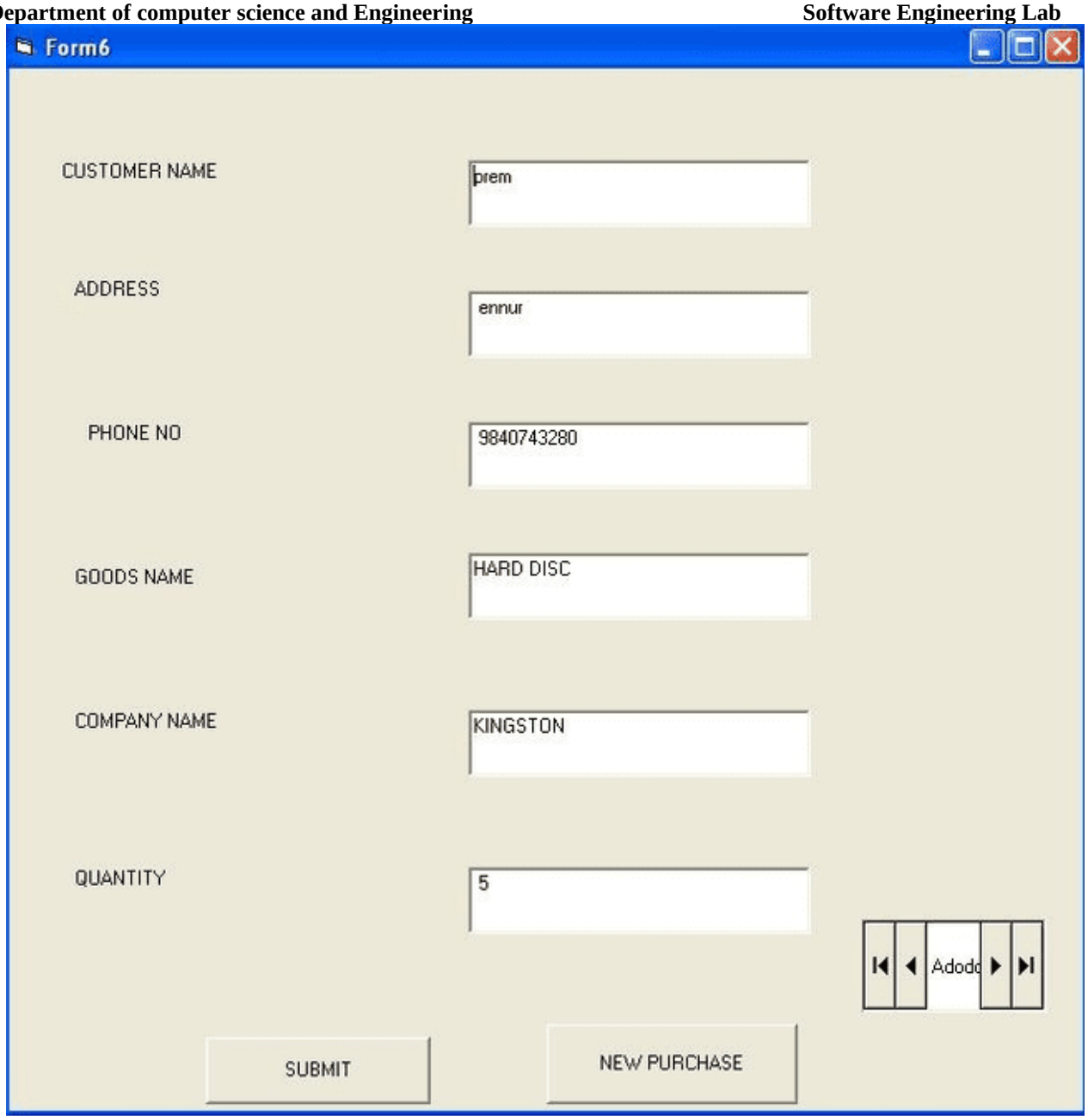
FORM 4


Form4
HARD DISC
AVAILABLE
REQUIRED
TRANSCEND
50
5
DONE
KINGSTON
50
5
DONE
Adodc1
BACK

FORM 5

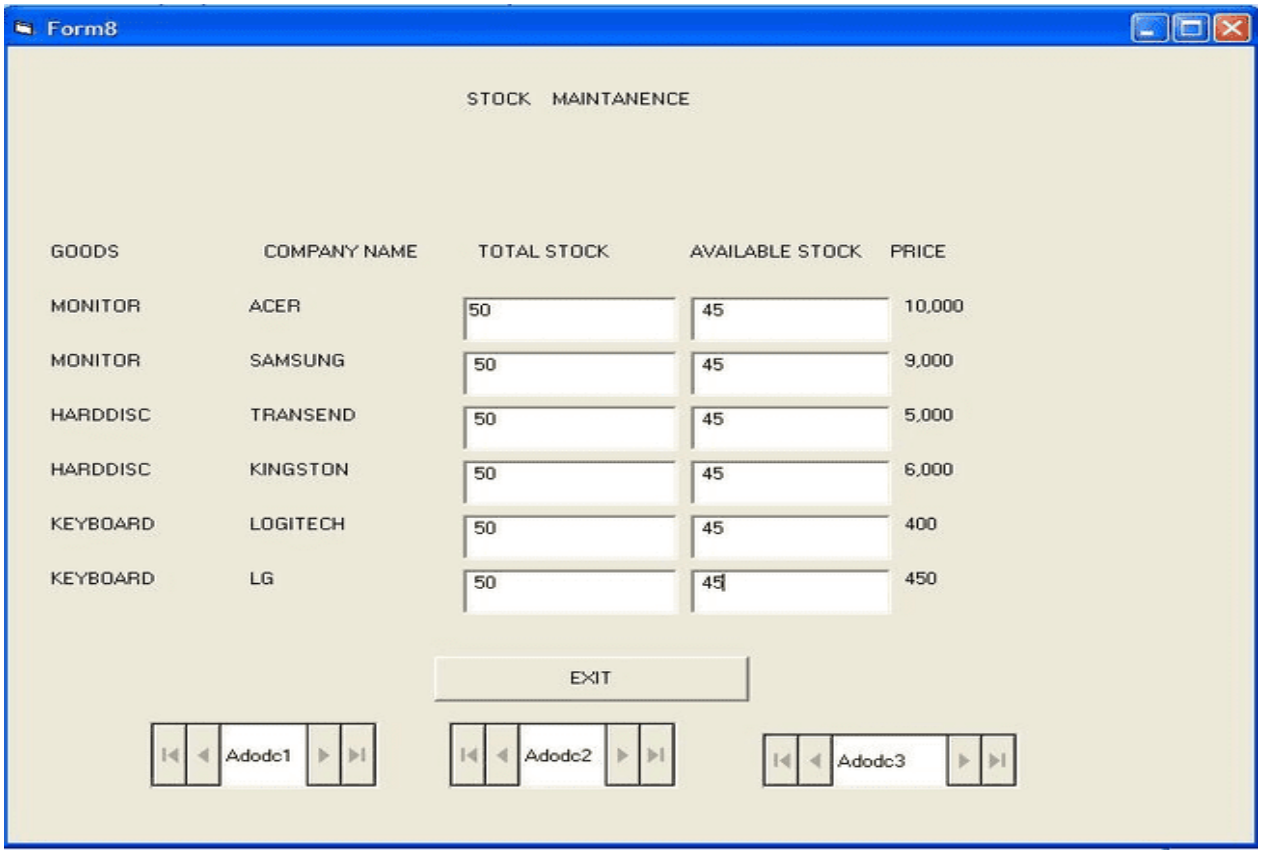

Form5
KEYBOARD
AVAILABLE
REQUIRED
LOGITECH
50
5
DONE
LG
50
5
DONE
BACK
Adodc1

FORM 6


Form6
CUSTOMER NAME
prem
ADDRESS
ennur
PHONE NO
9840743280
GOODS NAME
HARD DISC
COMPANY NAME
KINGSTON
QUANTITY
5
Adodc
SUBMIT
NEW PURCHASE

FORM 7

FORM 8



RESULT

Thus the project stock maintenance system using Rational Rose Software and implement the software in Visual Basic is executed successfully.

EXPERIMENT 4b

STOCK MAINTENANCE SYSTEM

AIM

To develop a project Stock Maintenance system using Rational Rose Software and to implement the software in Java.

PROBLEM ANALYSIS AND PROJECT PLANNING

Stock Maintenance gives an idea about how products are maintained in the particular concern. The products that are to be purchased, the products that are to be sold are maintained here. This project also gives idea about the faults in the purchased product and the products that are to be replaced also been given. Further some additional details of the current stock that is available in the store are also given. Stock maintenance in this project is done in an authorized way. The password and user id has been set here. As a whole the marketing process can be improved if the stock is maintained properly.

PROBLEM STATEMENT

The stock has to be maintained properly since the whole marketing process can be improved. Stock maintenance in this project gives the idea about how products are maintained in a particular concern. The stock details which includes the amount of stock available, the stock is to be purchased, the date or the time it is being bought or delivered, the amount that is already available are maintained in this project. Stock maintenance system the stock maintenance in this project is understood by going through the modules that is being involved. The whole economic status is being improved properly if stock is maintained.

SOFTWARE REQUIREMENT SPECIFICATION

1. INTRODUCTION

Stock Maintenance gives an idea about how products are maintained in the particular concern. The products that are to be purchased, the products that are to be sold are maintained here. This project also gives idea about the faults in the purchased product and the products that are to be replaced also been given. Further some additional details of the current stock that is available in the store is also given. Stock maintenance in this project is done in an authorized way.

2. OBJECTIVE

The main objective of this project is to overcome the work load and time consumption which makes the maintenance of the stock in an organization as a tedious process. This project provides complete information about the details of the stock to the users. This project identifies the amount of stock available, the product that is purchased faults in the product, products that are replaced, products that have been sold, and the date at which the products are bought and sold in a particular concern. Separate modules have been created for

purchasing, viewing stock details, selling, details and delivery details.

3. OVERVIEW

The overview of the project is to Storing of information about the stock values and updating the stock values for each organization which is using this system, keeps track of all the information about the stock exchange that are made by the customers, having registration feature of adding up new customers to the organization are provided in this system.

4. GLOSSARY

TERMS	DESCRIPTION
SUPPLIER	Supplier will get order from the store keeper and he will supply the stock as ordered.
STORE KEEPER	Store keeper will purchase the supplies from the supplier and will be updating the stock details in the database.
DATABASE	Database is used to store the details of stock.
ADMIN	Handles all the support features and the technical works in the application.
SOFTWARE REQUIREMENT SPECIFICATION	This software specification documents full set of features and function for stock management system that is performed in application.

5. PURPOSE

The purpose of stock management system is to store and maintain the stock details in a store effectively.

6. SCOPE

The scope of this Stock maintenance is to maintain the stock details after the purchase and re stocking from the supplier.

7. FUNCTIONALITY

The main functionality of stock maintenance system is to store the stock details for a store.

8. USABILITY

User interface makes the stock maintenance system to be efficient. That is the system will help the admin to maintain stock details easily and helps the store to handle the stocks effectively. The system should be user friendly.

9. PERFORMANCE

It describes the capability of the system to perform the stock maintenance system of the store without any error and performing it efficiently.

10. RELIABILITY

The stock maintenance system should be able to serve the store keeper with correct information and day-to-day update of stock details.

11. FUNCTIONAL REQUIREMENTS

Functional requirements are those refer to the functionality of the system. That is the services that are provided to the storekeeper who maintains stocks in a store.

UML DIAGRAMS

The following UML diagrams describe the process involved in the stock maintenance system

a. Use case diagram
b. Class diagram
c. Sequence diagram

d. Collaboration diagram
e. State chart diagram
f. Activity diagram
g. Component diagram
h. Deployment diagram
i. Package diagram

USE CASE DIAGRAM

A use case is a methodology used in system analysis to identify, clarify, and organize system requirements. The use case is made up of a set of possible sequences of interactions between systems and users in a particular environment and related to a particular goal. It is represented using ellipse.
Actor is any external entity that makes use of the system being modelled. It is represented using stick figure.

DOCUMENTATION OF USE CASE DIAGRAM

The actors in this use case diagram are Supplier, Store Keeper and Database. The usecases are the activities performed by actors.

a. Supplier will supply the items according to the quotation which will be purchased by the store keeper.

b. Store keeper will login and update the stock in the database.

c. The database will be updated according to the purchase done and it will be up to date.

2. The use cases in the use case diagram are Quotation & Purchase, login, stock, purchase.

a. Quotation & Purchase will gives us the status of the quotation details and the purchase order details

b. Login will gives us the entry for the user of this project.

c. Stock will gives us the details about the total stock available.

d. Purchase will gives us the details about the details and the history of items purchased.

CLASS DIAGRAM

A class diagram in the unified modeling language (UML) is a type of static structure diagram that describes the structure of a system by showing the system's classes, their attributes, and the relationships between the classes. It is represented using a rectangle with three

compartments. Top compartment have the class name, middle compartment the attributes and the bottom compartment with operations.

DOCUMENTATION OF CLASS DIAGRAM

1. This class diagram has three classes applicant, recruiter and database.

    a. **Supplier** – is the class name. Its attributes are id, name, address and payment mode. The operations performed in the Supplier class are get order, supply goods and get money.

    b. **Storekeeper** – is the class name. Its attributes are id, name, Dob, Designation, salary, user id and password. The operations performed are check stock, give order, receive goods and give money.

    c. **Database** – is the class name. Its attributes are product name, license, expiry date and updates. The operations performed are store details, update, insert, delete, verify and display.

    d. **Admin** – is the class name. Its attributes are id, name, Dob, user id and password. The operations performed are update the s\w, troubleshoot and manage the queries.

SEQUENCE DIAGRAM

A sequence diagram in Unified Modeling Language (UML) is a kind of interaction diagram that shows how processes operate with one another and in what order. It is a construct of a Message Sequence Chart. There are two dimensions.

1. Veritcal dimension-represent time.
2. Horizontal dimension-represent different objects.

DOCUMENTATION OF SEQUENCE DIAGRAM

The sequence diagram describes the sequence of steps to show

a. The store keeper checks the stock.

b. Gives order to the supplier.

c. Supplier supplies the goods.

d. Store keeper checks the goods.

e. Database provides user id and pass.

f. Store keeper updates the stock and stores it in database.

g. Pay money to the Supplier.

COLLABORATION DIAGRAM

A collaboration diagram, also called a communication diagram or interaction diagram,. A sophisticated modeling tool can easily convert a collaboration diagram into a sequence diagram and the vice versa. A collaboration diagram resembles a flowchart that portrays the roles, functionality and behavior of individual objects as well as the overall operation of the system in real time

DOCUMENTATION OF COLLABORATION DIAGRAM

The first collaboration diagram is to show how the applicant login and storing stock details in the stock maintenance system. Here the sequence is numbered according to the flow of execution.

STATE CHART DIAGRAM

The purpose of state chart diagram is to understand the algorithm involved in performing a method. It is also called as state diagram. A state is represented as a round box, which may contain one or more compartments. An initial state is represented as small dot. A final state is represented as circle surrounding a small dot.

DOCUMENTATION OF STATE CHART DIAGRAM

This state diagram describes the behavior of the system.

a. First state is login where the storekeeper login to the stock maintenance system.

b. The next state is check the stock followed by giving order.

c. Then purchase the goods.

d. The store keeper check the goods.

e. Update database with goods purchased.

f. Pay money for the purchased goods.

ACTIVITY DIAGRAM

Activity diagrams are graphical representations of workflows of stepwise activities and actions with support for choice, iteration and concurrency. In the Unified

Modeling Language, activity diagrams can be used to describe the business and operational step-by-step workflows of components in a system. An activity diagram shows the overall flow of control. An activity is shown as an rounded box containing the name of the operation.

DOCUMENTATION OF ACTIVITY DIAGRAM

This activity diagram flow of stepwise activities performed in recruitment system.

a. First the storekeeper login then checks stock.

b. The stock details are verified and the order is given.

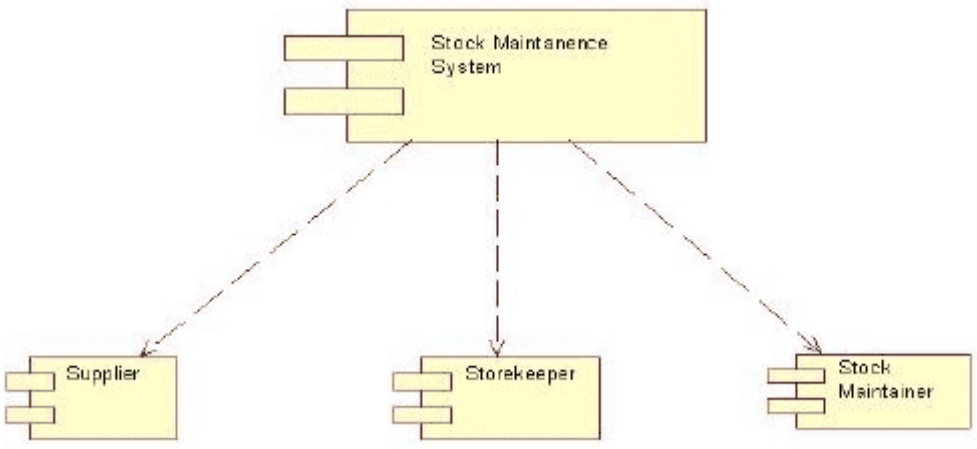
c. Goods are purchased.

d. Products are checked.

e. Update the stock details in the database.

COMPONENT DIAGRAM

The component diagram's main purpose is to show the structural relationships between the components of a systems. It is represented by boxed figure. Dependencies are represented by communication association.



Stock Maintenance system purchase verify store

DOCUMENTATION OF COMPONENT DIAGRAM

The main component in this component diagram is stock maintenance systems. And Supplier, storekeeper and database are the components come under the main component.

DEPLOYMENT DIAGRAM

A deployment diagram in the unified modeling language serves to model the physical deployment of artifacts on deployment targets. Deployment diagrams show "the allocation of artifacts to nodes according to the Deployments defined between them. It is represented by 3-dimentional box. Dependencies are represented by communication association.

DOCUMENTATION OF DEPLOYMENT DIAGRAM

The processor in this deployment diagram is the stock maintenance system which is the main part and the devices are the purchase, verify and store which are the some of the main activities performed in the system.

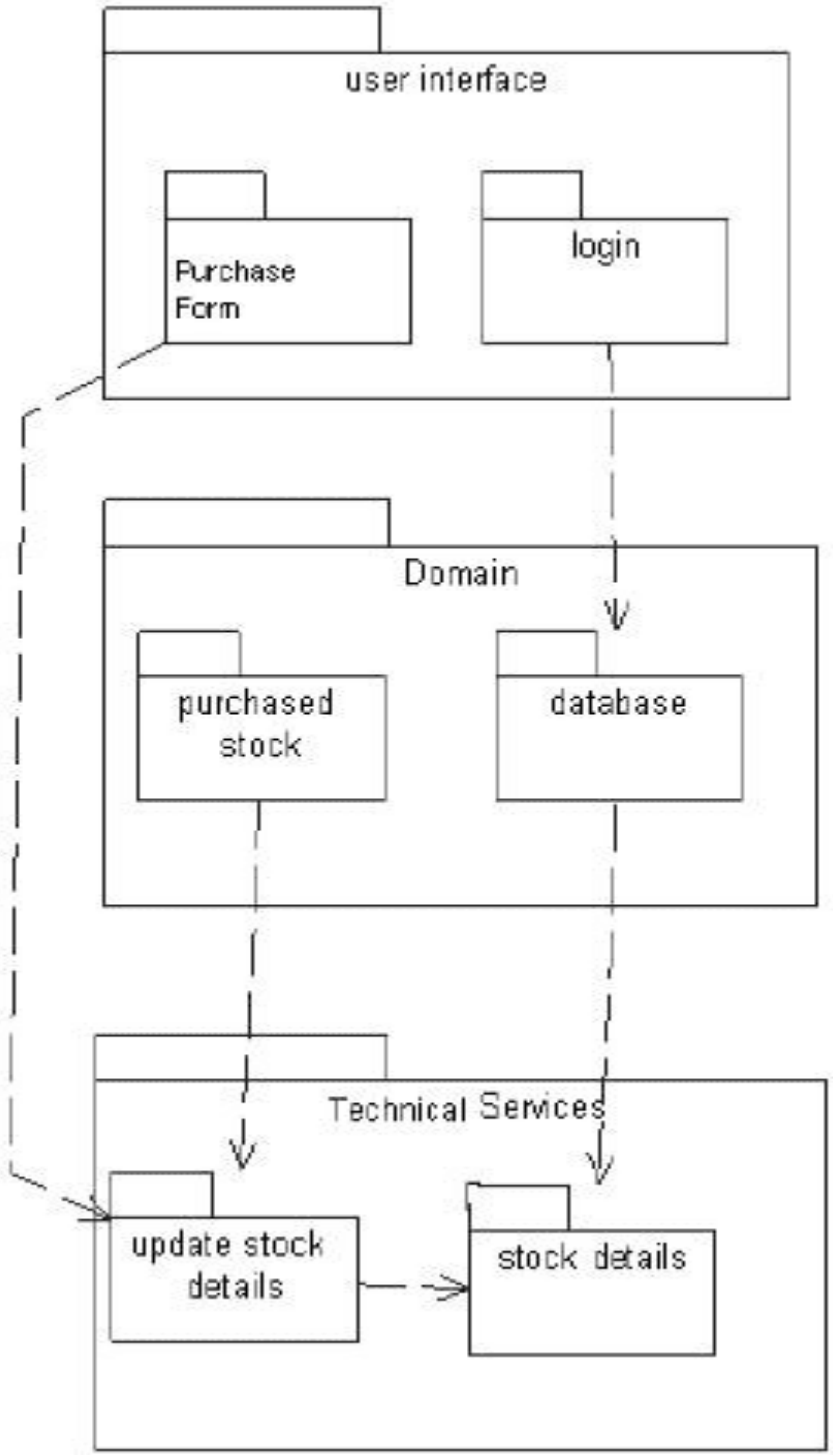
PACKAGE DIAGRAM

A package diagram in unified modeling language that depicts the dependencies between the packages that make up a model. A Package Diagram (PD) shows a grouping of elements in the OO model, and is a Cradle extension to UML. PDs can be used to show groups of classes in Class Diagrams (CDs), groups of components or processes in Component Diagrams (CPDs), or groups of processors in Deployment Diagrams (DPDs).
There are three types of layer. They are

a. **User interface layer:** consists of the form and login. This layer describes how the storekeeper logins and maintains the stock.

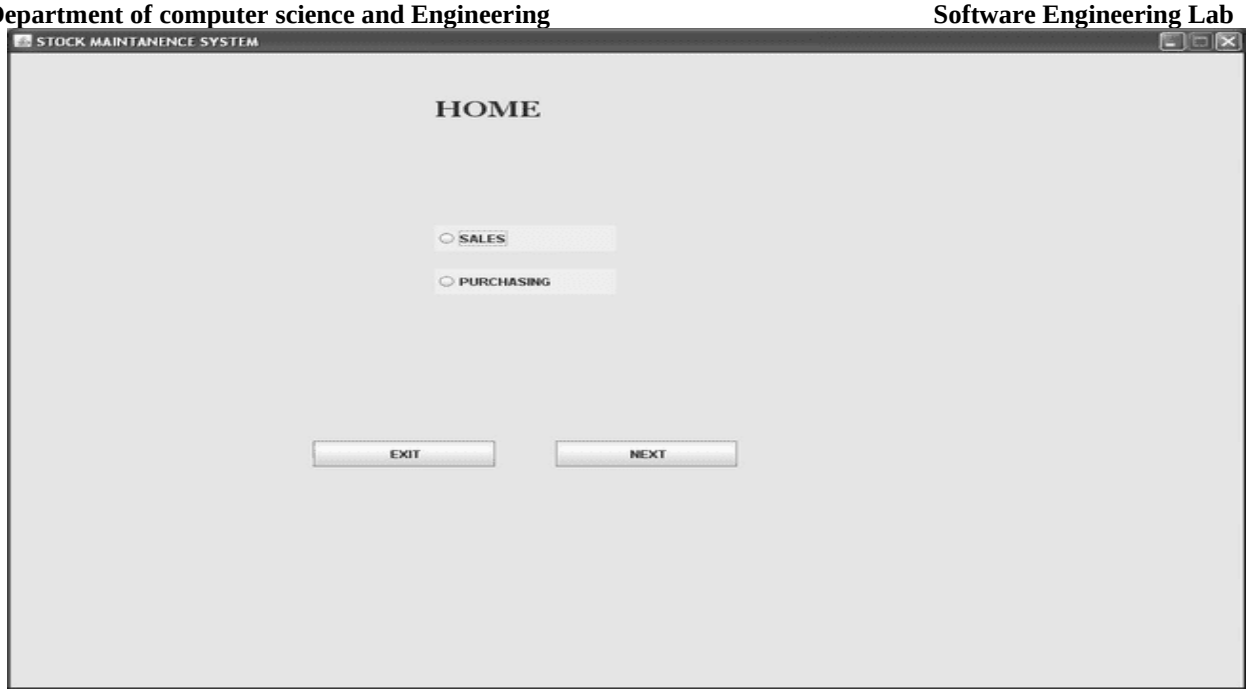
b. **Domain layer:** shows the activities that are performed in the stock maintenance system. The activities are purchased stock, database verification.

c. **Technical services layer:** the update stock details, verification stock details and stored in the database.

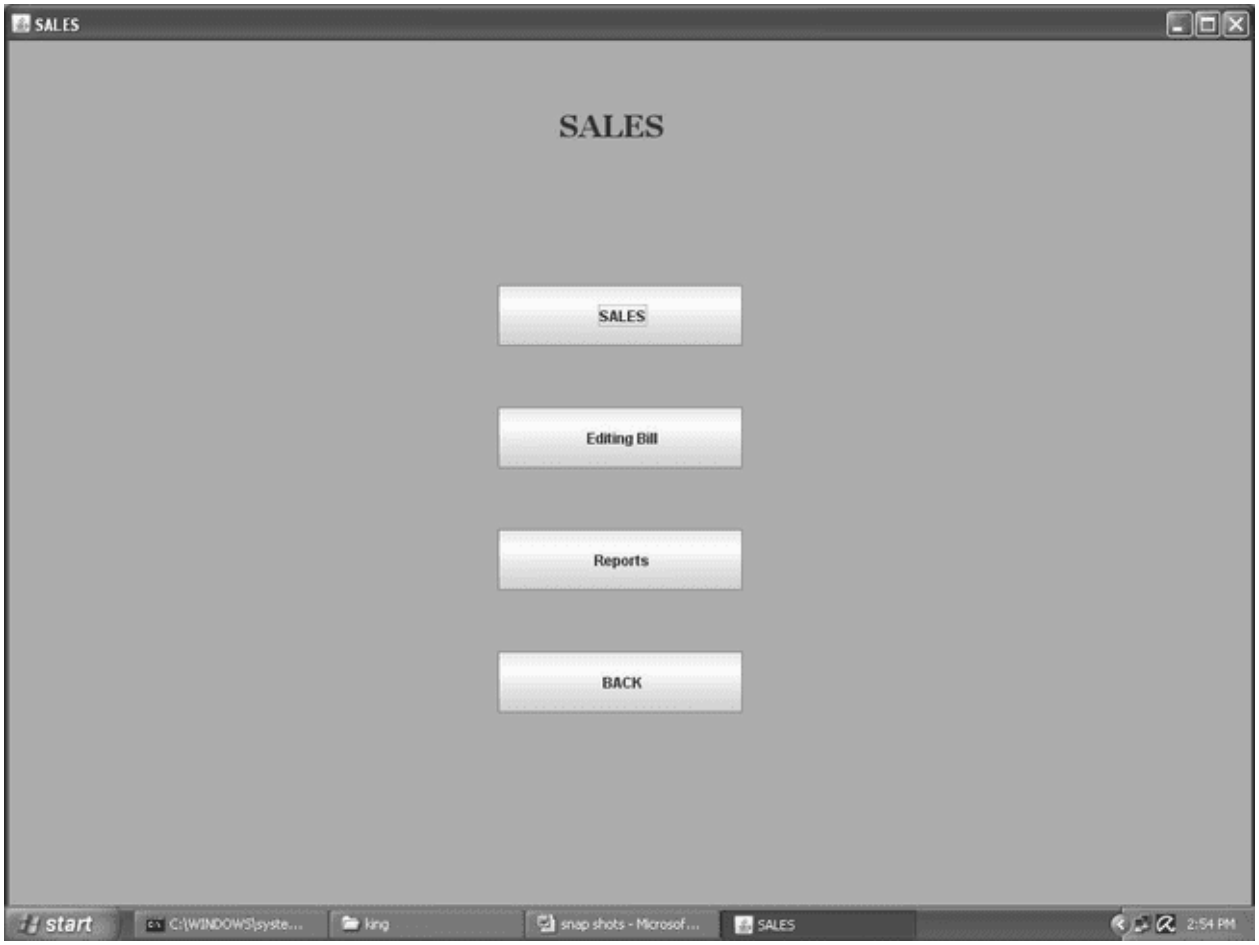

user interface
Purchase Form
login
Domain
purchased stock
database
Technical Services
update stock details
stock details

FORMS

FORM 1


STOCK MAINTANENCE SYSTEM
HOME
SALES
PURCHASING
EXIT
NEXT

FORM 2


SALES
SALES
SALES
Editing Bill
Reports
BACK
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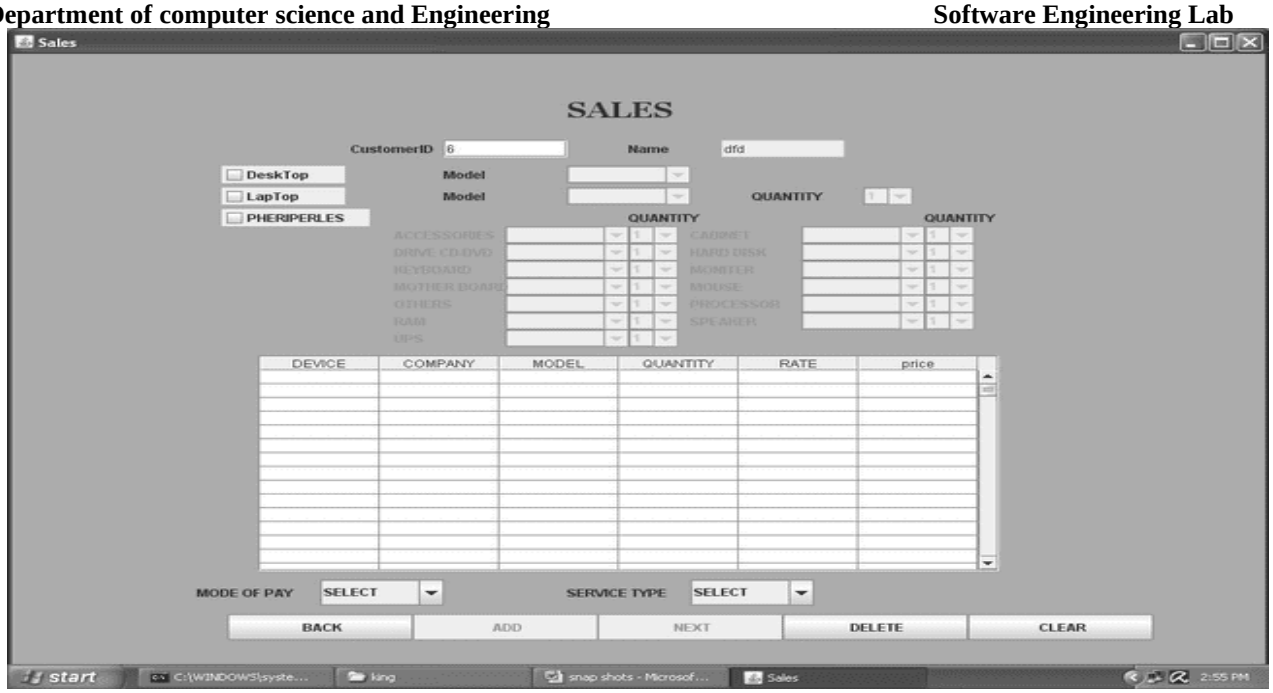
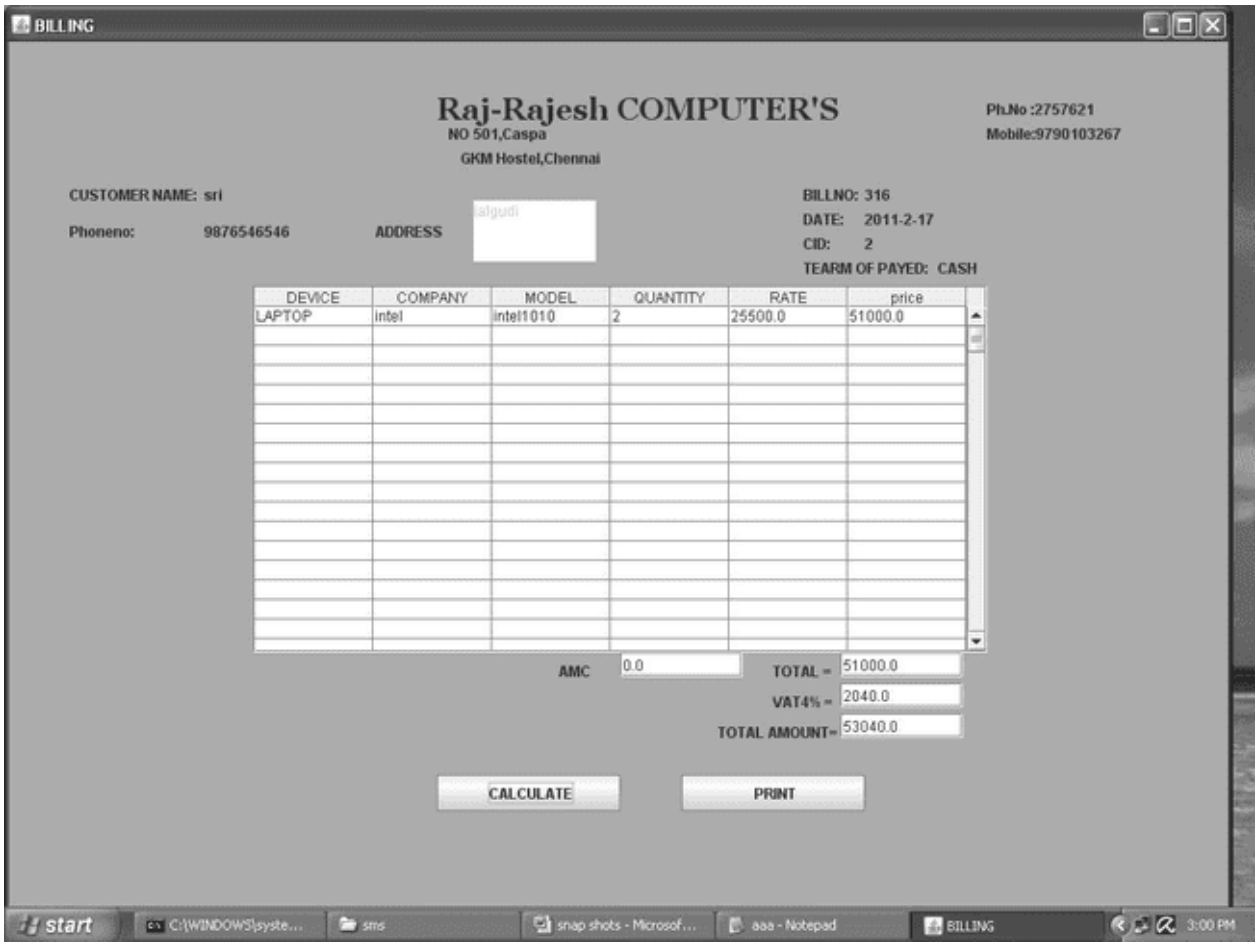
king
snap shots - Microsof...
SALES
2:54 PM

FORM 3


Sales
SALES
CustomerID
6
Name
dfd
DeskTop
LapTop
PHERIPERLES
Model
Model
QUANTITY
QUANTITY
QUANTITY
ACCESSORIES
DRIVE CD-DVD
KEYBOARD
MOTHER BOARD
OTHERS
RAM
UPS
CABINET
HARD DISK
MONITER
MOUSE
PROCESSOR
SPEAKER
DEVICE
COMPANY
MODEL
QUANTITY
RATE
price
MODE OF PAY
SELECT
SERVICE TYPE
SELECT
BACK
ADD
NEXT
DELETE
CLEAR
start
2:55 PM

FORM 4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Raj-Rajesh COMPUTER'S
NO 501,Caspa
GKM Hostel,Chennai
PhNo :2757621
Mobile:9790103267
CUSTOMER NAME: sri
Phoneno: 9876546546
ADDRESS
salgudi
BILLNO: 316
DATE: 2011-2-17
CID: 2
TEARM OF PAYED: CASH
DEVICE
COMPANY
MODEL
QUANTITY
RATE
price
LAPTOP
intel
intel1010
2
25500.0
51000.0
AMC
0.0
TOTAL =
51000.0
VAT4% =
2040.0
TOTAL AMOUNT=
53040.0
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sms
snap shots - Microsof...
aaa - Notepad
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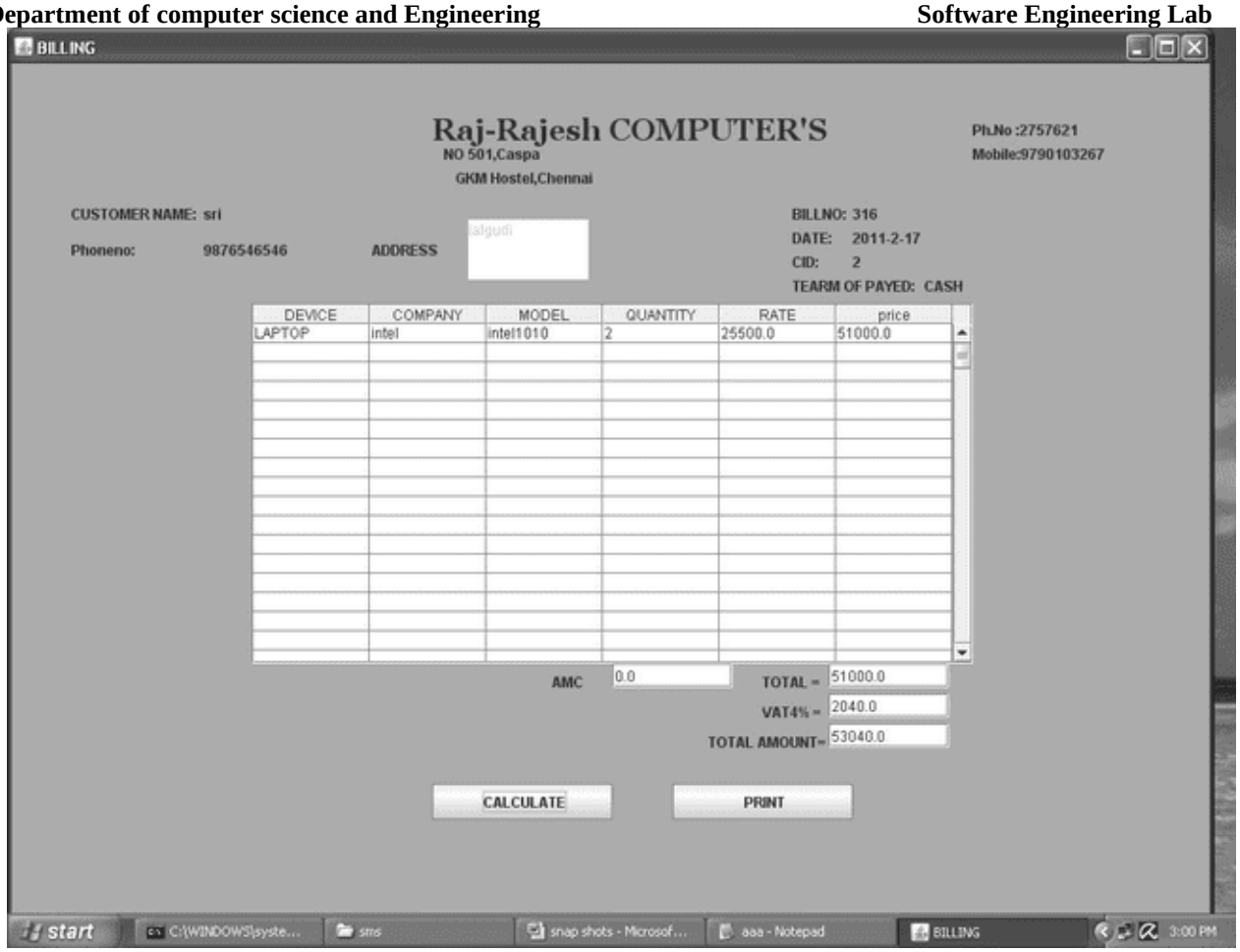
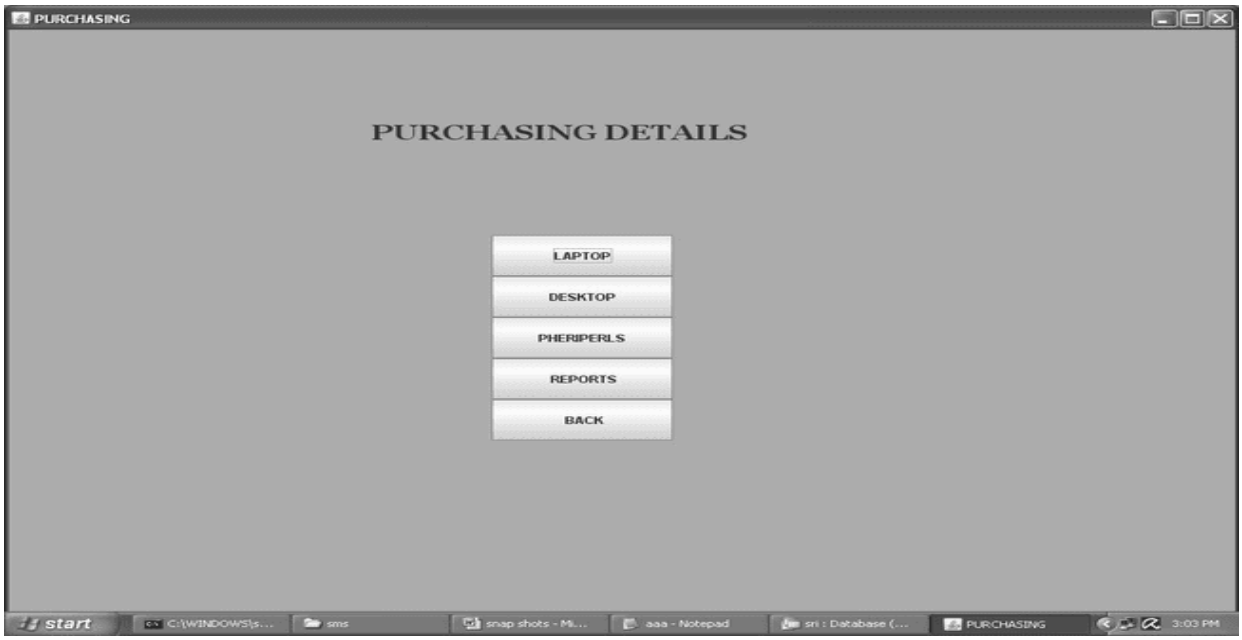
3:00 PM

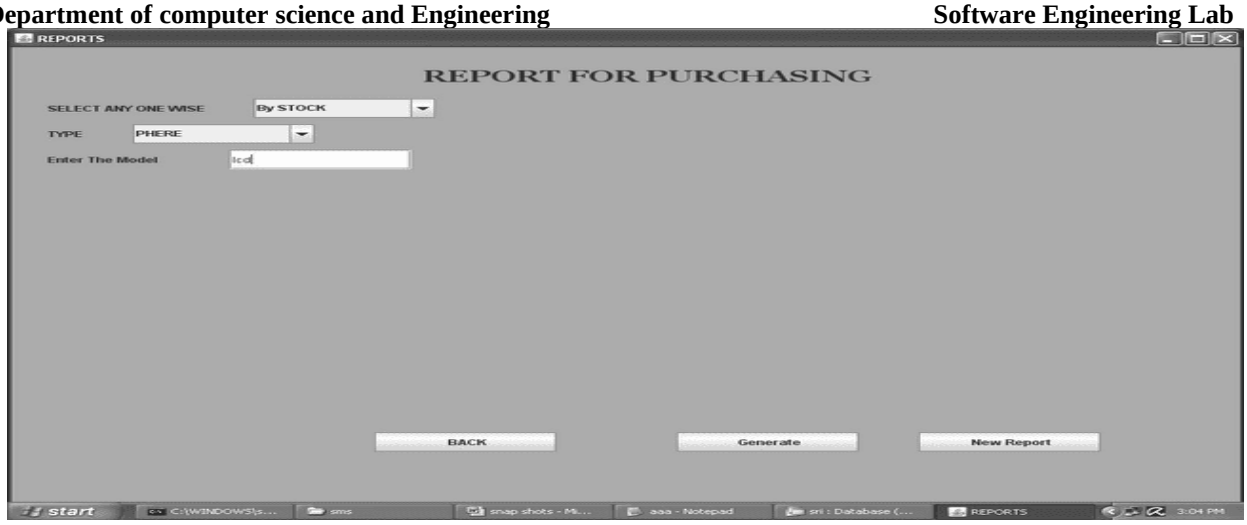
FORM 5


BILLING
Raj-Rajesh COMPUTER'S
NO 501,Caspa
GKM Hostel,Chennai
Ph.No :2757621
Mobile:9790103267
CUSTOMER NAME: sri
Phoneno: 9876546546
ADDRESS
Kalgudi
BILLNO: 316
DATE: 2011-2-17
CID: 2
TEARM OF PAYED: CASH
DEVICE COMPANY MODEL QUANTITY RATE price
LAPTOP intel intel1010 2 25500.0 51000.0
AMC 0.0
TOTAL = 51000.0
VAT4% = 2040.0
TOTAL AMOUNT= 53040.0
CALCULATE
PRINT
start
C:\WINDOWS\syste...
sms
snap shots - Microsof...
aaa - Notepad
BILLING
3:00 PM

FORM 6


PURCHASING
PURCHASING DETAILS
LAPTOP
DESKTOP
PHERIPERLS
REPORTS
BACK
start
C:\WINDOWS\s...
sms
snap shots - Mi...
aaa - Notepad
sri : Database (...
PURCHASING
3:03 PM

FORM 7



FORM 8

RESULT

Thus the project to develop Stock Maintenance system using Rational Rose Software and to implement the software in Java is done successfully.

EXPERIMENT 5
ONLINE COURSE RESERVATION SYSTEM

AIM

To design an object oriented model for course reservation system.

PROBLEM ANALYSIS AND PROJECT PLANNING:

The requirement form the customer is got and the requirements about the course registration are defined. The requirements are analyzed and defined so that is enables the student to efficiency select a course through registration system. The project scope is identified and the problem statement is prepared.

PROBLEM STATEMENT

a. Whenever the student comes to join the course he/she should be provided with the list of course available in the college.

b. The system should maintain a list of professor who is teaching the course. At the end of the course the student must be provided with the certificate for the completion of the course.

SYSTEM REQUIEMENT SPECIFICATION

GLOSSARY

Generally a glossary is performed to define the entire domain used in the problem. It defines about the storage items that are familiar to the uses it provided these definitions and information about the attribute we are using in the particular project to the use,

DEFINITIONS

The glossary contain the working definition for the key concept in the course registration system

COURSE

The course which are offered by the institution

COURSE CATALOG

The un a bridged for all the course offered by the institution.

GRADE

The ranking of a particular student for a particular course offered

PROFESSOR

A person who reaches the course

CERTIFICATE

It is the proof for the completion the course

REGISTER

One who register the course for the student

OBJECTIVES

a. The main purpose of creating the document about the software is to know about the list of the requirement in the software project part of the project to be developed.

b. It specifies the requirement to develop a processing software part that completes the set of requirement.

SCOPE

a. In this specification, we define about the system requirements that are about from the functionality of the system.

b. It tells the users about the reliability defined in usecase specification

FUNCTIONALITY

Many members of the process line to check for its occurrences and transaction, we are have to carry over at sometimes

USABILITY

The user interface to make the transaction should be effectively

PERFORMANCE

It is the capability about which it can performed function for many user at sometimes efficiently (ie) without any ever occurrences

RELIABILITY

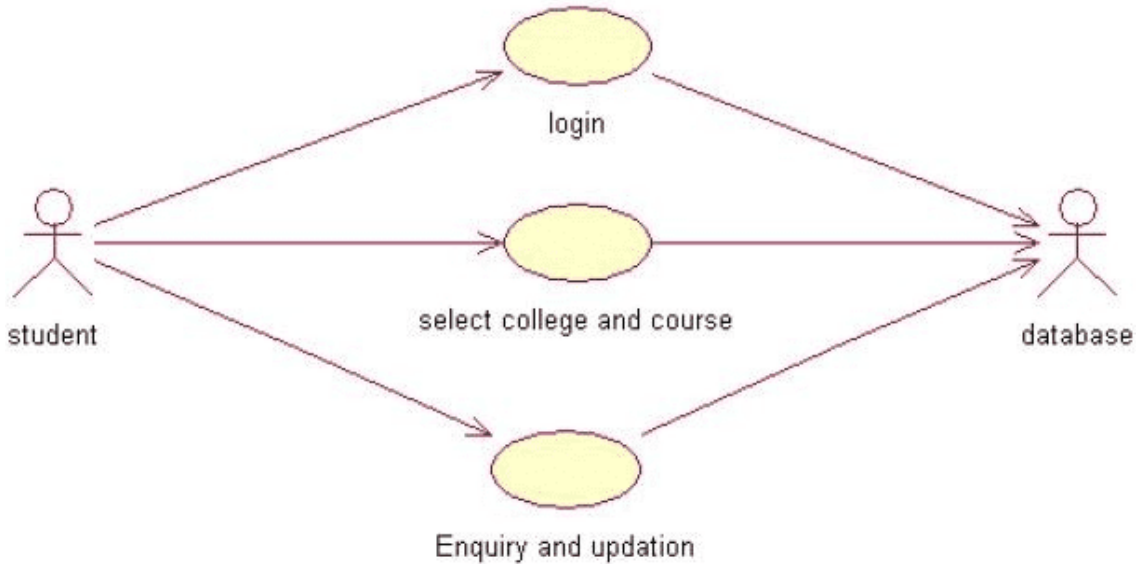
The system should be able to the user through the day to day transaction

USERCASE DIAGRAM

a. Use case is a sequence of transaction in a system whose task is to yield result of measurable value to individual author of the system

b. Use case is a set of scenarios together by a common user goal

c. A scenario is a sequence of step describing as interaction between a user and a system



DOCUMENTATION FOR USE CASE DIAGRAM

The use case diagram in the course registration system illustrates the sequence of steps followed in the system related to the actions of the system

LOGIN

This usecase gives a entry to the student,professor and the register

SELECT COLLEGE AND COURSE

This use case list out the various courses offered by the institution

SUBMIT GRADES

This usecase given the marks scored by the system

MAINTAIN PROFESSOR INFORMATION

This usecase maintain the information about professor in the system

MAINTAIN STUDENT INFORMATION

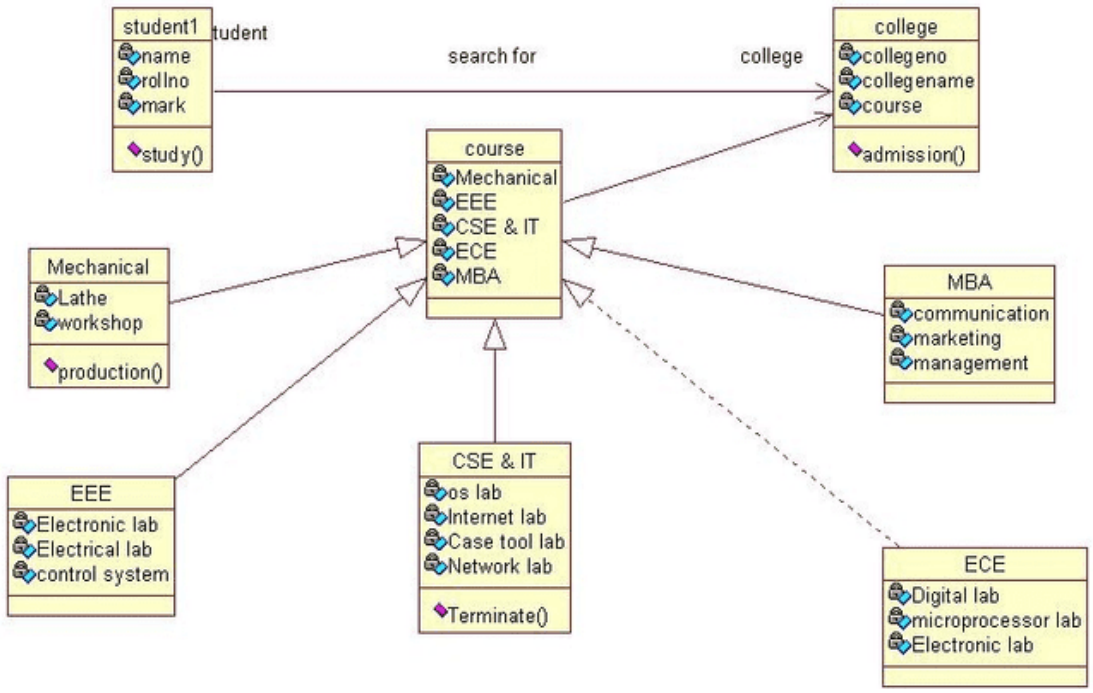
This usecase maintain the information about the professor in the system

CLOSE REGISTRATION

This usecase describes the certification of the student when he/she finishes the course

CLASS DIAGRAM:

A class diagram describes the type of objectors in the system the various kinds of static relationship that exist among them.



DOCUMENTATION OF CLASS DIAGRAM

a. The various classes involved in the system are registered student record, professor record all admistration grade and close registration

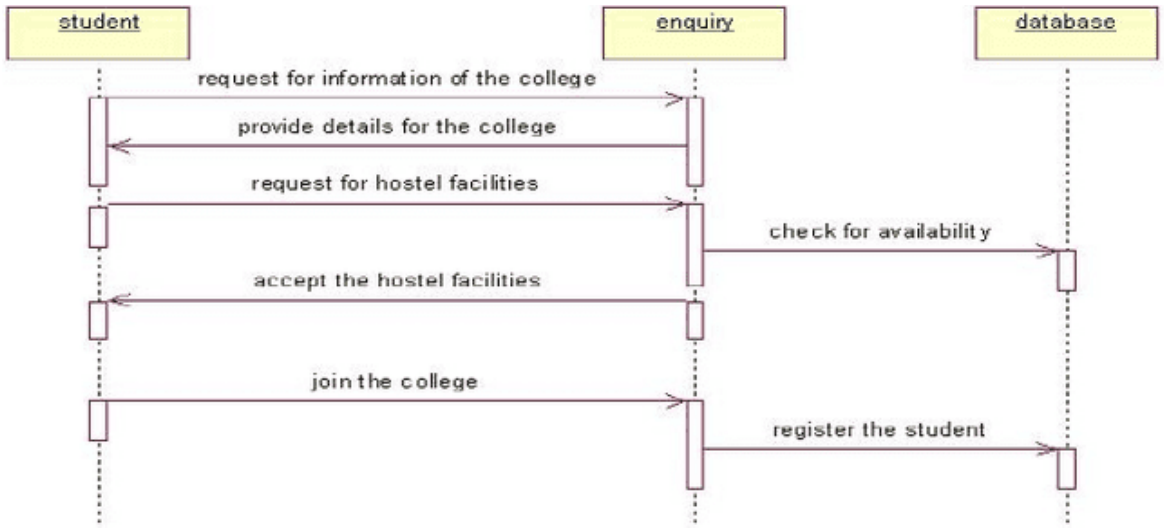
b. The student register for the course

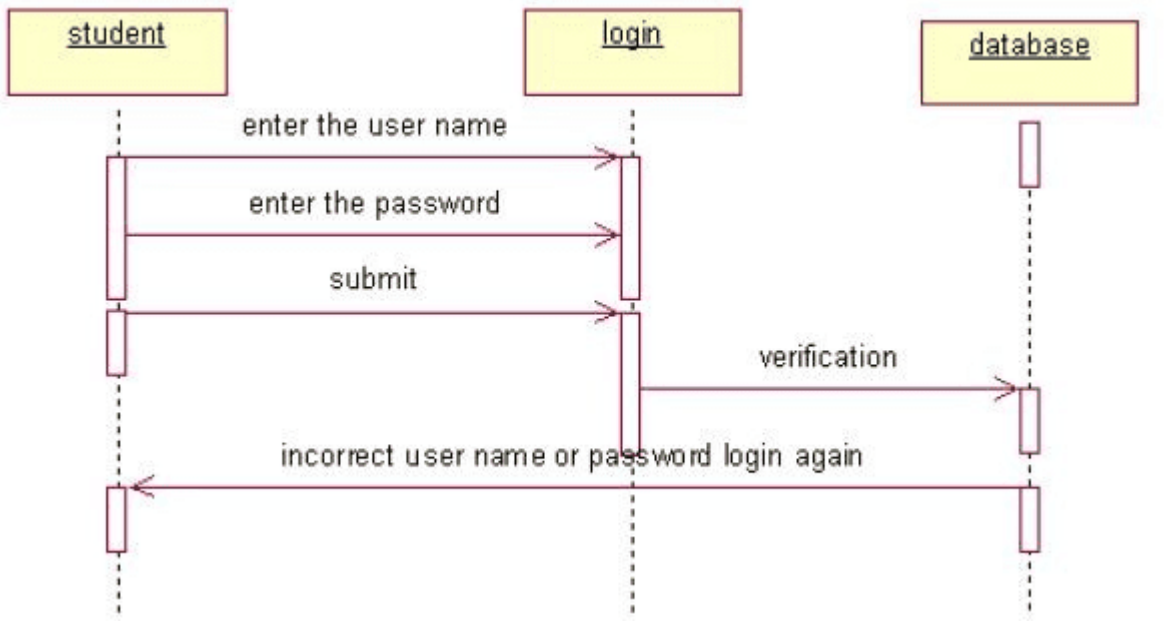
c. After the course gets over each student will be asked to write a test

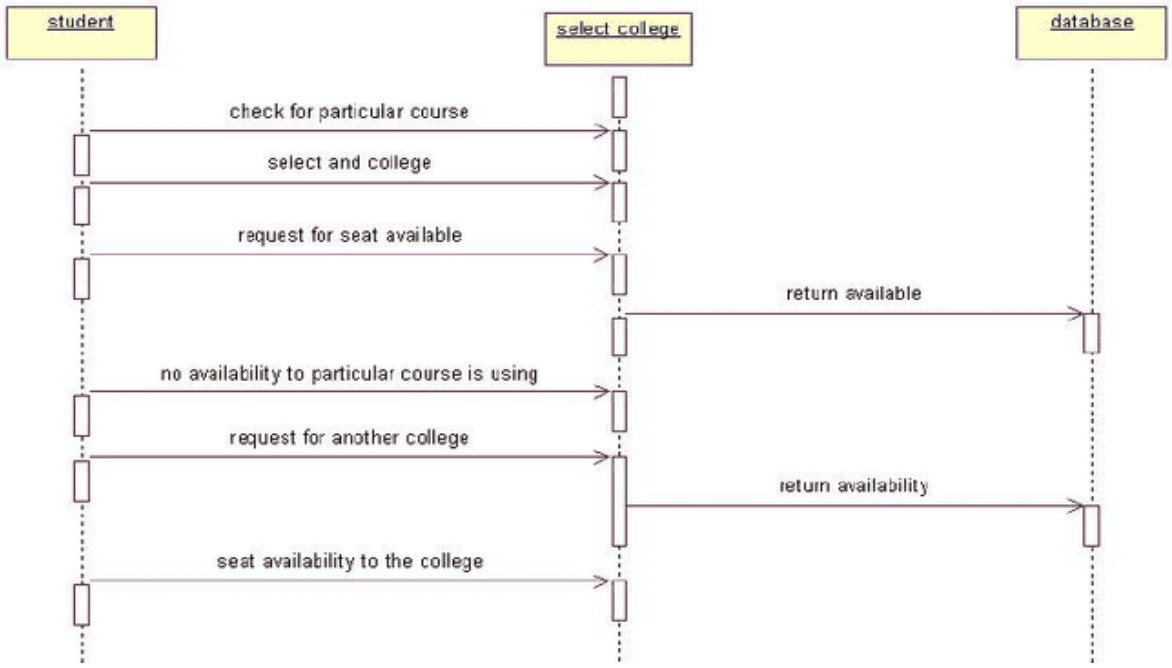
d. Test mark are analyzed for the issue grade sheet after certification the registration of the student in closes.

SEQUENCE DIAGRAM

A sequence diagram is one that includes the object of the projects and tells the lifetimes and also various action performed between objects.







DOCUMENTATION OF SEQUECE DIAGRAM

a. The single use case in the course registration is taken and sequence of operation followed in the usecase

b. In the registration for the course usecase diagram illustration on the process of registering and select a course

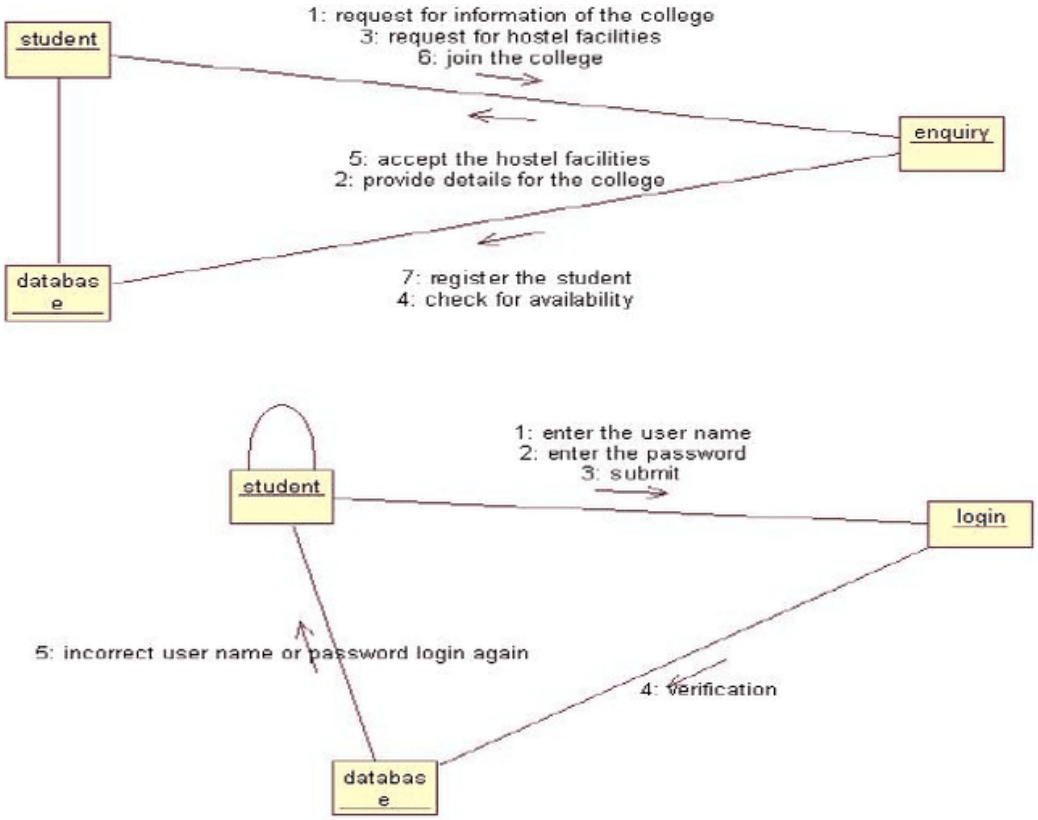
c. The student enters the institution and gets a catalog about the list of course offered by the system

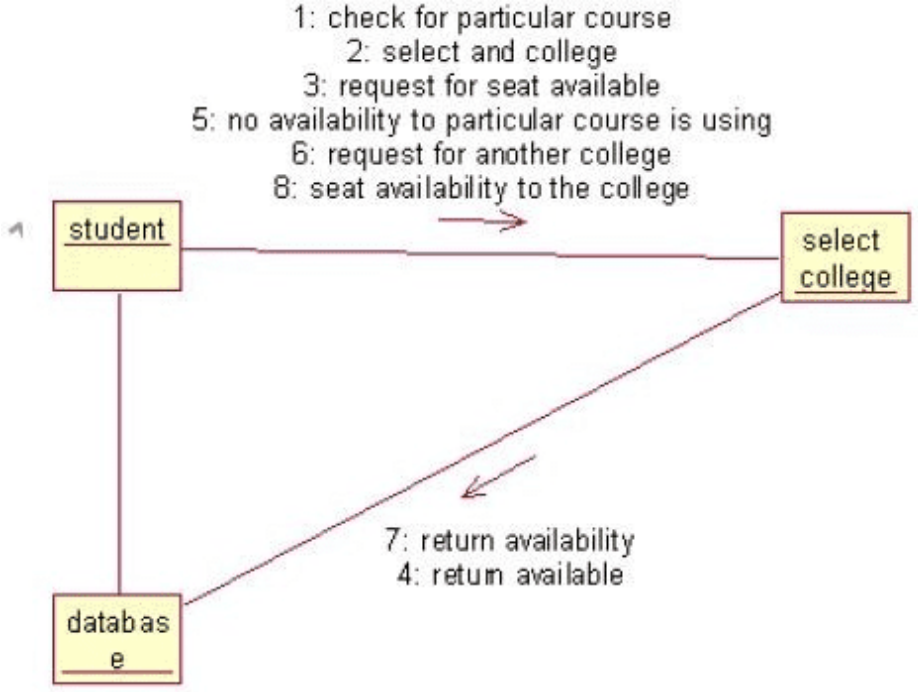
d. The student can select a particular usecase and registration for the course

e. In the record usecase submit grade at the end of each course each student will be asked to write a test.The result will evaluavate for the issue of grade sheet and the grade are submitted

COLLOBORATIION DIAGRAM

It is same as the sequence diagram that involved the project with the only difference that we give the project with the only difference that we give sequence number to each process.





DOCUMENTATION OF COLLOBORATION DIAGRAM

a. The diagram is also similar to sequence diagram but the difference is the various operations involves in the particular use case will be numbered. In this diagram the sequence of steps.

b. Getting the catalog to now about the course

c. Selecting the course to study

d. The final step is to register for the selected course

e. In this submit garde usecase the sequence of step is:

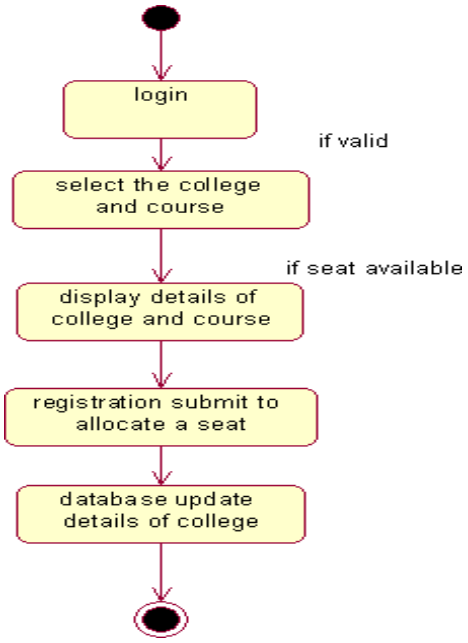
f. At the end of the course the student will write a test

g. The test marks is validated to issue grade sheet

h. The certification is done to the student for the particular courses.

STATE DIAGRAM

It is a technique to describe the behavior of the system. It describes all the possible states that a particular object gets into theobject oriented technique. State diagram are drawn for a single class to show to the lifetime behaviour of a single objects

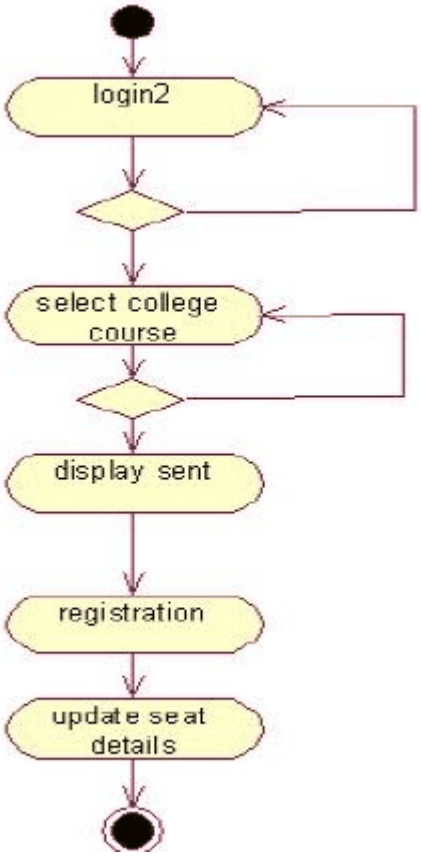


DOCUMENTATION OF THE STATE DIAGRAM

1. The various states are login student, register for course, maintain student and professor record, submit grade and close registration
2. The state diagram describes the behaviour of the system
3. The main purpose of the system is to register the student for a course
4. After the student enrolls the course maintain the record for the student and professor
5. After the test being conducted each student mark will be analysed for the grade sheet purpose
6. After the certification the registration is closed

ACTIVIY DIAGRAM

It includes all the activities of particular project and various steps using join and forks



DOCUMENTATION OF ACTIVITY DIAGRAM

a. The user login in to the course registration system

b. He/she select a particular course form the list of available course

c. After the student register into the course the institution start the bill operation and record is maintain

d. The professor also start maintains the student record

e. At the end of the course based on the result grade the grade sheet or certificate is issued to the student

f. The registration is closed for the particular student

SOFTWARE DEVELOPMENT AND DEBUGING

a. Using rational rose software the software development and debugging is done

b. This gives the over view of the project by the generation of defition and implementation of packages classes with all the relationship method and constructor

c. We debug the diagram using log file and rectify the immoral relationship that exist among them and finally produce the project perfect diagram which gives exact print of the project

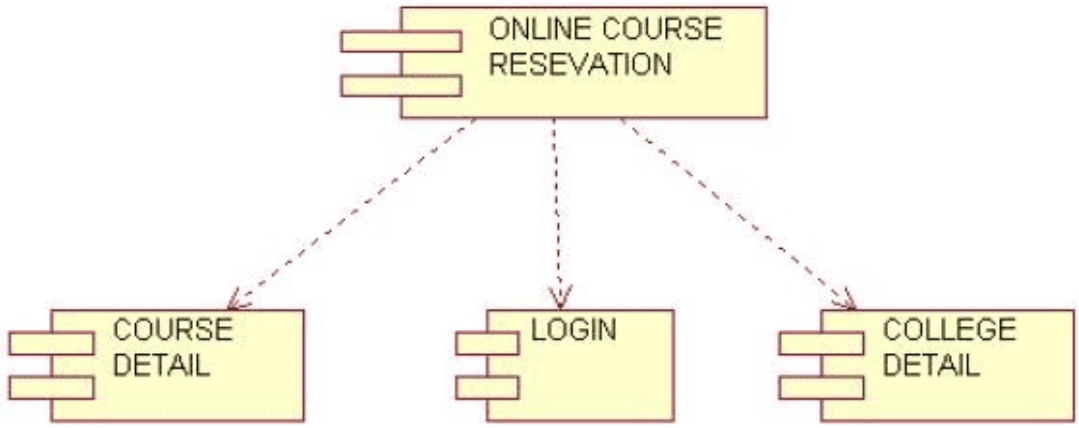
SOFTWARE TESTING

a. In this step we prepare there plan for testing the diagram

b. We perform the validation for the various data involved into the projects

COMPONENT DIAGRAM

The component diagram is represented by figure dependency and it is a graph of design of figure dependency. The component diagram's main purpose is to show the structural relationships between the components of a systems. It is represented by boxed figure. Dependencies are represented by communication association



DOCUMENTATION OF COMPONENT DIAGRAM

a. The components of the online course reservation are course details, login, and college details

b. The course details, login and college details are dependent on the online course reservation are show by the dotted arrows

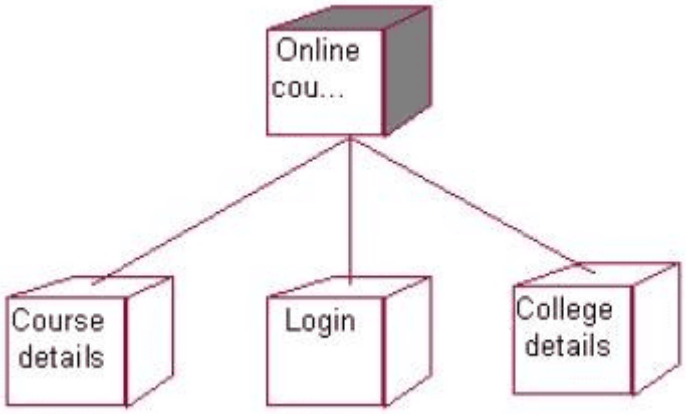
DEPLOYMENT DIAGRAM

It is a graph of nodes connected by communication association. It is represented by a three dimensional box. A deployment diagram in the unified modeling language serves to model

the physical deployment of artifacts on deployment targets. Deployment diagrams show "the allocation of artifacts to nodes according to the Deployments defined between them. It is represented by 3-dimentional box. Dependencies are represented by communication association. The basic element of a deployment diagram is a node of two types

DEVICE NODE – A physical computing resource with processing and memory service to execute software, such as a typical computer or a mobile phone.

EXECUTION ENVIRONMENT NODE-- This is a software computing resource that runs within an outer node and which itself provides a service to host an execute other executable software element.



DOCUMENTATION OF DEPLOYMENT DIAGRAM

The device node is online course reservation and execution nodes are course details, login and college details

PACKAGE DIAGRAM

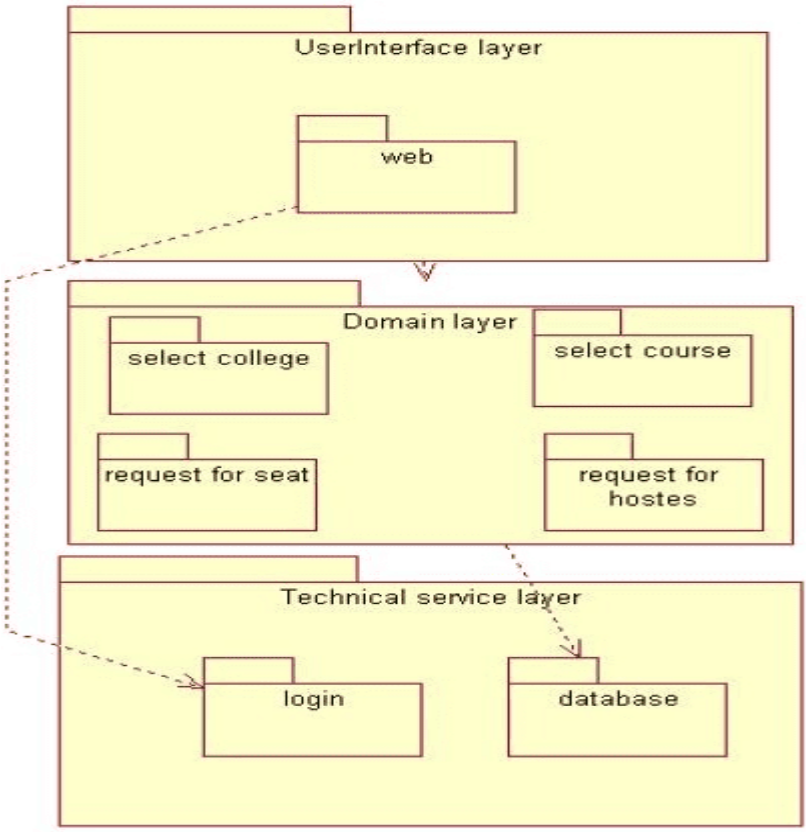
A package diagram is represented as a folder shown as a large rectangle with a top attached to its upper left corner. A package may contain both sub ordinate package

and ordinary model elements. All uml models and diagrams are organized into package. A package diagram in unified modeling language that depicts the dependencies between the packages that make up a model. A Package Diagram (PD) shows a grouping of elements in the OO model, and is a Cradle extension to UML. PDs can be used to show groups of classes in Class Diagrams (CDs), groups of components or processes in Component Diagrams (CPDs), or groups of processors in Deployment Diagrams (DPDs).
There are three types of layer. They are

a. User interface layer

b. Domain layer

c. Technical services layer



DOCUMENTATION OF PACKAGE DIAGRAM

• The three layer of online course reservation are user interface layer, domain layer and technical service layer

a. **The user interface layer-** represent the user interface component such as web where the student login

b. **The domain layer-** has the major action such as select college, select course, request for seat and request for hostel.

c. **Technical service layer**-only authenticated user can access the technical service

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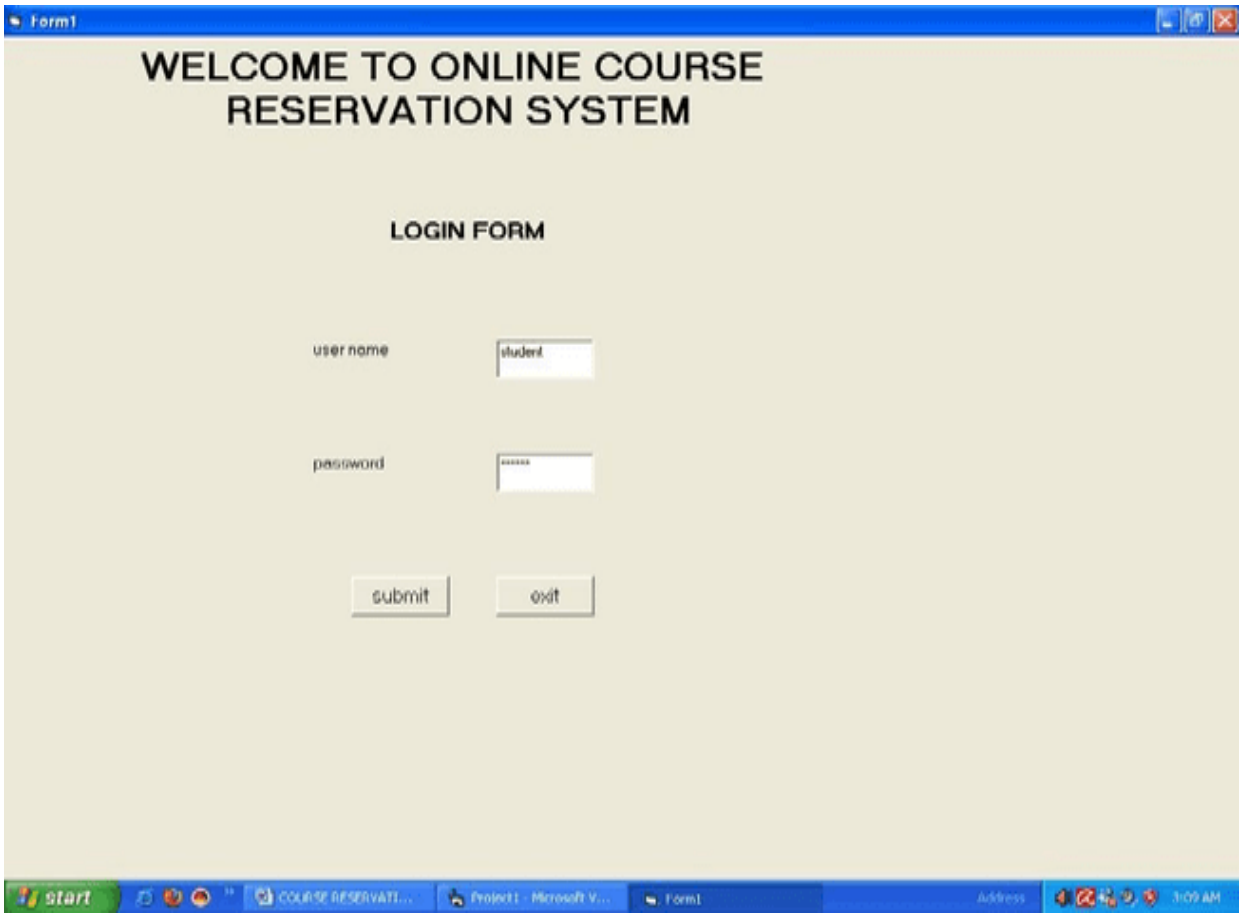
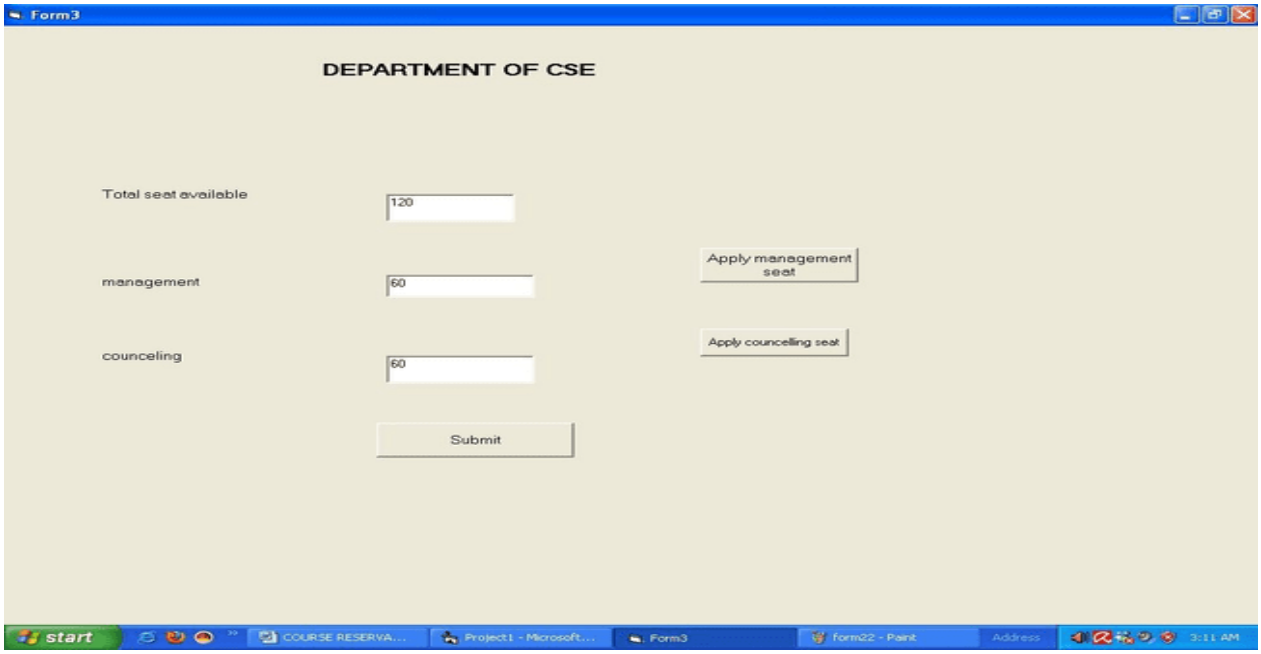
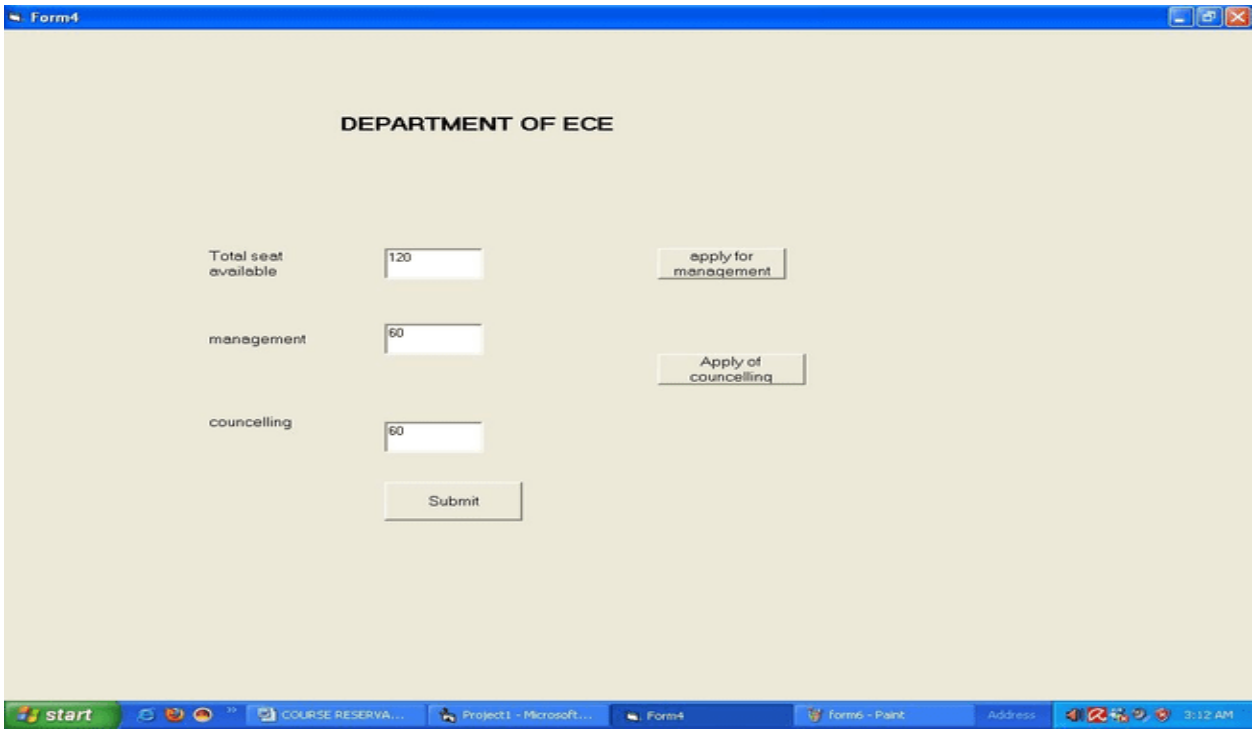

Form1
WELCOME TO ONLINE COURSE RESERVATION SYSTEM
LOGIN FORM
user name
student
password
submit
exit
start

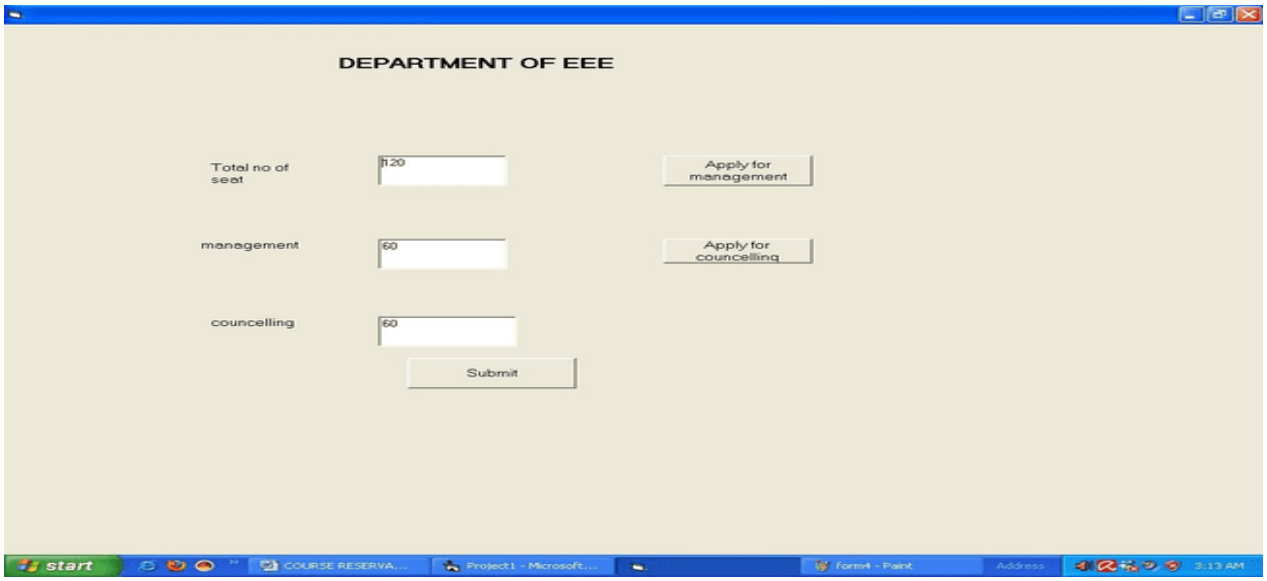
FORM 3


Form3
DEPARTMENT OF CSE
Total seat available
120
management
60
counceling
60
Apply management seat
Apply councelling seat
Submit

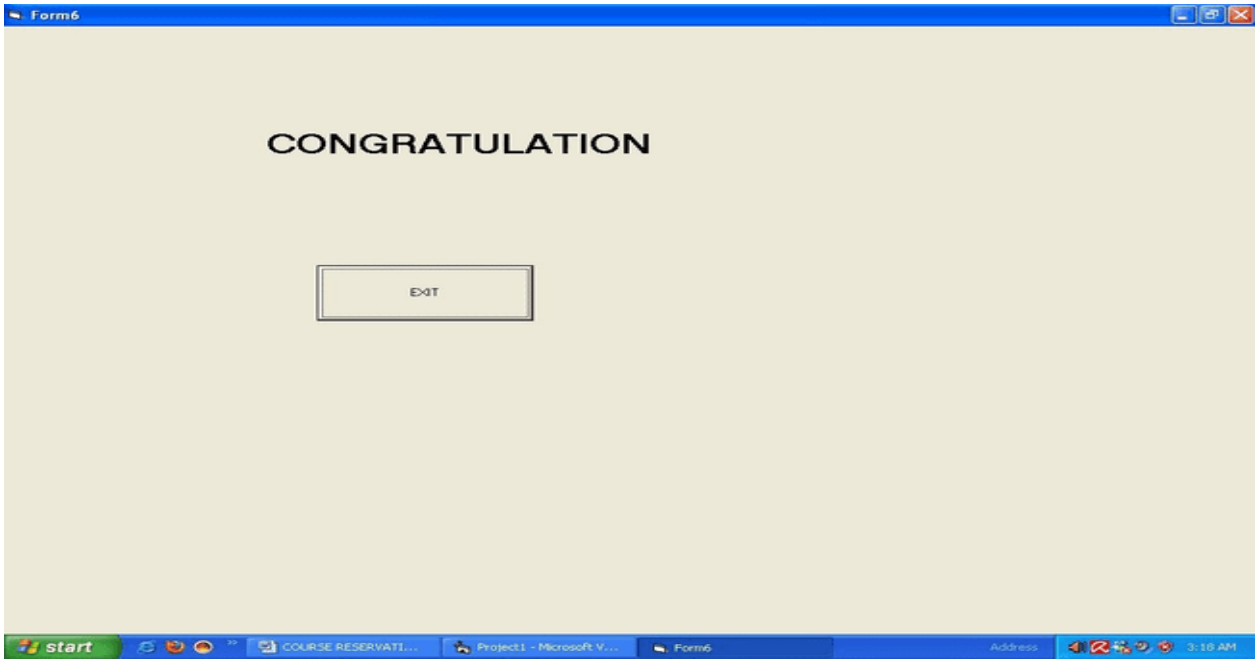
FORM 4


Form4
DEPARTMENT OF ECE
Total seat available
120
management
60
councelling
60
apply for management
Apply of councelling
Submit

FORM 5



FORM6



RESULT

Thus the project to develop online course reservation system was developed using Rational Rose Software and to implement the software in Visual Basic is done successfully.

EXPERIMENT 6

E-TICKETING

AIM

To develop the E-Ticketing System using Rational Rose Software and to implement the software in visual basic.

PROBLEM ANALYSIS AND PROJECT PLANNING

In the E-Ticketing system the main process is a applicant have to login the database then the database verifies that particular username and password then the user must fill the details about their personal details then selecting the flight and the database books the ticket then send it to the applicant then searching the flight or else cancelling the process.

PROBLEM STATEMENT

The E-Ticketing system is the initial requirement to develop the project about the mechanism of the E-ticketing system what the process do at all.

a. The requirement are analyzed and refined which enables the end users to efficiently use the E-ticketing system.

b. The complete project is developed after the whole project analysis explaining about scope and project statement is prepared.

c. The main scope for this project is the applicant should reserved for the flight ticket.

d. First the applicant wants to login to the database after that the person wants to fill their details.

e. Then the database will seach for ticket or else the person will cancelled the ticket if he/she no need.

1. INTRODUCTION

1.1Purpose

The applicant should login to the database for reserving the ticket. In the specification use define about the system requirements that are part from the functionality of the system. It tells the usability, reliability defined in the use case specification.

Technology To Be Used **Microsoft Visual Basic 6.0**

Tools Be Used Rational Rose tool or StarUML (for developing UML Patterns)

Overview

SRS includes two sections overall description and specific requirements - Overall description will describe major role of the system components and inter- connections. Specific requirements will describe roles & functions of the actors.

2. OVERALL DESCRIPTION

Functionality

The database should be act as an main role of the e-ticketing system it can be booking the ticket in easy way.

Usability

The User interface makes the Credit Card Processing System to be efficient.

Performance

It is of the capacities about which it can perform function for many users at the same times efficiently that are without any error occurrence.

Reliability

The system should be able to process the user for their corresponding request.

UML DIAGRAMS

The project can be explained diagrammatically using the following diagrams.

a. Use case diagram

b. Class diagram

c. Sequence diagram

d. Collaboration diagram

e. State chart diagram

f. Activity diagram

g. Component diagram

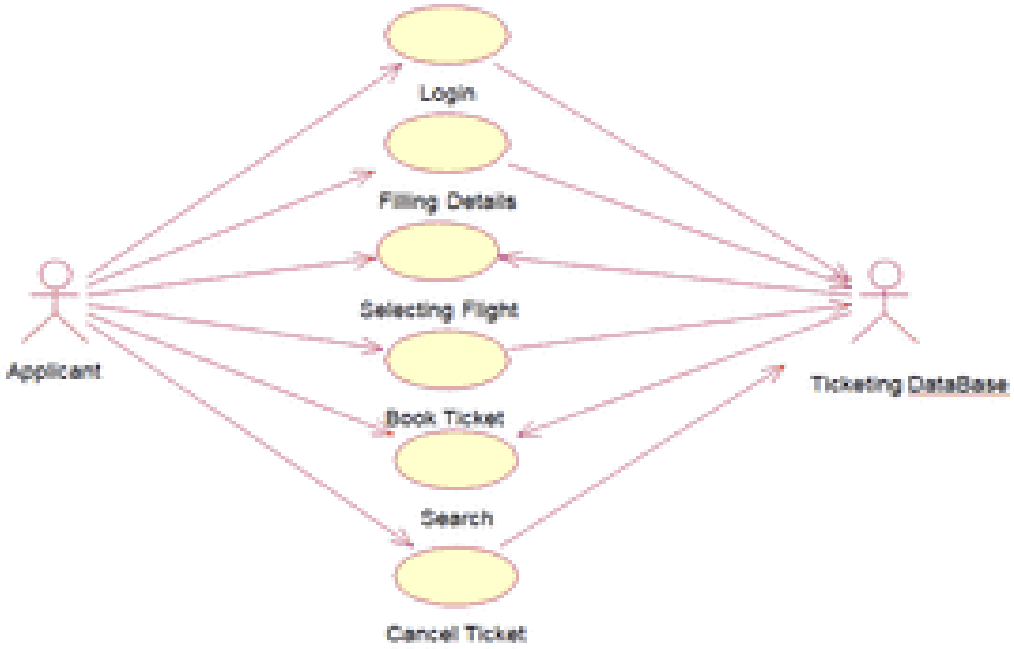
h. Deployment diagram

i. Package diagram

USE CASE DIAGRAM

A use case is a methodology used in system analysis to identify, clarify, and organize system requirements. The use case is made up of a set of possible sequences of interactions between systems and users in a particular environment and related to a particular goal. It is represented using ellipse.

Actor is any external entity that makes use of the system being modelled. It is represented using stick figure



DOCUMENTATION OF USE CASE DIAGRAM

The actors in this use case diagram are applicant, and E-ticketing DataBase. The use cases are the activities performed by actors.

The actors in this use case diagram are

a. **Applicant -** logins the E-Ticketing and filling the required data fields.

b. **E-Ticketing DataBase-**verify the login and filling the details and selected applicant details are stored in it.

The use cases in this use case diagram are

Login - applicant enter their username and password to enter in to the E-

Ticketing form.

Filling Details –applicants are used to enter the details in the requiredForm.

Selecting Flight –it is used to selecting the flight for the applicants.

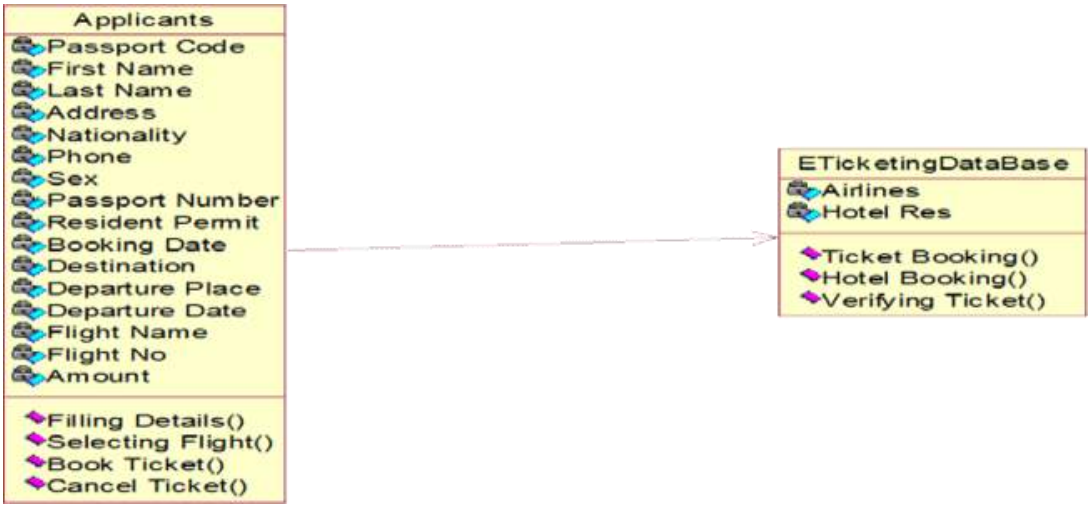
Book Ticket – it is used to book the ticket through the E-Ticketing database.

Search –it is used to search the flight details.

Cancel Ticket- it is used to cancel the ticket through the E-Ticketing DataBase.

CLASS DIAGRAM

A class diagram in the unified modeling language (UML) is a type of static structure diagram that describes the structure of a system by showing the system's classes, their attributes, and the relationships between the classes. It is represented using a rectangle with three compartments. Top compartment have the classname, middle compartment the attributes and the bottom compartment with operations.



DOCUMENTATION OF CLASS DIAGRAM

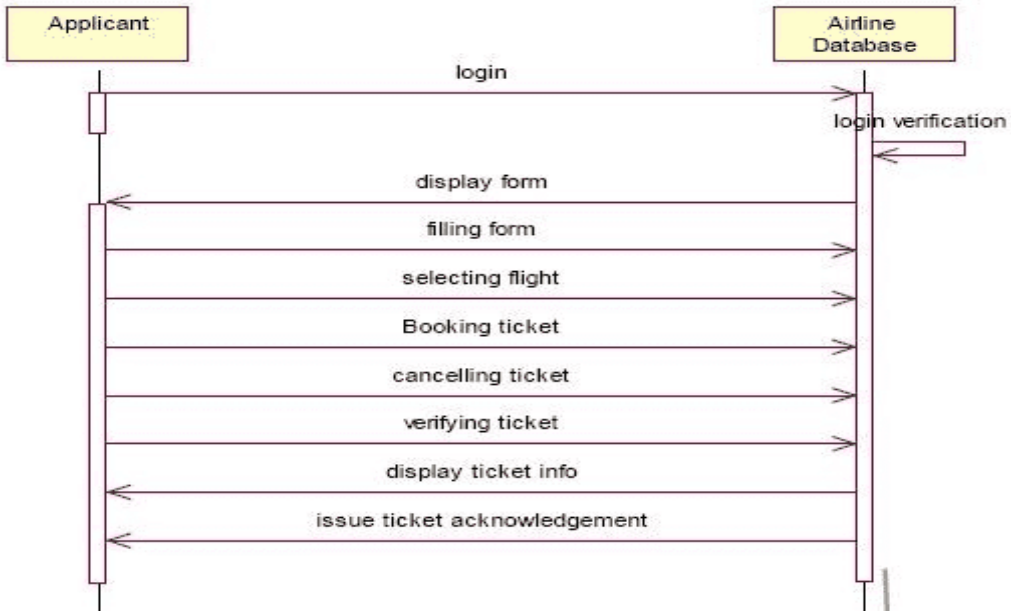
This class diagram has two classes applicant, E-Ticketing DataBase.

a. **Applicant** - logins the E-Ticketing and filling the required data fields.
b. **E-Ticketing DataBase-**verify the login and filling the details and selected applicant details are stored in it.

SEQUENCE DIAGRAM

A sequence diagram in Unified Modeling Language (UML) is a kind of interaction diagram that shows how processes operate with one another and in what order. It is a construct of a Message Sequence Chart. There are two dimensions.

1. Vertical dimension-represent time.
2. Horizontal dimension-represent different objects.



DOCUMENTATION OF SEQUENCE DIAGRAM

This sequence diagram describes the sequence of steps to show

a. Applicants are used to login the form.And then its verify the username and password.

b. If the password and username are correct then applicants are used to login the filling details.

c. Applicants are used to selecting the flights and book the tickets.

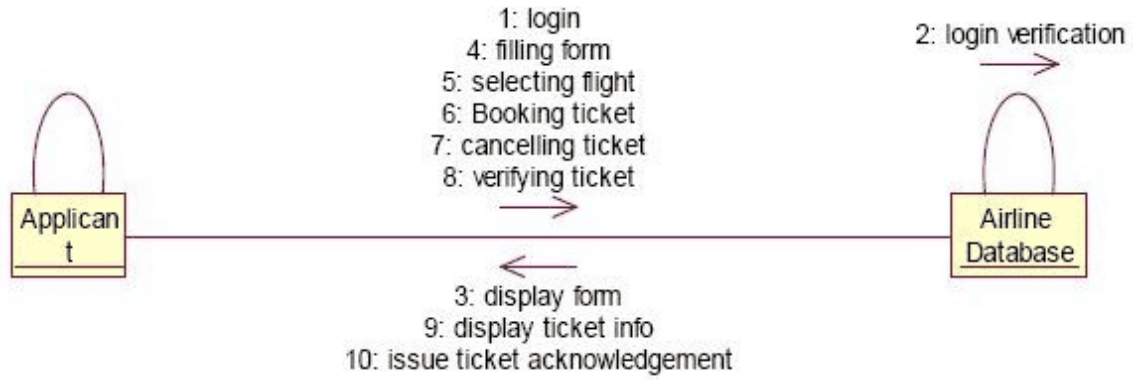
d. Now the E-Ticketing DataBase verify the filling Details.

e. And then the E-Ticketing DataBase display the ticket information.

f. Incase of any sudden change of the plan,the applicant can cancel the ticket.

COLLABRATION DIAGRAM

A collaboration diagram, also called a communication diagram or interaction diagram,. A sophisticated modeling tool can easily convert a collaboration diagram into a sequence diagram and the vice versa. A collaboration diagram resembles a flowchart that portrays the roles, functionality and behavior of individual objects as well as the overall operation of the system in real time.

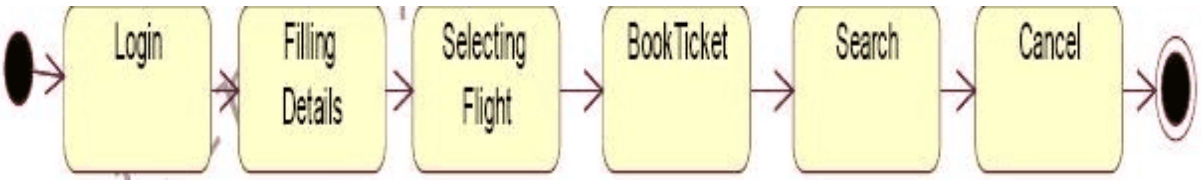


DOCUMENTATION OF COLLABRATION DIAGRAM

This collaboration diagram is to show how the applicant login and register in the E-Ticketing system. Here the sequence is numbered according to the flow of execution.
This collaboration diagram is to show the selection process of the applicant for the ticket booking. The flow of execution of this selection process is represented using the numbers.

STATE CHART DIAGRAM

The purpose of state chart diagram is to understand the algorithm involved in performing a method. It is also called as state diagram. A state is represented as a round box, which may contain one or more compartments. An initial state is represented as small dot. A final state is represented as circle surrounding a small dot.



DOCUMENTATION OF STATE CHART DIAGRAM

This state diagram describes the behaviour of the system.

- First state is login where the applicant login to the E-Ticketing system.
- The next state is filling details the applicant are used to fill the form.
- Then applicant used to selecting the flight.

• The applicant appears for book ticket and search details from E-Ticketing DataBase.

ACTIVITY DIAGRAM

Activity diagrams are graphical representations of workflows of stepwise activities and actions with support for choice, iteration and concurrency. In the Unified Modeling Language, activity diagrams can be used to describe the business and operational step-by-step workflows of components in a system. An activity diagram shows the overall flow of control. An activity is shown as an rounded box containing the name of the operation.

DOCUMENTATION OF ACTIVITY DIAGRAM

This activity diagram describes the behaviour of the system.

a. First state is login where the applicant login to the E-Ticketing system.

b. The next state is filling details the applicant are used to fill the form.

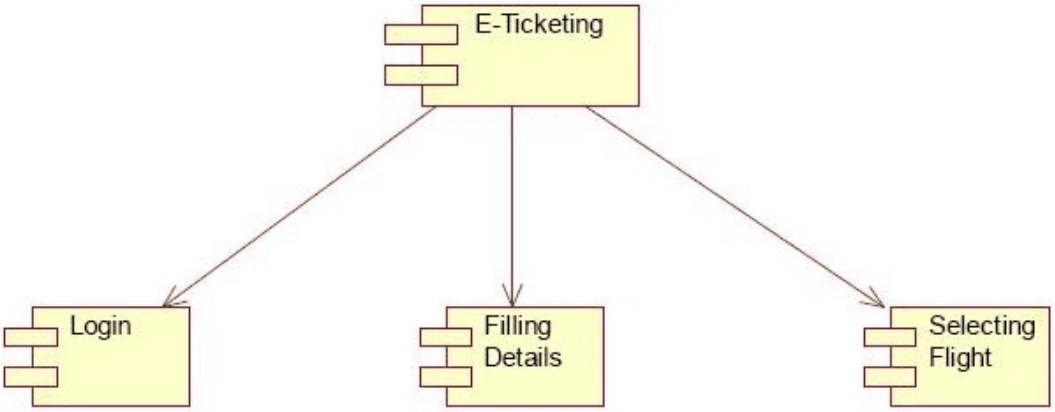
c. Then applicant used to selecting the flight.

d. The applicant appears for book ticket and search details from E-

Ticketing DataBase.

COMPONENT DIAGRAM

The component diagram's main purpose is to show the structural relationships between the components of a system. It is represented by boxed figure. Dependencies are represented by communication association.

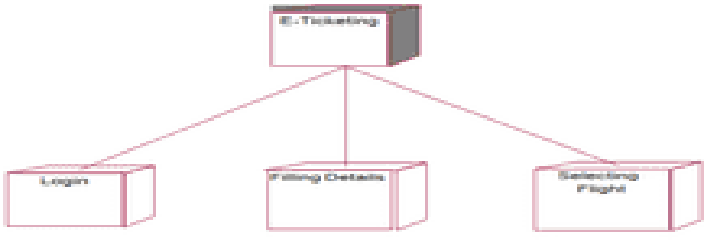


DOCUMENTATION OF COMPONENT DIAGRAM

The main component in this component diagram is E-Ticketing systems. And Login, Filling Details and selecting flights applicants are the components comes under the main component.

DEPLOYMENT DIAGRAM

A deployment diagram in the unified modeling language serves to model the physical deployment of artifacts on deployment targets. Deployment diagrams show "the allocation of artifacts to nodes according to the Deployments defined between them. It is represented by 3-dimentional box. Dependencies are represented by communication association.



DOCUMENTATION OF DEPLOYMENT DIAGRAM

The processor in this deployment diagram is the E-Ticketing system which is the main part and the devices are the login, appear for the filling details and selecting flights applicant which are the some of the main activities performed in the system.

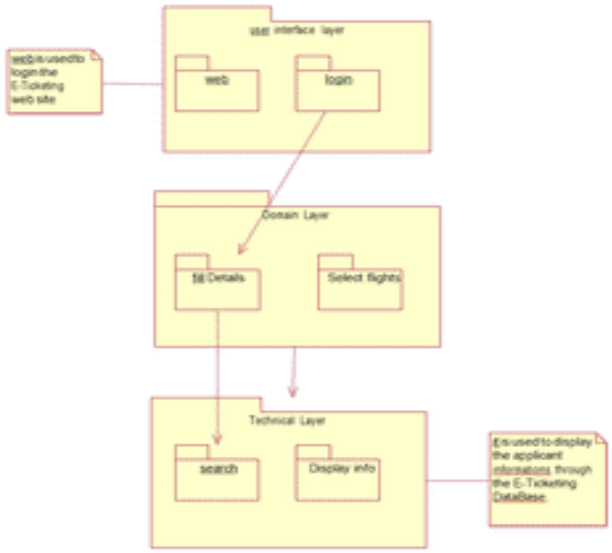
PACKAGE DIAGRAM

A package diagram in unified modeling language that depicts the dependencies between the packages that make up a model. A Package Diagram (PD) shows a grouping of elements in the OO model, and is a Cradle extension to UML. PDs can be used to show groups of classes in Class Diagrams (CDs), groups of components or processes in Component Diagrams (CPDs), or groups of processors in Deployment Diagrams (DPDs).
There are three types of layer. They are

a. User interface layer -

b. Domain layer

c. Technical services layer



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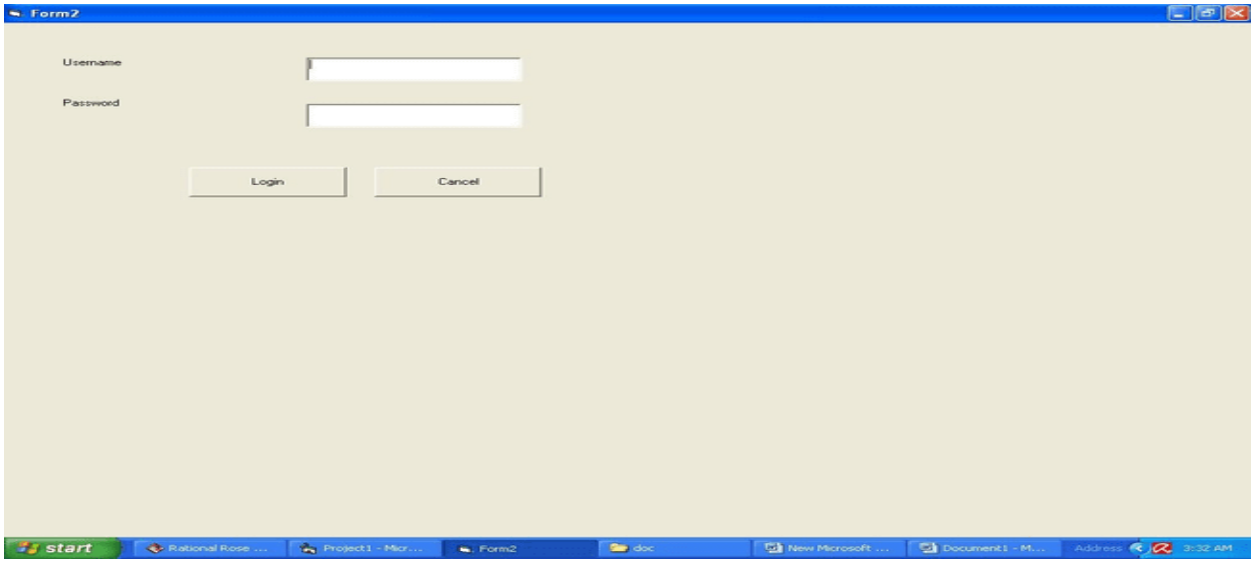
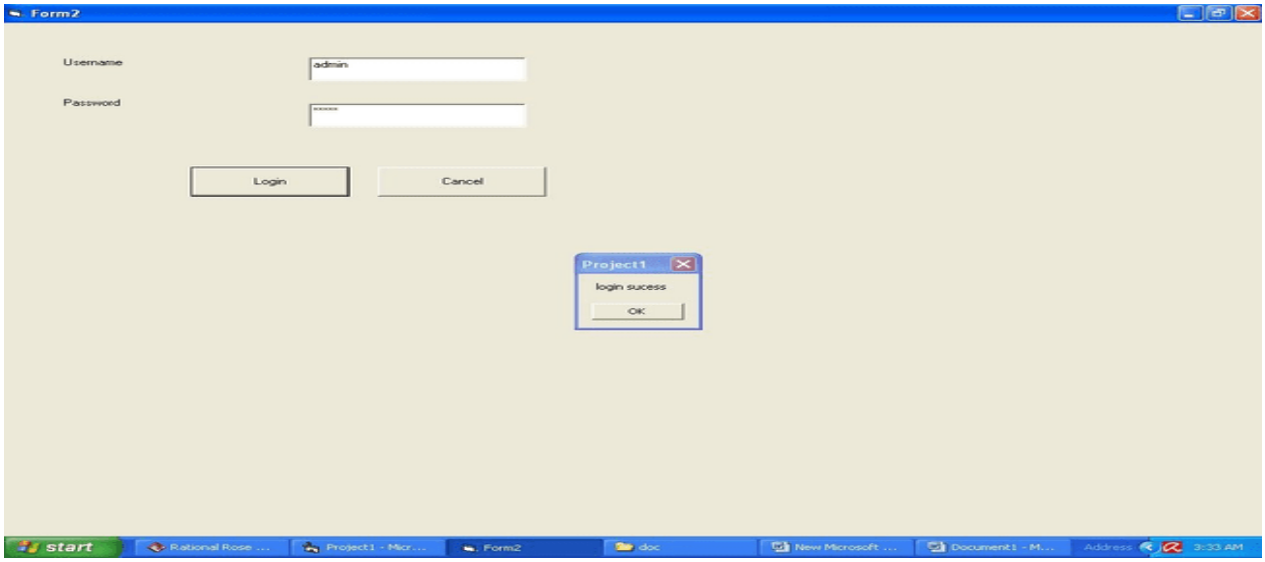
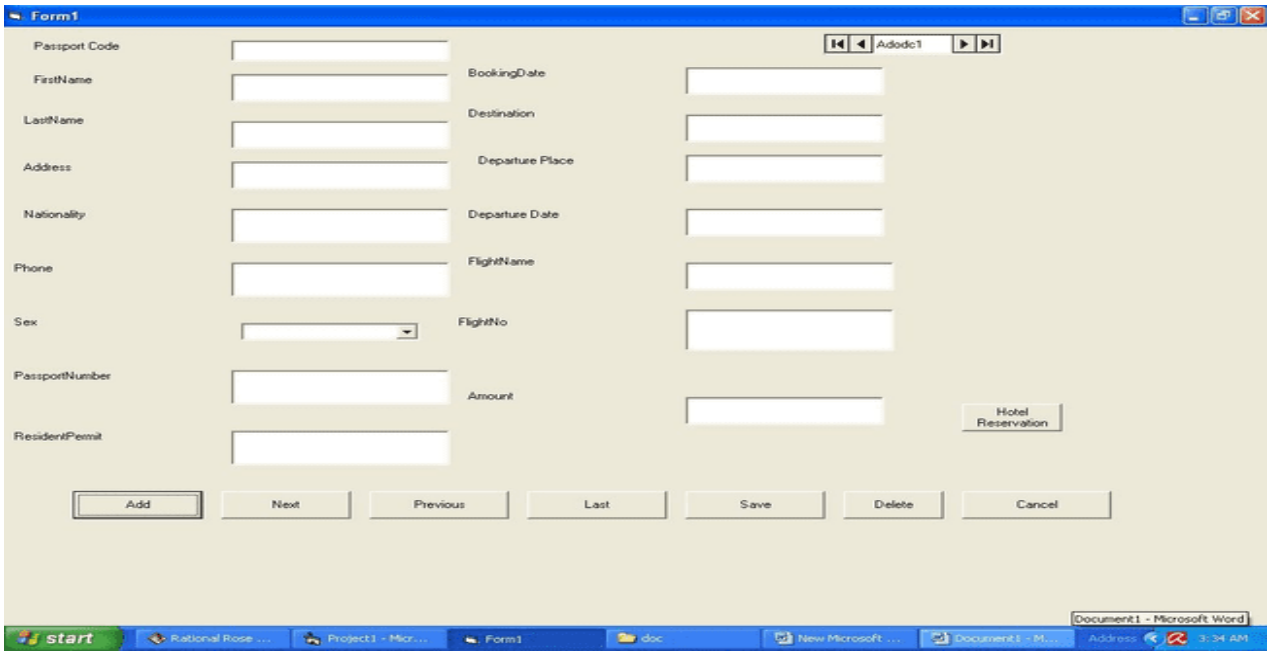

Form2
Username
Password
Login
Cancel
start
Rational Rose ...
Project1 - Micr...
Form2
doc
New Microsoft ...
Document1 - M...
Address
3:32 AM

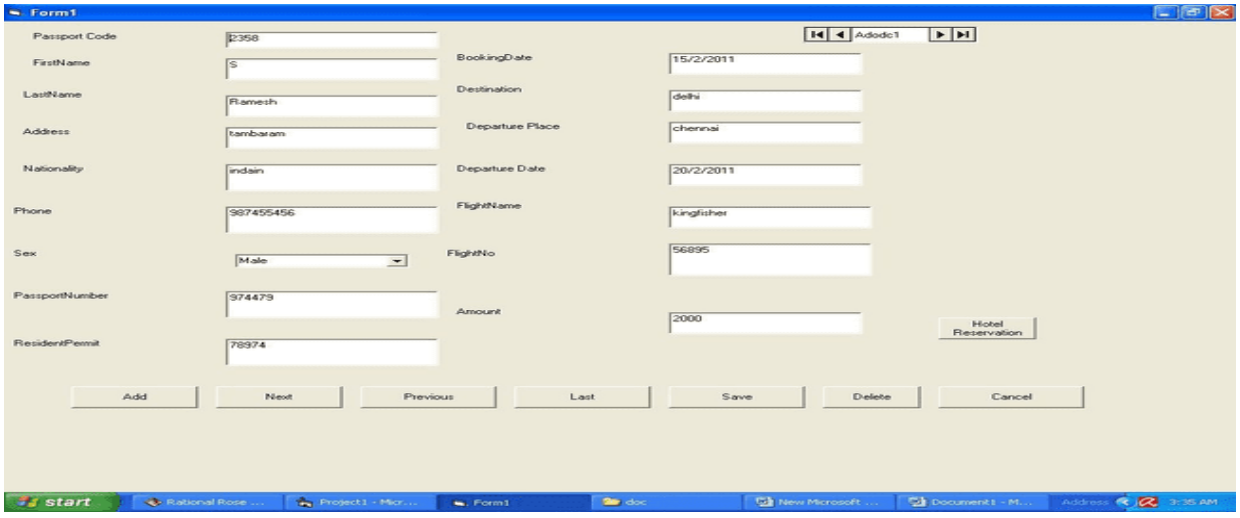
FORM2


Form2
Username
admin
Password
Login
Cancel
Project1
login sucess
OK
start
Rational Rose ...
Project1 - Micr...
Form2
doc
New Microsoft ...
Document1 - M...
Address
3:33 AM

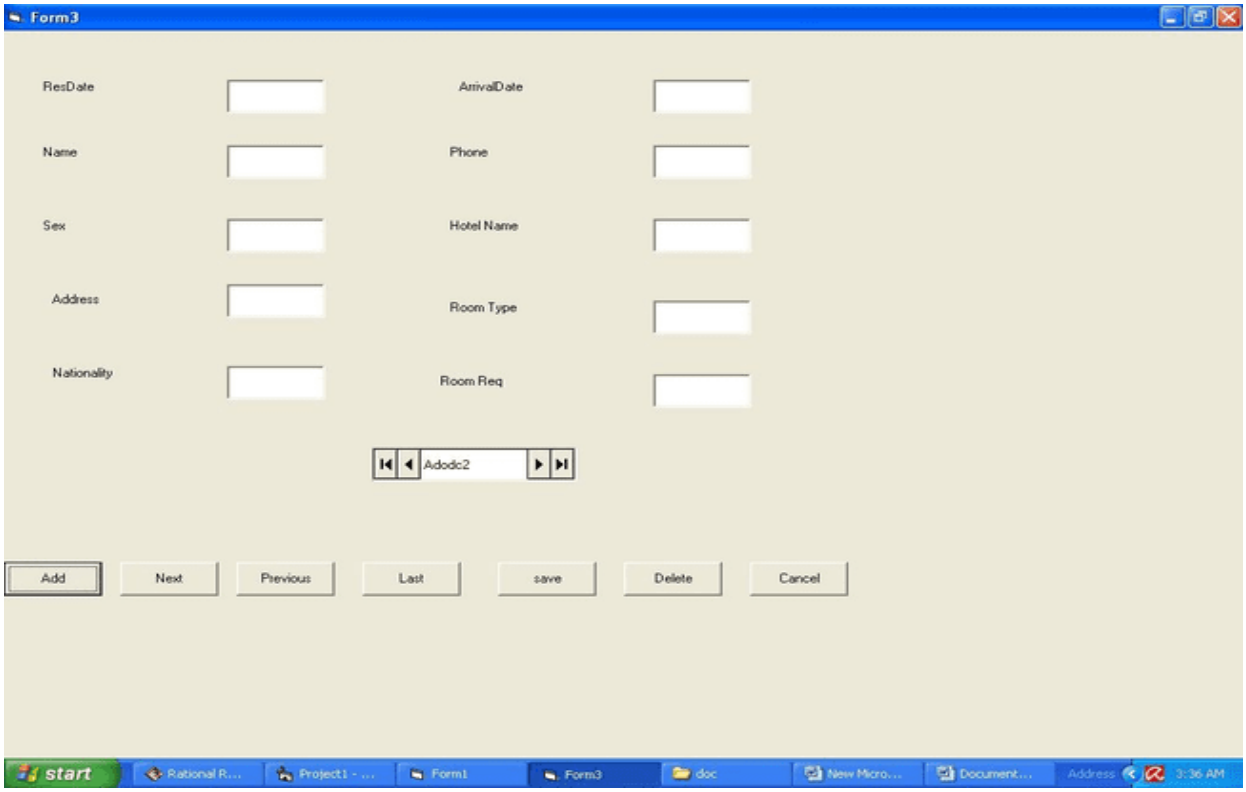
FORM3


Form1
Passport Code
FirstName
LastName
Address
Nationality
Phone
Sex
PassportNumber
ResidentPermit
Adodc1
BookingDate
Destination
Departure Place
Departure Date
FlightName
FlightNo
Amount
Hotel Reservation
Add
Next
Previous
Last
Save
Delete
Cancel

FORM4


Form1
Passport Code
12358
FirstName
S
LastName
Ramesh
Address
tambaram
Nationality
indain
Phone
9874554456
Sex
Male
PassportNumber
974479
ResidentPermit
78974
Adodc1
BookingDate
15/2/2011
Destination
delhi
Departure Place
chennai
Departure Date
20/2/2011
FlightName
kingfisher
FlightNo
56895
Amount
2000
Hotel Reservation
Add
Next
Previous
Last
Save
Delete
Cancel

FORM5



RESULT

Thus the project to develop E-Ticketing system using Rational Rose Software and to implement the project in Visual Basic is done successfully.

EXPERIMENT 7
SOFTWARE PERSONNEL MANAGEMENT SYSTEM

AIM

To develop a project management system using the Rational Rose Software/StarUML from the UML diagram and to implement the software in Visual Basic.

PROJECT ANALYSIS AND PROJECT PLANNING

The personal management system is used to manage our personnel things such as maintaining databases in offices etc. this project is easy for the CEO to handle the details. This is personally used for CEO.

PROBLEM STATEMENT

The CEO must enter the name and password to login the form and select the particular employee to view the details about that employee and maintaining the employee details personally. This process of employee management system are described sequentially through following steps,

- The CEO login to the employee management system.
- He/she search for the list of employees.
- Then select the particular employee.
- Then view the details of that employee.
- After displaying the employee details then logout.

INTRODUCTION

Purpose

The main purpose of creating the document about the software is to know about the list of requirements that is to be developed.

Scope:

It specifies the requirements to develop a processing software part that complete the set of requirements. In this specification, we define about the system requirements that are apart from the functionality of system

Technology to Be Used

Microsoft Visual Basic 6.0

ToolsBeUsed Rational Rose tool/StarUML (for developing UML Patterns)

Overview SRS includes two sections overall description and specific requirements - Overall description will describe major role of the system components and inter-connections. Specific requirements will describe roles & functions of the actors.

OVERALL DESCRIPTION

Product Perspective

The SPMP acts as an interface between the user and the database. This tries to handle the personnel databases easily.

Functionality:

Many members of the process live to check for the occurrence and transaction, we all have to carry over at sometime.

Usability

The User interface makes the employee Management System to be efficient.

Performance

It is the capability about which it can perform function for many users at the same time for the efficiency (i.e.) without any error occurrences.

Reliability

The system should be able to the user through the day to day transactions.

Assumptions and dependencies

The user must have the basic knowledge of computer and English language. The user must correctly login the database

UML DIAGRAMS:

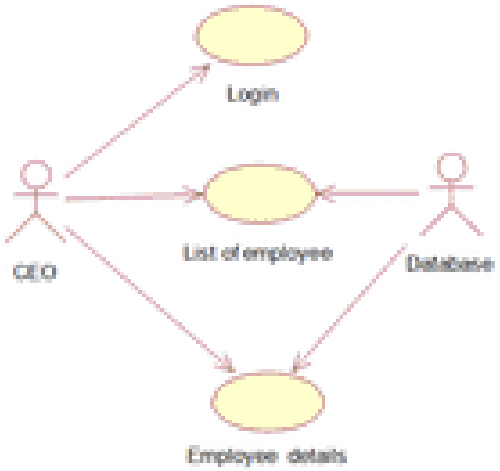
The following UML diagrams describe the process involved in the online recruitment system

- Use case diagram
- Class diagram
- Sequence diagram
- Collaboration diagram
- State chart diagram
- Activity diagram
- Component diagram
- Deployment diagram
- Package diagram

The project can be explained diagrammatically using the following diagrams.

USE CASE DIAGRAM

The use cases are a set of scenarios to guide together by a common user goal. A scenario is the sequence of steps describing an interaction between a user and their system.



List of employeeLoginCEOEmployee detailsDatabase

DOCUMENTATION OF USE CASE DIAGRAM

The use case diagram in the employee management system illustrates the sequence of sequencing and describing an interaction between a CEO and a system.

Login:

This use case gives as entry to the CEO and the database.

List of employee:

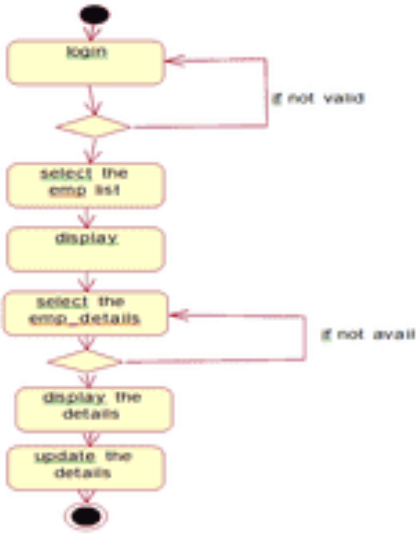
This will create the situation for the CEO to select particular employee from the available list.

Employee details:

The CEO can able to view the details of the employee using this use case.

ACTIVITY DIAGRAM

The Activity diagram describes the sequencing of activity will support for both conditional and parallel. An activity is a variant of state diagram.

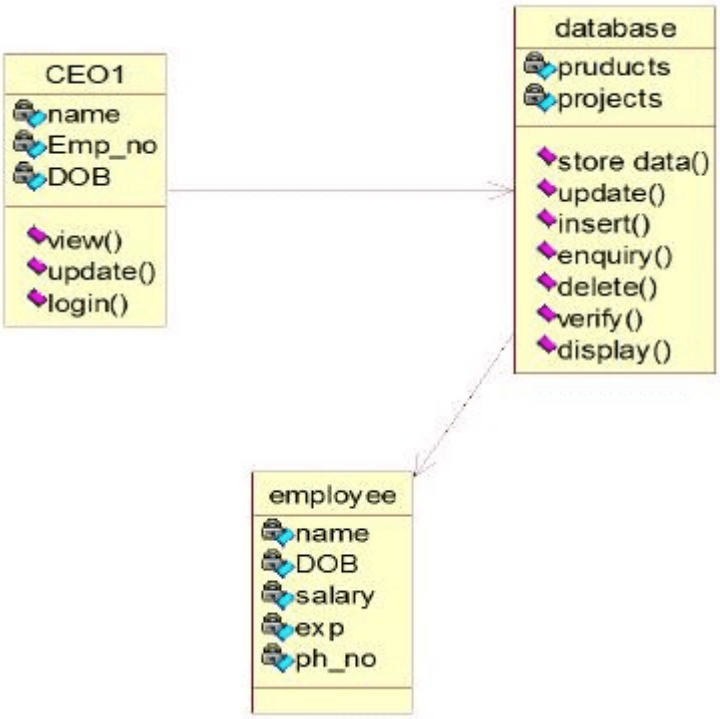


DOCUMENTATION OF ACTIVITY DIAGRAM

The CEO Logins to the employee management system. He/she selects a particular employee from the list of available employee. The CEO can view the details of the particular employee by clicking the respective button. After viewing the details he is logout from the system.

CLASS DIAGRAM

The Class diagram the types of object in the system a various kinds of static relation ships that exists among them.



DOCUMENTATION OF CLASS DIAGRAM

The Classes used in this project are

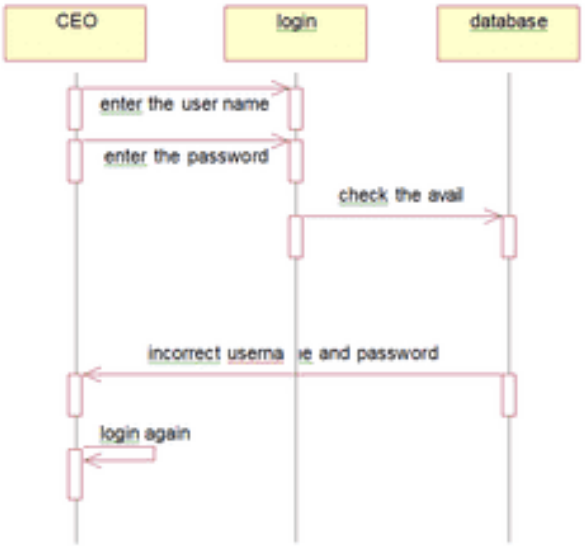
CEO: The CEO has to login the form by specifying the name and password of him.

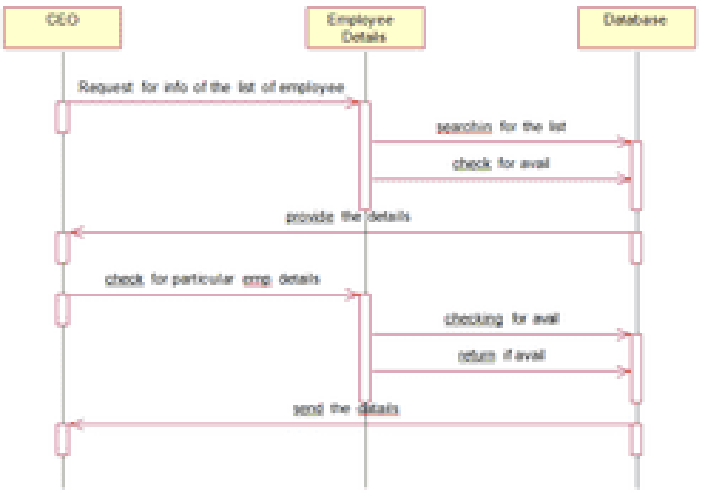
Database: The database checks whether the CEO has given the name and password accordingly if not the error message will be displayed.

Available employees: The database is connects to the list of available employees and the CEO if wants then select the employee from it.

SEQUENCE DIAGRAM:

It is a kind of interaction diagram in which an object is shown as a box at the top of the dash vertical line. This vertical line is called object life time. The life time represent the object's life during interaction object deletion is shown with a large x.



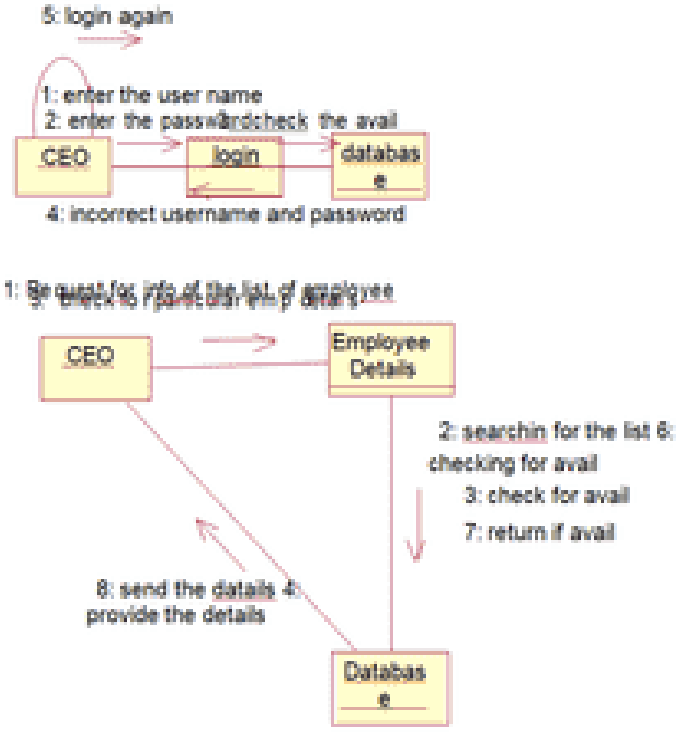


DOCUMENTATION OF SEQUENCE DIAGRAM

The CEO must enter his name and password to login the employee management system. The verification process is undergone by the database .If the details are correct he can enter to the system otherwise error is displayed. After login the details of the particular employee is viewed by the CEO. Finally he is logged out from the system.

COLLABORATION DIAGRAM

In a collaboration diagram object are shown as icons as on. A collaboration diagram arrow indicates the message send within the given use case. The sequence is indicated by numbering the messages.

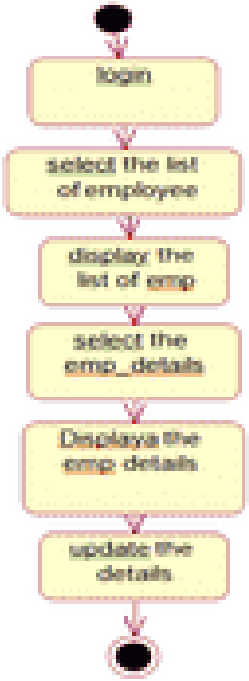


DOCUMENTATION OF COLLABORATION DIAGRAM

It is same as the sequence diagram that involves the object of the project with the only differences that we give the sequence no to the each process
The CEO must enter his name and password to login the employee management system. The verification process is undergone by the database .If the details are correct he can enter to the system otherwise error is displayed. After login the detail of the particular employee is viewed by the CEO. Finally he is logged out from the system.

STATE CHART DIAGRAM

It is a technique to describe the behavior of the system.It determines all the possible states as that of particular object gets into the object oriented technique.State diagrams are drawn for a single class so status to the lifetime behavior of a single objector.



DOCUMENTATION OF THE STATE CHART DIAGRAM:

The various states are the login, lists of employees, selects a employee, display the information about the employee, logout.
The state chart diagram describes the behavior of the system. The main purpose of the system is to maintain an employee details personally. For that the CEO Login to the employee management system. He/she selects a particular employee from the list of available employee. The CEO has to view the details of the particular employee by clicking the respective button. The CEO views the details then finally he is logout from the system.

PACKAGE DIAGRAM

A package is represented as folder among shown as large rectangle with a tab attached its upper left corner. A package may contain both subordinated package both ordinary model can be organized into packages. There are three types of layers,

a. User interface layer

b. Domain layer

c. Technical layer

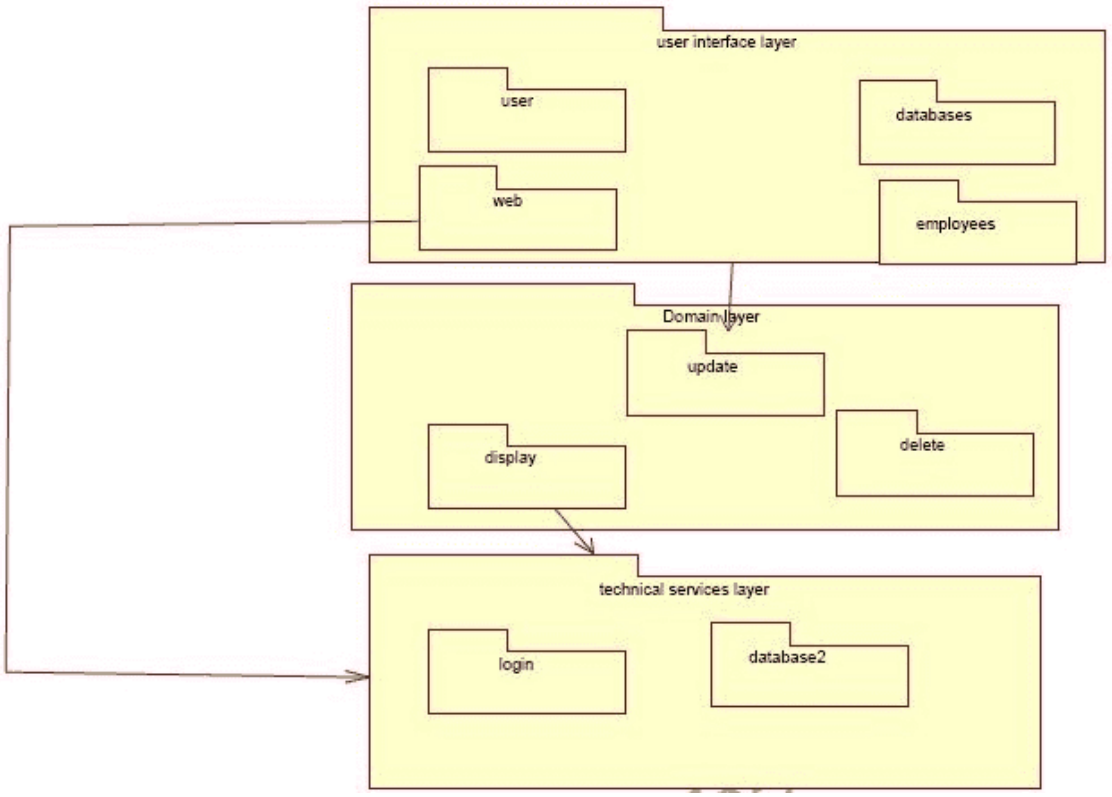
DOCUMENTATION OF PACKAGE DIAGRAM

The three layers in the online recruitment system are

The User interface layer - consists of the web and login. This layer describes how the applicant logins to the website and apply for the job.

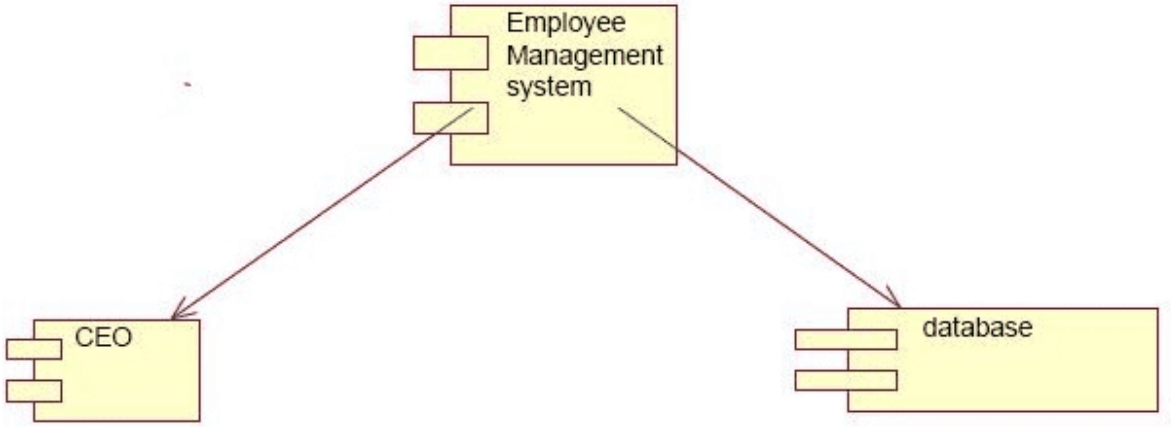
The Domain layer – shows the activities that are performed in the online recruitment system. The activities are register, attend test and select talented applicant.

The Technical service layer - the applicant details, verification details and the selected applicant details are stored in the database.



COMPONENT DIAGRAM

Components are a slightly fuzzy concept in the UML, because both classes and components can be used to model the same thing. A component represents a modular part of a system that encapsulates its contents and whose manifestation is replaceable within its environment. A component defines its behavior in terms of provided and required interfaces. As such, a component serves as a type, whose conformance is defined by these provided and required interfaces.

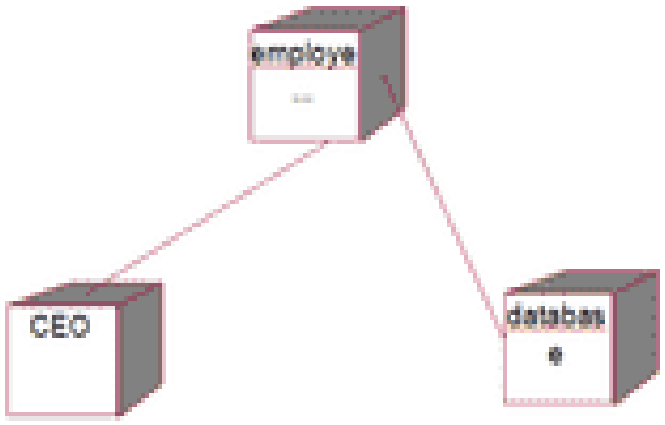


DOCUMENTATION OF COMPONENT DIAGRAM

In this diagram there link between the actors is present in the SPMS that could be shown in diagrammatically way in the component diagram. Each every actor is having a directional link to process further details present in the system.

DEPLOYMENT DIAGRAM

A deployment diagram shows the assignment of concrete software artifacts (such as executable files) to computational nodes (something with processing services). It shows the deployment of software elements to the physical architecture and the communication (usually on a network) between physical elements.
A deployment diagram usually shows an example set of instances (rather than classes



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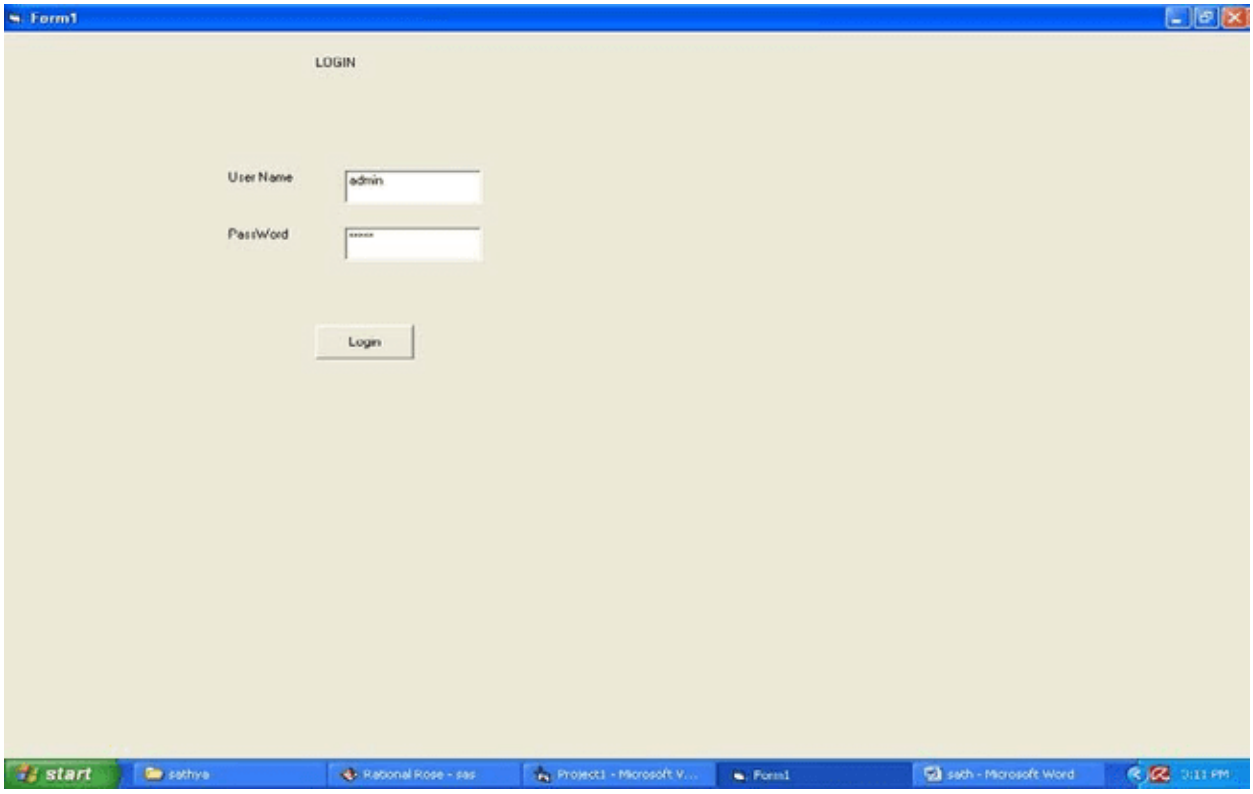

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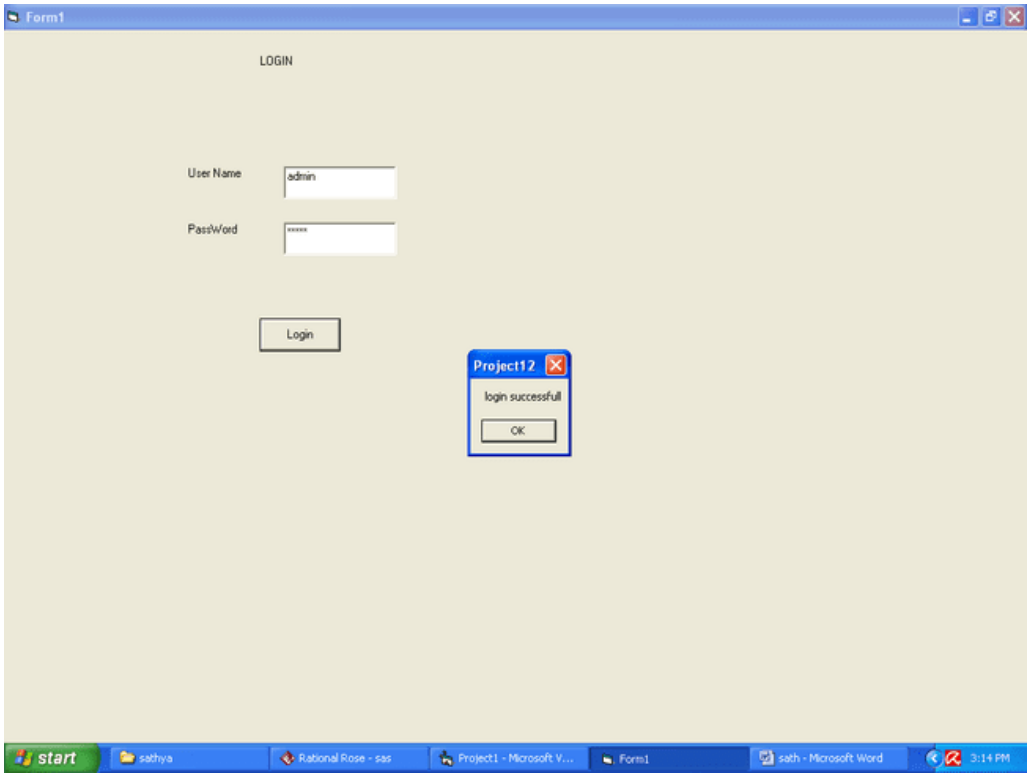
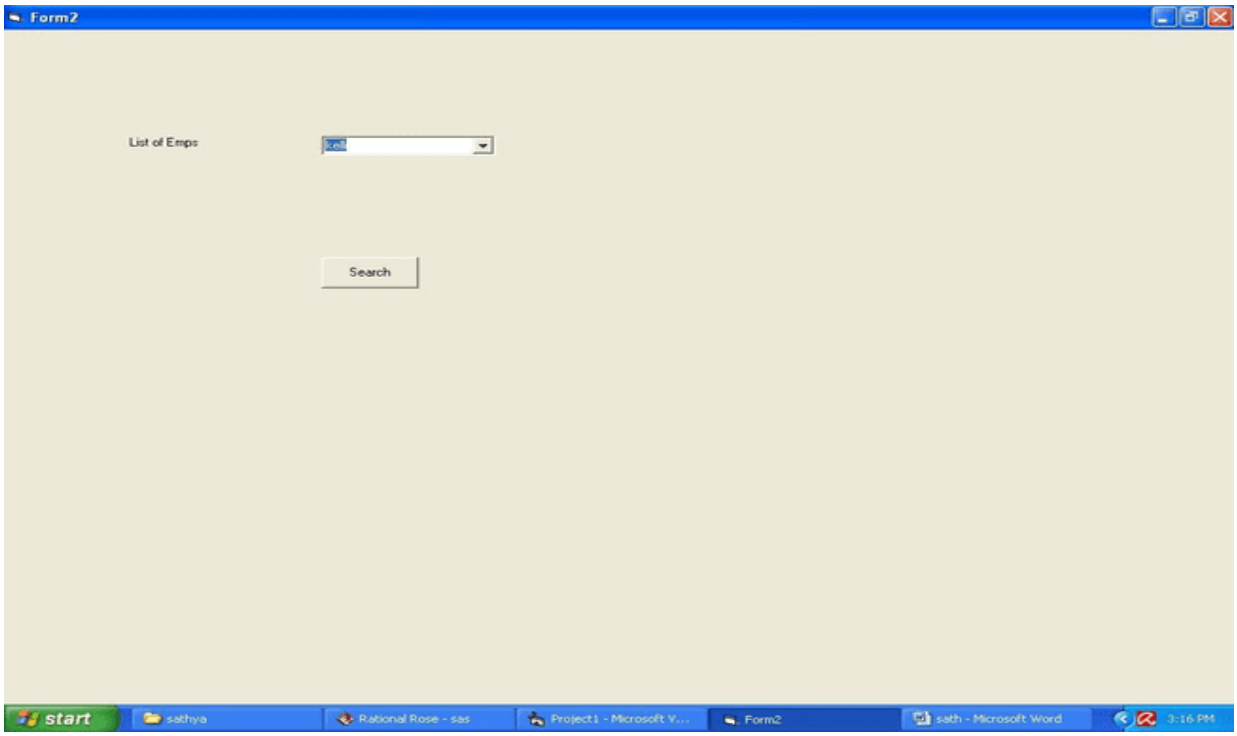


FORM 3



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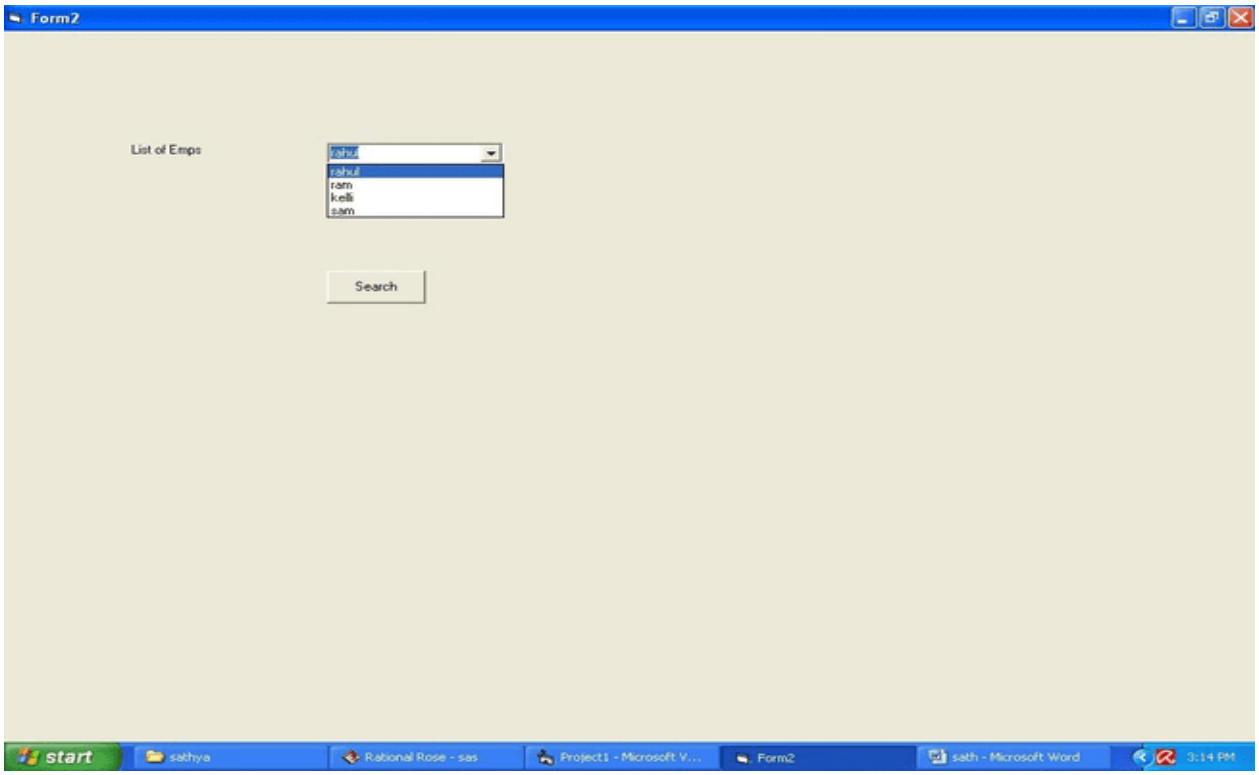

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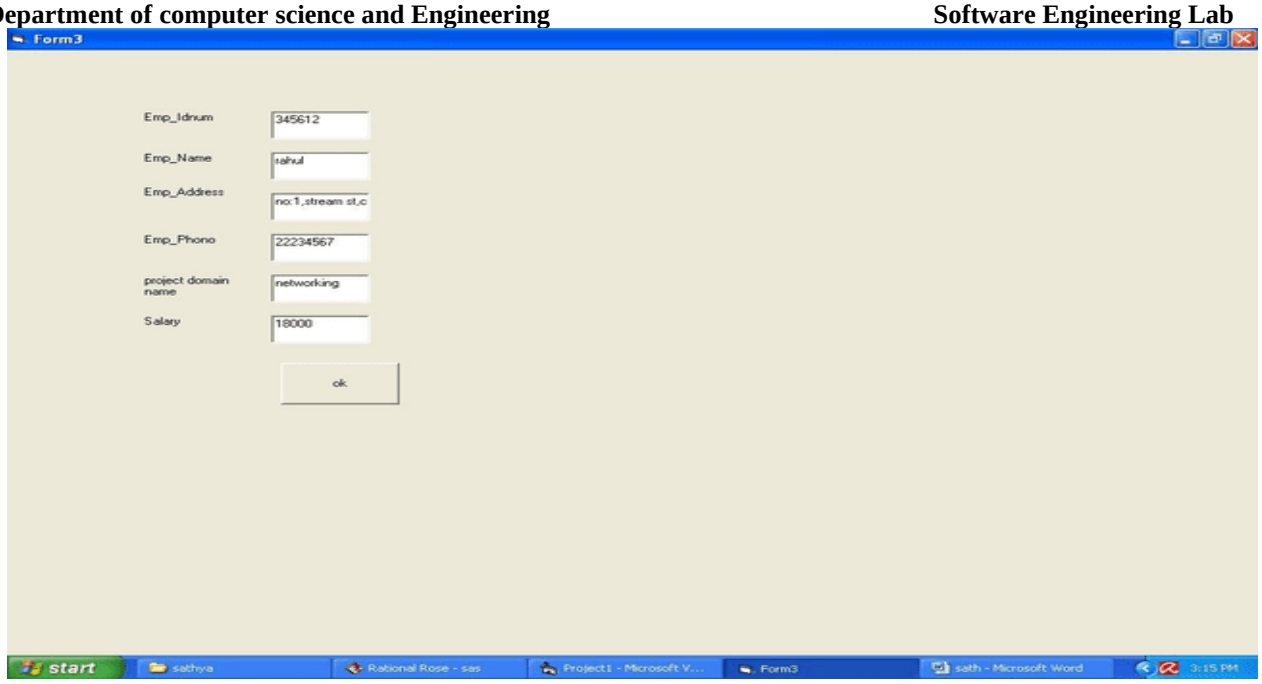
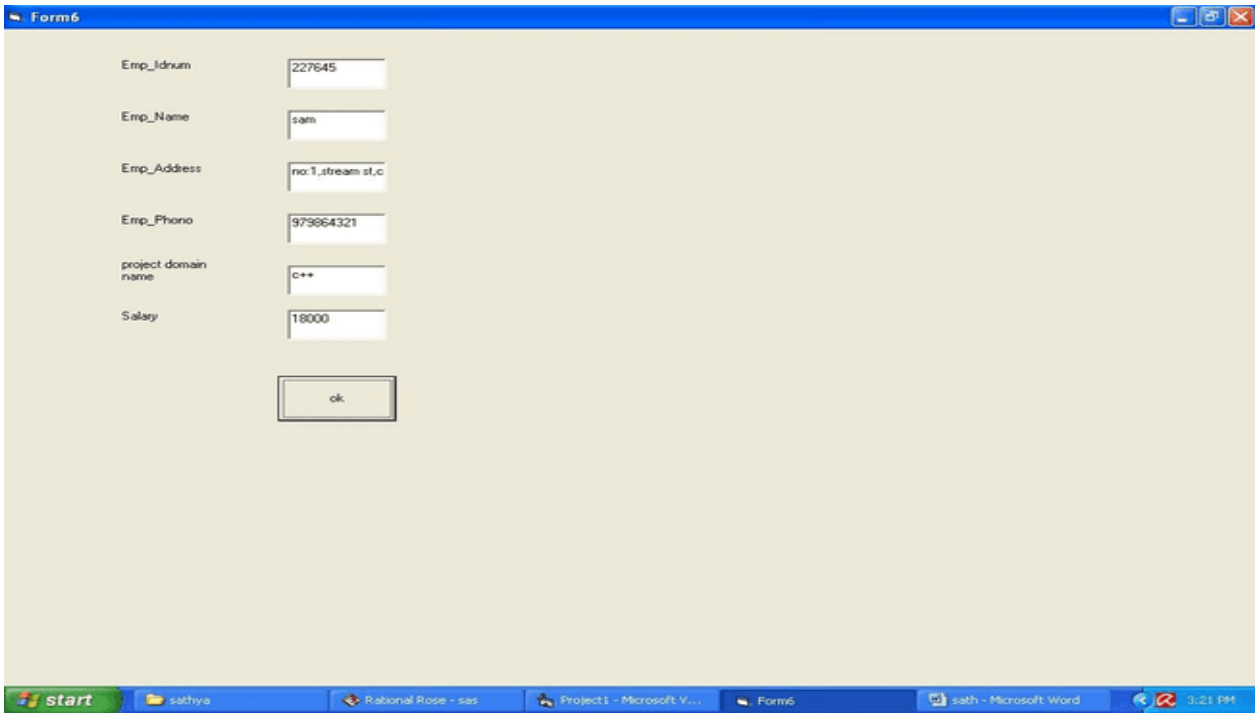


FORM 6



RESULT

Thus the project is to develop an EMPLOYEE MANAGEMENT SYSTEM using the Rational Rose Software from the UML diagram and to implement the employee details and successfully executed using visual basic and rational rose.

EXPERIMENT 8
CREDIT CARD PROCESSING

AIM

To develop a project credit card system using the Rational Rose /StarUML from the UML diagram and to implement the software in Visual Basic

PROBLEM ANALYSIS AND PROJECT PLANNING

The Credit Card Processing System which is use to purchasing an item from any shop mall, and it is used to maintain the limitation of credit card balance and current transaction process could be update via credit card machine. This project mainly used for large amount of item can be easy to buy from anywhere and required transaction process should be maintained them.

PROBLEM STATEMENT

The customer should select the item to be purchase from the shop by using credit card payment then the vendor should give a bill for the selected item .The customer should give his card to swap and request for the kind of amount transaction. After processing the transaction, the CREDIT CARD MACHINE should give the balance print statement or receipt.

• Customer should select the item from the shop.

• Vendor makes the bill for the selected item.

• Customer gives the credit card to the vendor to swap the card.

• They required amount transaction is done by the card reader.

• Vendor will issue the balance statement to the customer.

• Customers put the signature in the receipt and return to the vendor.

INTRODUCTION

PURPOSE

The customer should purchase an item from the shop by using credit card payment then the vendor should give response to the customers view while a purchasing item from the shop and required processing of transaction should be done by the vendor by using a credit card reader.

In the specification use define about the system requirements that are part from the functionality of the system. It tells the usability, reliability defined in the use case specification.

TECHNOLOGY TO BE USED

Microsoft Visual Basic 6.0

TOOLS TO BE USED Rational Rose tool (for developing UML Patterns)

OVERVIEW

SRS includes two sections overall description and specific requirements - Overall description will describe major role of the system components and inter-connections. Specific requirements will describe roles & functions of the actors

.

2. OVERALL DESCRIPTION

PRODUCT PERSPECTIVE

The CCP acts as an interface between the 'Customer' and the 'Card Reader'. This system tries to make the transaction as simple as possible and at the same time not risking the security of data transaction process. This minimizes the time duration in which the user receives the item.

FUNCTIONALITY

Many members of the process lives to checking for the occurrence and transaction we all have to carry over sometimes user interface to make the transaction to be efficient.

USABILITY

The User interface makes the Credit Card Processing System to be efficient.

PERFORMANCE

It is of the capacities about which it can perform function for many users at the same times efficiently that are without any error occurrence.

RELIABILITY

The system should be able to process the user for their corresponding request.

ASSUMPTION AND DEPENDENCIES

The Vendor and Customer must have basic knowledge of computers and English Language. The vendor may be required to delivered the item purchased by the customer.

UML DIAGRAMS

The following UML diagrams describe the process involved in the online recruitment system

a. Use case diagram

b. Class diagram

c. Sequence diagram

d. Collaboration diagram

e. State chart diagram

f. Activity diagram

g. Component diagram

h. Deployment diagram

i. Package diagram

USE CASE DIAGRAM

The use cases are a set of scenarios to guide together by a common user goal. A scenario is the sequence of steps describing an interaction between a user and their system.

DOCUMENTATION OF USE CASE DIAGRAM

The actors in this use case diagram are customer, vendor and card reader. The use cases are the activities performed by actors.

The actors in this use case diagram are

• **Customer** – used to purchase some item from the shop by using credit card payment.

• **Vendor** – used to issue a bill for selected item and verify the card holder signature and then delivery the item.

• **Card reader** – its make the amount transaction for required credit card and print the balance statement.

The use cases in this use case diagram are

Purchase item – customer enter the shop to purchase some item by using credit card payment.

• **Bill issue** – vendor will make a bill for the selected item.

• **Swap the card** – vendor will swap the card.

• **Make transaction–** card reader will processes the amount transaction.

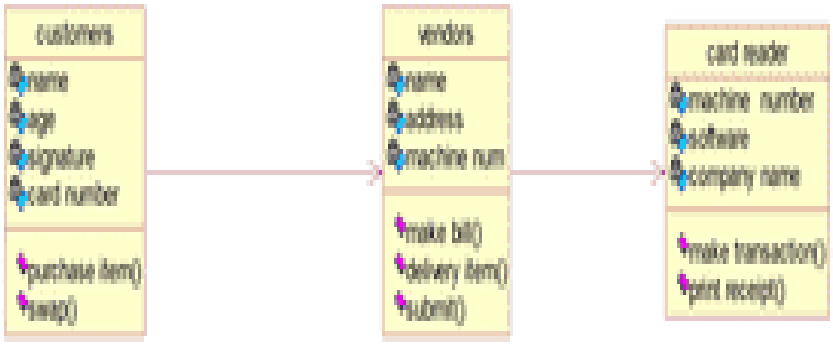
• **Print the statement** – after the transaction, balance amount should be printed.

• **Signature** – customer should put the signature and give it to vendor.

• **Deliver the item**–vendor issued to deliver a item.

CLASS DIAGRAM

The Class diagram the types of object in the system an the various kinds of static relation ships that exists among them.



DOCUMENTATION OF CLASS DIAGRAM

The Classes used in this project are:

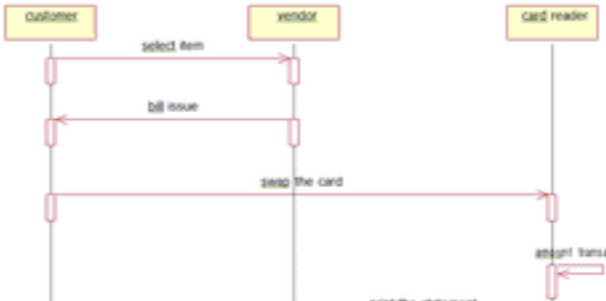
• **Customer** – is the class name. Its attributes are name, age, signature, and card number. The operations performed in the customer class are purchase item and swap the credit card.

• **Vendor** – is the class name. Its attributes are name, address, and phone number. The operations performed are make bill and then delivered item purchased by the customer.

• **Card Reader** – is the class name. Its attributes are machine number, software and company. The operations performed are make the transaction and print balance statement.

SEQUENCE DIAGRAM

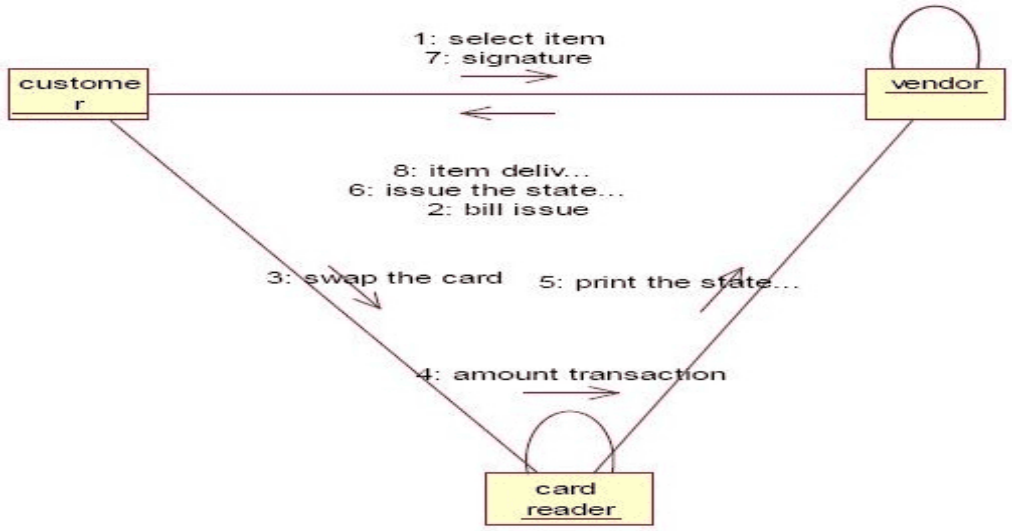
It is a kind of interaction diagram in which an object is shown as a box at the top of the dash vertical line. This vertical line is called object life time. The life time represent the object's life during interaction object deletion is shown with a large x.



DOCUMENTATION OF SEQUENCE DIAGRAM

The customer wants to purchase some item from the shop; Vendor makes a bill for the selected item. The Customer gives the credit card to the vendor to the swap the card. The further transaction is proceeding for if the credit card is validated. Vendor will issue the required balance statement to the customer. Customer put the signature in the receipt and returns the one copy of statement to the vendor.

COLLABORATION DIAGRAM



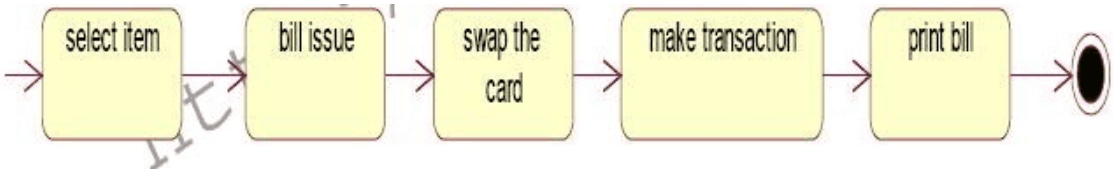
In a collaboration diagram object are shown as icons as on. A collaboration diagram arrow indicates the message send within the given use case. The sequence is indicated by numbering the messages.

DOCUMENTAION OF COLLABORATION DIAGRAM

In this diagram there is sequence of ordered relationship should performing in the CCP, then Customer will performed a selecting item, putting signature, and deliver the item, Vendor should perform the swap the card, issue the statement and Card reader should perform amount transaction and print the balance statement.

STATECHART DIAGRAM

It is a familiar technique to describe the behavior of the system. Events involve in the state chart diagram a purchase, make transaction, delivery the item.



DOCUMENTAION OF STATECHART DIAGRAM

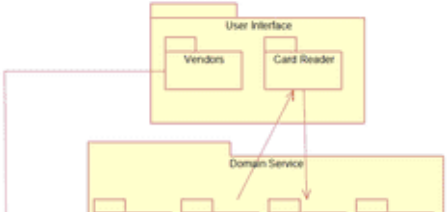
The Entire process of CCP could be shown in the start state to goal state behavior should be performed by the Customer, Vendor and Card reader in this credit card processing system.

PACKAGE DIAGRAM

A package is represented as folder among shown as large rectangle with a tab attached its upper left corner. A package may contain both subordinated package both ordinary model can be organized into packages.

There are three types of layers includes in package diagram:

- User interface layer
- Domain layer
- Technical layer



DOCUMENTATION OF PACKAGE DIAGRAM

The three layers in the credit card processing system are

The User interface layer - consists of the Card reader and Vendor. This layer describes how the customer is used to purchasing and makes it transaction process.

• **The Domain layer** – shows the activities that are performed in the Credit card processing system. The activities are purchase the item, make transaction and delivered item.

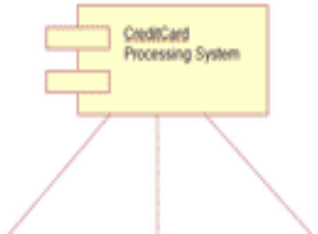
• **The Technical service layer –** To verify a required Customer Signature.

COMPONENT DIAGRAM

The component diagram is represented by figure dependency and it is a graph of design of figure dependency**.**

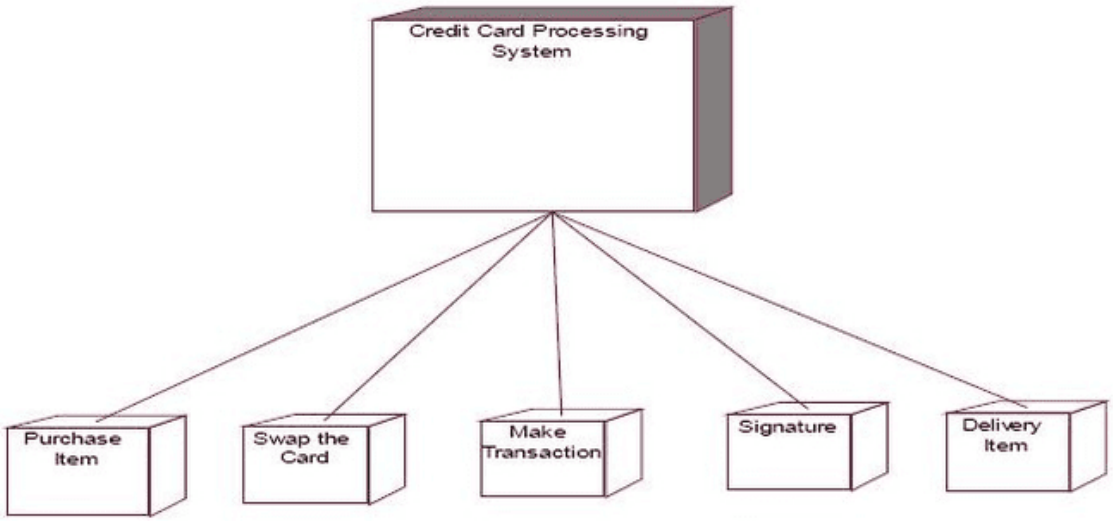
DOCUMENTATION OF COMPONENT DIAGRAM

In this diagram there link between the actor is present in the CCP, that could be shown in diagrammatically way in the component diagram. Each every actor is having a bidirectional link to process further details present in the system.



DEPLOYMENT DIAGRAM

A deployment diagram in the unified modeling language serves to model the physical deployment of artifacts on deployment targets. Deployment diagrams show "the allocation of artifacts to nodes according to the Deployments defined between them. It is represented by 3-dimentional box. Dependencies are represented by communication association.



DOCUMENTATION OF DEPLOYMENT DIAGRAM

The processor in this deployment diagram is the credit card processing system which is the main part and the devices are the purchase item, swap the card, make transaction, verify signature, delivery item which are the some of the main activities performed in the system.

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MS:
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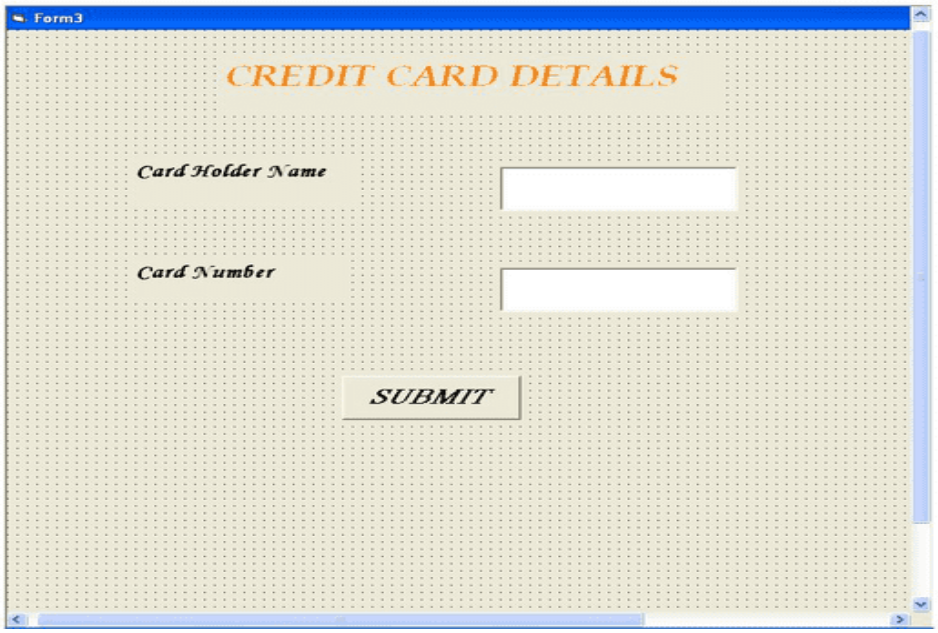
M 1

FORM 2

FORM 3



FORM 4

RESULT

Thus the project to develop credit card processing system using Rational Rose Software and to implement the project in Visual Basic is done successfully.

EXPERIMENT 9
E-BOOK MANAGEMENT SYSTEM

AIM

To develop a project E-Book Management system using Rational Rose Software and to implement the software in Java.

PROBLEM ANALYSIS AND PROJECT PLANNING

Ebook Management System gives an idea about how books are maintained in the particular websites. The books that are to be purchased, the books that are to be sold are maintained here. . Further some additional details of the current books that is available in the store are also given. Ebook Management System in this project is done in an authorized way. The password and user id has been set here.

PROBLEM STATEMENT

The website has to be maintained properly since the whole ebook purchase process can be improved. Ebook management in this project gives the idea about how ebooks are maintained in a particular concern. The book details which includes the number of books available ,no of pages and price. Ebook management system the Ebook management in this project is understood by going through the modules that is being involved.

1. INTRODUCTION

Ebook managemnt gives an idea about how ebooks are maintained in the particular concern. The ebooks that are to be purchased, the ebooks that are to be sold are maintained here. Further some additional details of the current ebook list that is available in the website is also given. Ebook management in this project is done in an authorized way.

2. OBJECTIVE

The main objective of this project is to overcome the work load and time consumption which makes the maintenance of the ebook in an organization as a tedious process. This project provides complete information about the details of the ebook to the customers. This project identifies the amount of book available, . Separate modules have been created for purchasing, viewing book details, and delivery details.

3. OVERVIEW

The overview of the project is to Storing of information about the ebooks and updating the ebook list for each organization which is using this system, keeps track of all the information about the ebooks purchased that are made by the customers, having registration feature of adding up new customers to the organization are provided in this system.

4. GLOSSARY

TERMS	DESCRIPTION
CUSTOMER	Customer will purchase the books from the Website .
DATABASE	Database is used to store the books and details of books.
ADMIN	Handles all the support features and the technical works in the application.
SOFTWARE REQUIREMENT SPECIFICATION	This software specification documents full set of features and function for ebook management system that is performed in application.

5. PURPOSE

The purpose of ebook management system is to store and sell the books in a website effectively.

6. SCOPE

The scope of this ebook management is to maintain the book details after the purchase and list of reaming books available in the same book type.

7. FUNCTIONALITY

The main functionality of ebook maintenance system is to store and sell ebooks for a website.

8. USABILITY

User interface makes the ebook management system to be efficient. That is the system will help the admin to maintain stock details easily and helps the store to handle the stocks effectively. The system should be user friendly.

9. PERFORMANCE

It describes the capability of the system to perform the ebook management system of the store without any error and performing it efficiently.

10. RELIABILITY

The ebook management system should be able to serve the customer with correct information and day-to-day update of ebook list details.

11. FUNCTIONAL REQUIREMENTS

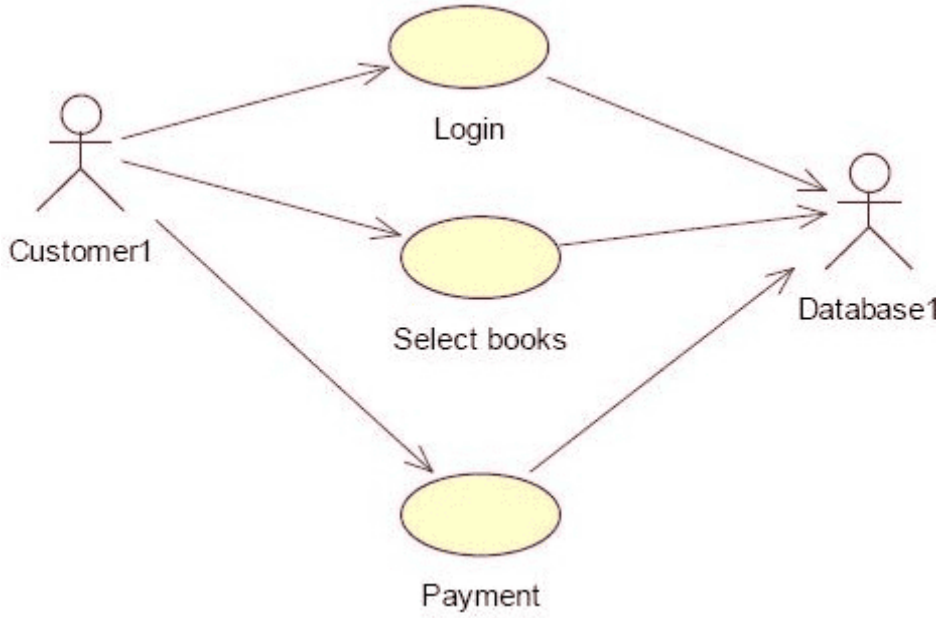
Functional requirements are those refer to the functionality of the system. That is the services that are provided to the webstie which maintains ebooks in online database.

UML DIAGRAMS

The following UML diagrams describe the process involved in the stock maintenance system
Use case diagram
Class diagram
Sequence diagram
Collaboration
diagram State chart
diagram Activity
diagram
Component
diagram
Deployment
diagram Package
diagram

USE CASE DIAGRAM

A use case is a methodology used in system analysis to identify, clarify, and organize system requirements. The use case is made up of a set of possible sequences of interactions between systems and users in a particular environment and related to a particular goal. It is represented using ellipse.
Actor is any external entity that makes use of the system being modelled. It is represented using stick figure.



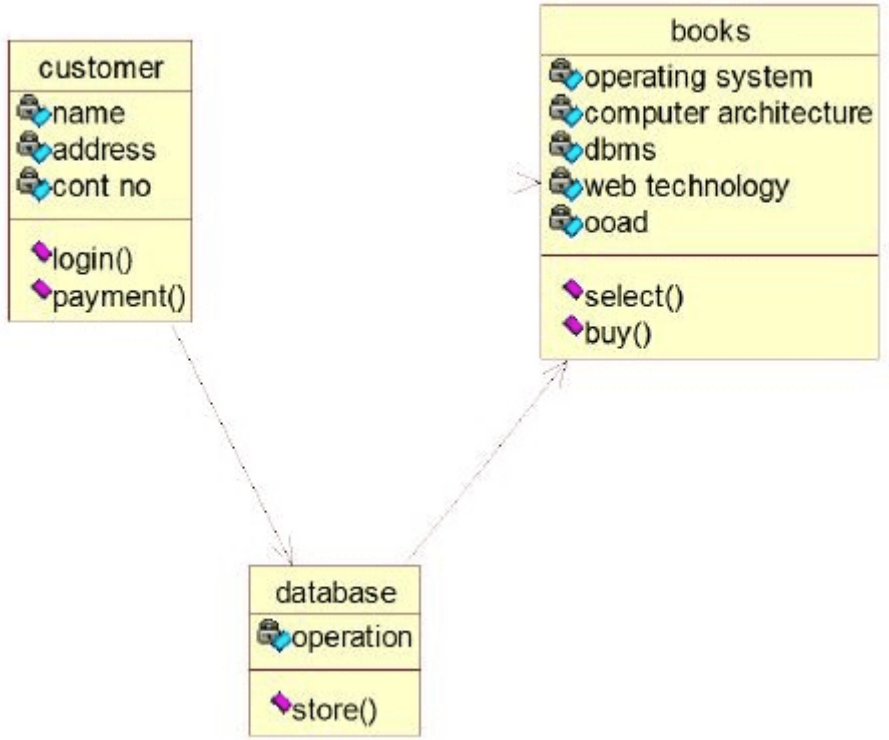
DOCUMENTATION OF USE CASE DIAGRAM

The actors in this use case diagram are Supplier, Store Keeper and Database. The usecases are the activities performed by actors.

- The website will give the books available.
- Customer will login and check the list of ebooks in the database.
- The database will be updated according to the purchase done and it will be up to date.The use cases in the use case diagram are Quotation & Purchase, login, stock, purchase.
- Select books will gives us the status of the purchasing order details
- Login will gives us the entry for the customer of this project.
- Database will gives us the details about the total ebook available.
- Purchase will gives us the details about the details and the history of ebooks purchased.

CLASS DIAGRAM

A class diagram in the unified modeling language (UML) is a type of static structure diagram that describes the structure of a system by showing the system's classes, their attributes, and the relationships between the classes. It is represented using a rectangle with three compartments. Top compartment have the class name, middle compartment the attributes and the bottom compartment with operations.



DOCUMENTATION OF CLASS DIAGRAM

This class diagram has three classes applicant, recruiter and database.

• **Customer** – is the class name. Its attributes are name, address and cont no. The operations performed in the Supplier class are get order, supply goods and get money.

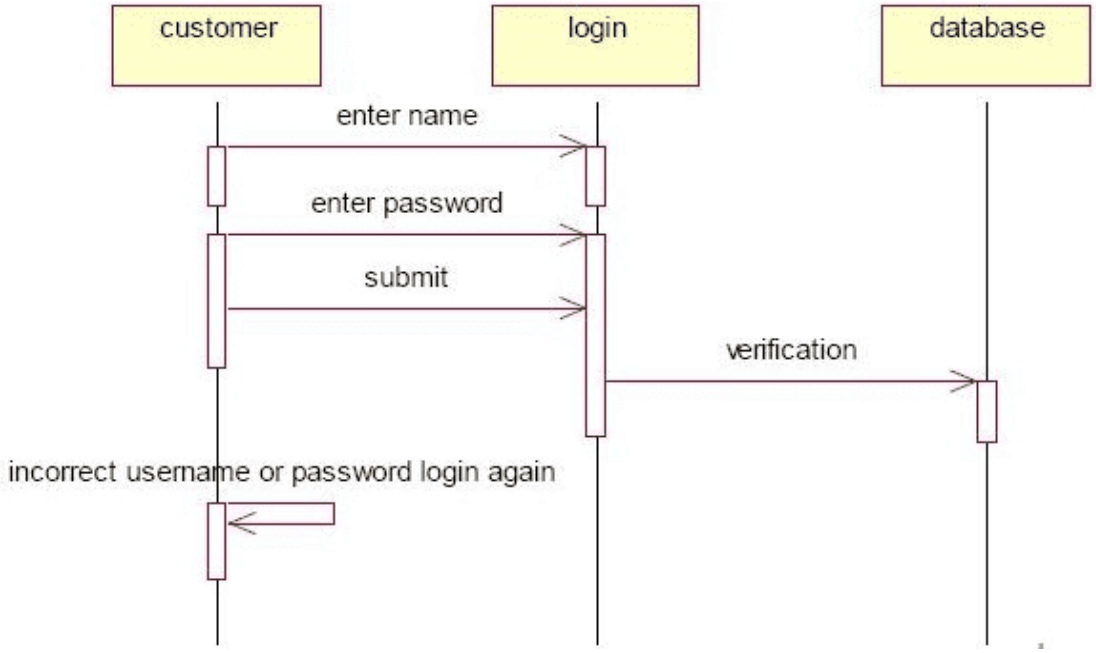
• **Books** – is the class name. Its attributes are operating system, computer architecture,dbms,web technology and ooad. The operations performed are select and buy.

• **Database** – is the class name. Its attribute is operation. The operations performed is store .

SEQUENCE DIAGRAM

A sequence diagram in Unified Modeling Language (UML) is a kind of interaction diagram that shows how processes operate with one another and in what order. It is a construct of a Message Sequence Chart. There are two dimensions.

1. Veritcal dimension-represent time.
2. Horizontal dimension-represent different objects.



DOCUMENTATION OF SEQUENCE DIAGRAM

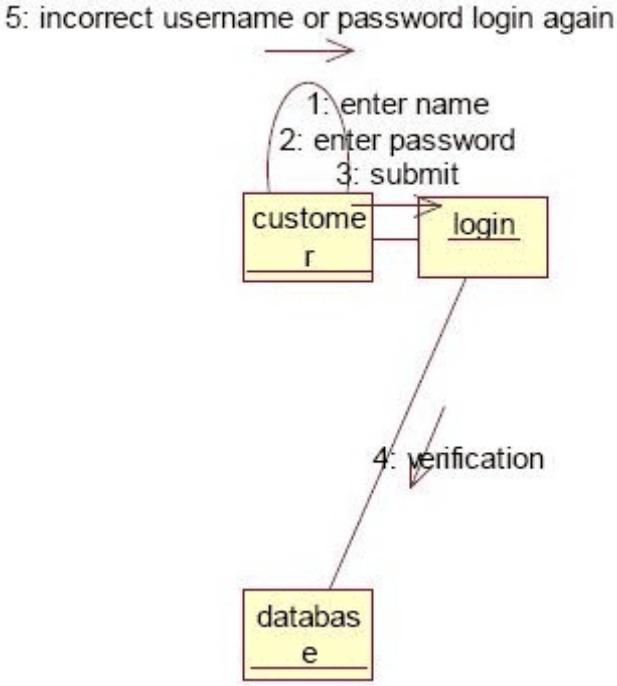
The sequence diagram describes the sequence of steps to show

- The Customer enters the Ebook website.
- The list of books available are listed.
- Customer checks the book list.
- Database provides user id and pass.
- Customer selects the book.
- Pay money to the Website.

COLLABORATION DIAGRAM

A collaboration diagram, also called a communication diagram or interaction diagram,. A sophisticated modeling tool can easily convert a collaboration diagram into a sequence diagram and the vice versa. A collaboration diagram

resembles a flowchart that portrays the roles, functionality and behavior of individual objects as well as the overall operation of the system in real time

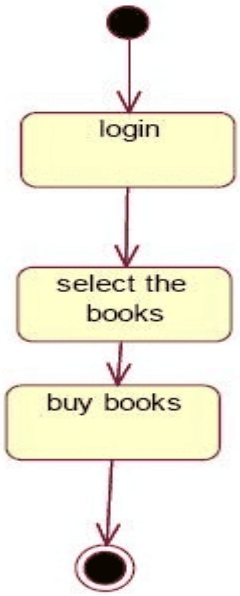


DOCUMENTATION OF COLLABORATION DIAGRAM

The first collaboration diagram is to show how the customer login and getting details of ebooks in the ebook management system. Here the sequence is numbered according to the flow of execution.

STATE CHART DIAGRAM

The purpose of state chart diagram is to understand the algorithm involved in performing a method. It is also called as state diagram. A state is represented as a round box, which may contain one or more compartments. An initial state is represented as small dot. A final state is represented as circle surrounding a small dot.



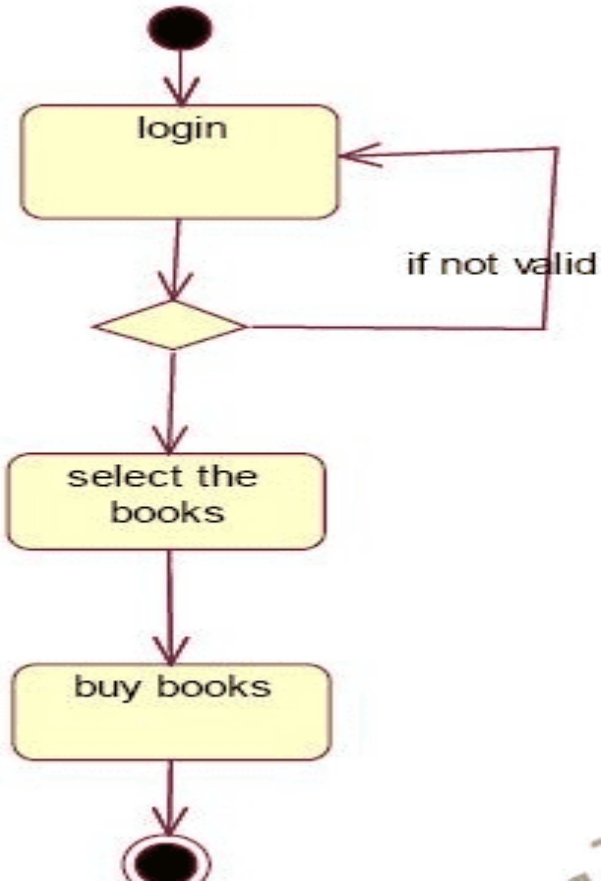
DOCUMENTATION OF STATE CHART DIAGRAM

This state diagram describes the behavior of the system.First state is login where the customer login to the ebook management system.

- The next state is check the list of books in order.
- Then select buy the book.
- Enter the account detail and purchase the book.

ACTIVITY DIAGRAM

Activity diagrams are graphical representations of workflows of stepwise activities and actions with support for choice, iteration and concurrency. In the Unified Modeling Language, activity diagrams can be used to describe the business and operational step-by-step workflows of components in a system. An activity diagram shows the overall flow of control. An activity is shown as an rounded box containing the name of the operation.



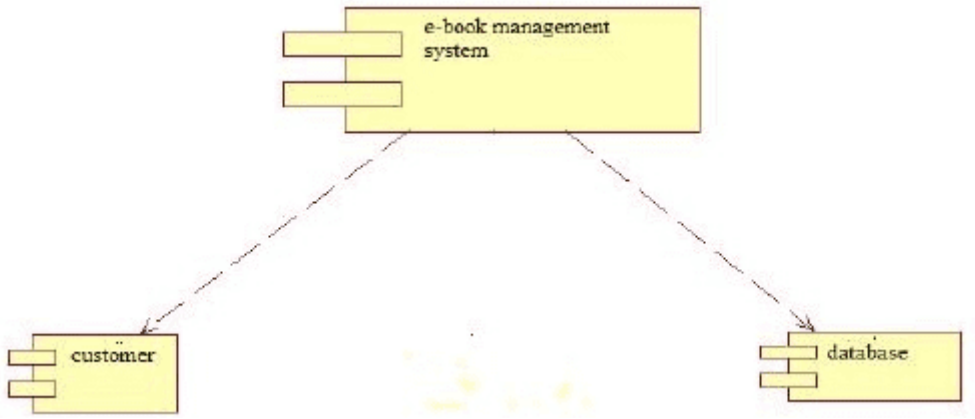
DOCUMENTATION OF ACTIVITY DIAGRAM

This activity diagram flow of stepwise activities performed in recruitment system.

- First Customer login then checks books available.
- The book list are verified and is given in a ordered format.
- The needed book is selected.
- Enter your account details and purchase the book .

COMPONENT DIAGRAM

The component diagram's main purpose is to show the structural relationships between the components of a systems. It is represented by boxed figure. Dependencies are represented by communication association.

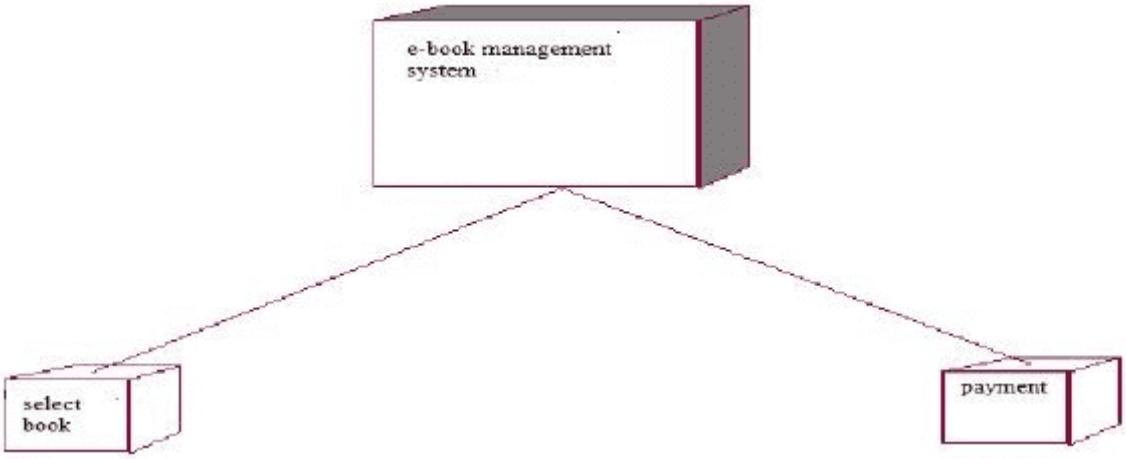


DOCUMENTATION OF COMPONENT DIAGRAM

The main component in this component diagram is online recruitment systems. And Supplier, storekeeper and database are the components come under the main component.

DEPLOYMENT DIAGRAM

A deployment diagram in the unified modeling language serves to model the physical deployment of artifacts on deployment targets. Deployment diagrams show "the allocation of artifacts to nodes according to the Deployments defined between them. It is represented by 3-dimentional box. Dependencies are represented by communication association.

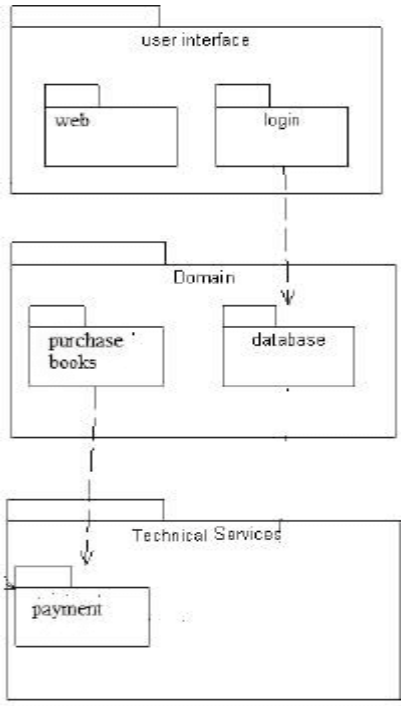


DOCUMENTATION OF DEPLOYMENT DIAGRAM

The processor in this deployment diagram is the online recruitment system which is the main part and the devices are the select and payment which are the some of the main activities performed in the system.

PACKAGE DIAGRAM

A package diagram in unified modeling language that depicts the dependencies between the packages that make up a model. A Package Diagram (PD) shows a grouping of elements in the OO model, and is a Cradle extension to UML.



PDs can be used to show groups of classes in Class Diagrams (CDs), groups of components or processes in Component Diagrams (CPDs), or groups of processors in Deployment Diagrams (DPDs).
There are three types of layer. They are

• **User interface layer:** consists of the form and login. This layer describes how the customer logins and books maintained in website.
• **Domain layer:** shows the activities that are performed in the ebook management system. The activities are books are purchased from the websote
• **Technical services layer:** the update the account details and buy the book by payment through the account

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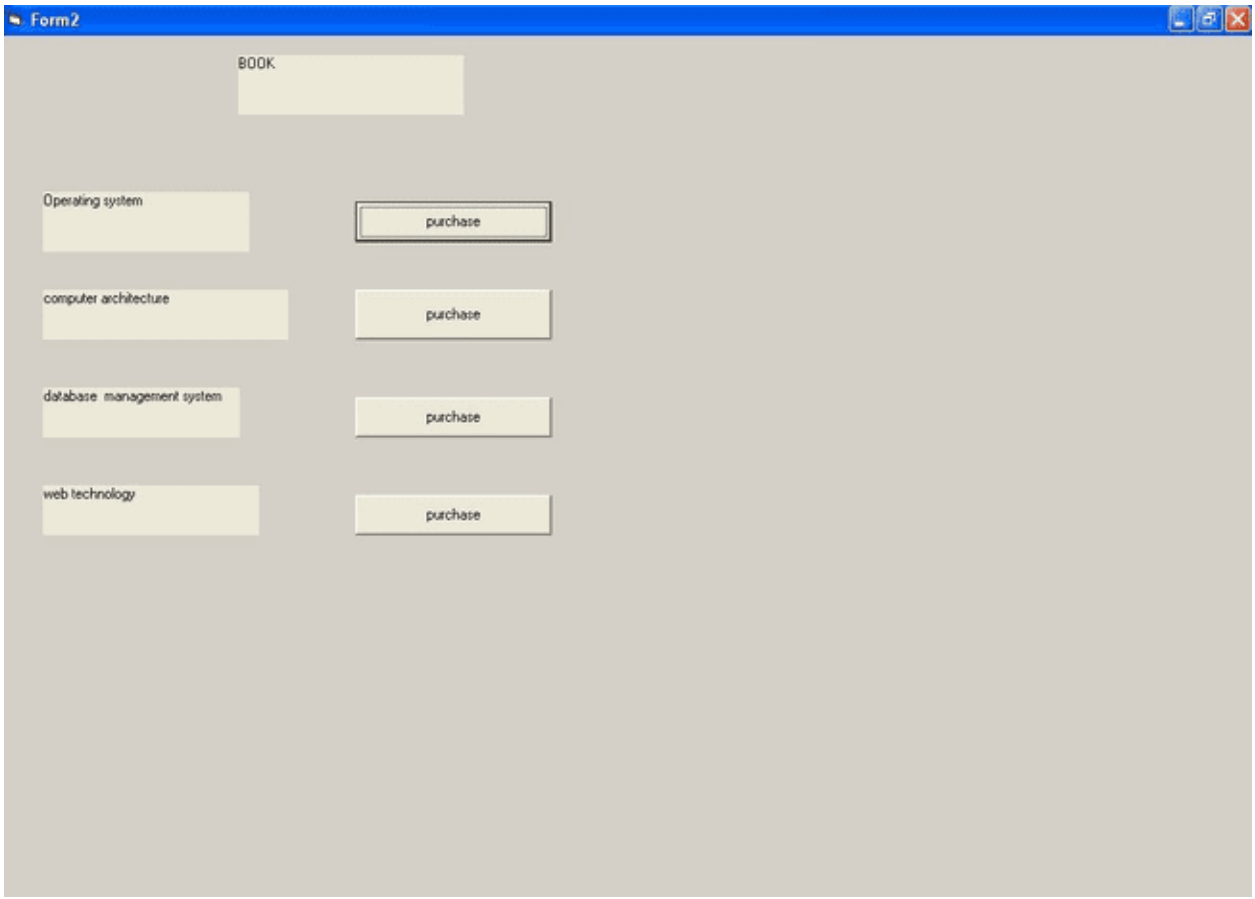
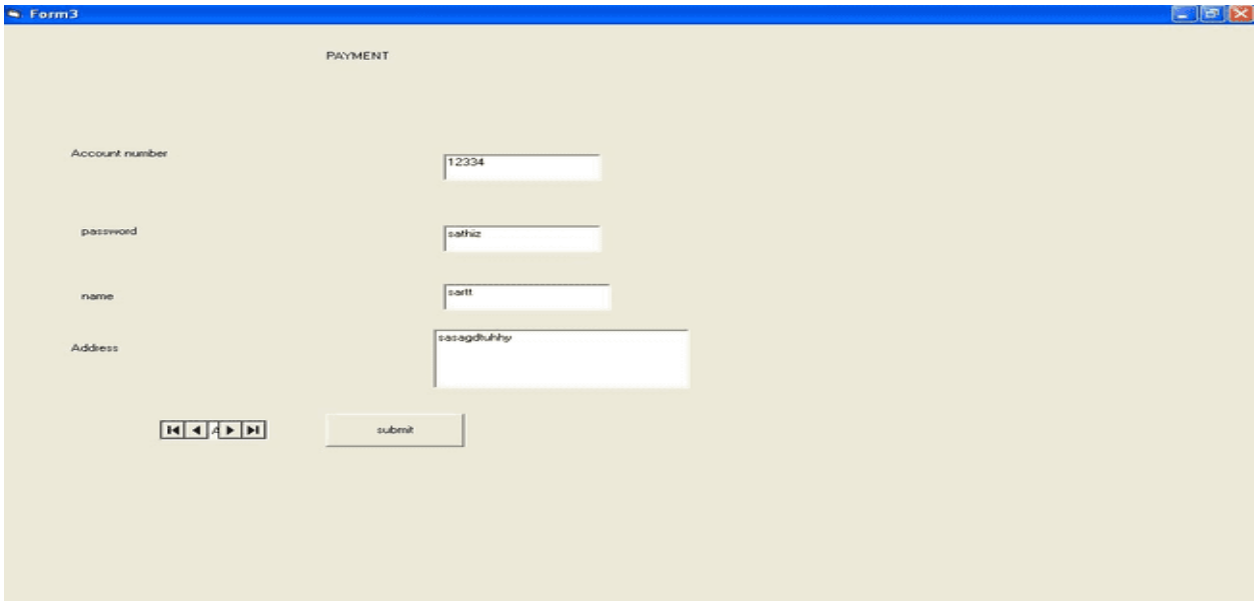
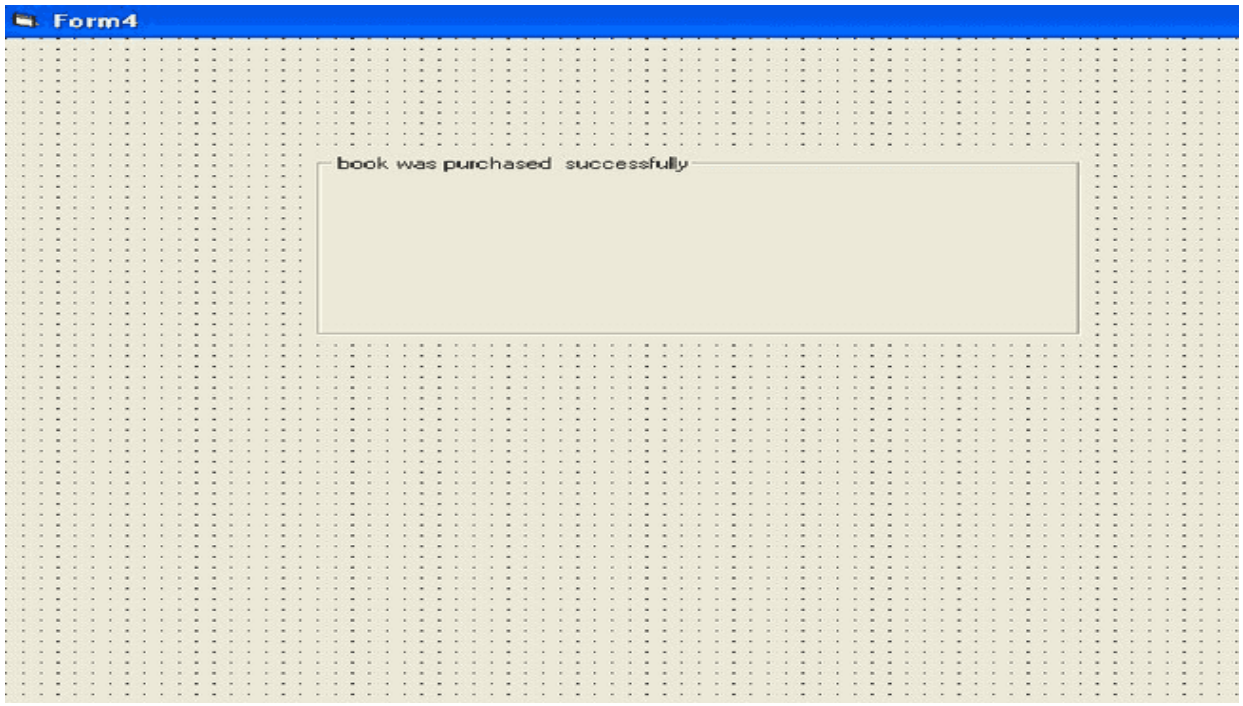
FOR
M 1



FORM 2



FORM 3



RESULT

Thus the project to develop Ebook Management System using Rational Rose Software and to implement the software in Java is done successfully.

EXPERIMENT 10
RECRUITMENT SYSTEM

AIM

To develop a project on online recruitment system using Rational Rose Software and to implement the project in Visual Basic.

PROBLEM ANALYSIS AND PROJECT PLANNING

The Online Recruitment System is an online website in which applicant can register themselves and then attend the exam. Examination will be conducted at some venue. The details of the examination, venue & Date of the examination will be made available to them through the website. Based on the outcome of the exam the applicant will be short listed and the best applicant is selected for the job.

PROBLEM STATEMENT

The process of applicants is login to the recruitment system and register for the job through online. The resume is processed by the company and the required applicant is called for the test. On the basis of the test marks, they are called for next level of interview. Finally the best applicant is selected for the job. This process of online recruitment system are described sequentially through following steps,

• The applicant login to the online recruitment system.

• They register to the company for the job.

• They appear for examination.

• Based on the outcome of the exam, the best applicant is selected.

• The recruiter informs the applicant about their selection.

1. INTRODUCTION

This software specification documents full set of features and function for online recruitment system that is performed in company website. In this we give specification about the system requirements that are apart from the functionality of the system to perform the recruitment of the jobseekers. It tells the usability,

reliability defined in use case specification.

2. OBJECTIVE

The main objective of Online Recruitment System is to make applicants register themselves online and apply for job and attend the exam. Online Recruitment System provides online help to the users all over the world.

3. OVERVIEW

The overview of the project is to design an online tool for the recruitment process which ease the work for the applicant as well as the companies. Companies can create their company forms according to their wish in which the applicant can register.

GLOSSARY

TERMS	**DESCRIPTION**
APPLICANT	Applicant can register himself. After registration, he will be directed to his homepage. Here he can update his profile, change password and see the examination details and all.
RECRUITER	Recruiter verify applicant details and conduct examination, approve or disapprove applicant attending examination and provides results about the selected applicant.
DATABASE	Database is used to verify login and store the details of selected applicants.
READER	Anyone visiting the site to read about online recruitment system.
USER	Applicant and the reader
SOFTWARE REQUIREMENT SPECIFICATION	This software specification documents full set of features and function for online recruitment system that is performed in company website.

The main functionality of recruitment system is to recruit the applicant for the job in their company.

8. USABILITY

User interface makes the Recruitment system to be efficient. That is the system will help the applicant to register easily and helps the companies to recruit the applicant effectively. The system should be user friendly.

9. PERFORMANCE

It describes the capability of the system to perform the recruitment process of the applicant without any error and performing it efficiently.

10. RELIABILITY

The online recruitment system should be able to serve the applicant with correct information and day-to-day update of information.

FUNCTIONAL REQUIREMENTS

Functional requirements are those refer to the functionality of the system. That is the services that are provided to the applicant who apply for the job.

UML DIAGRAMS

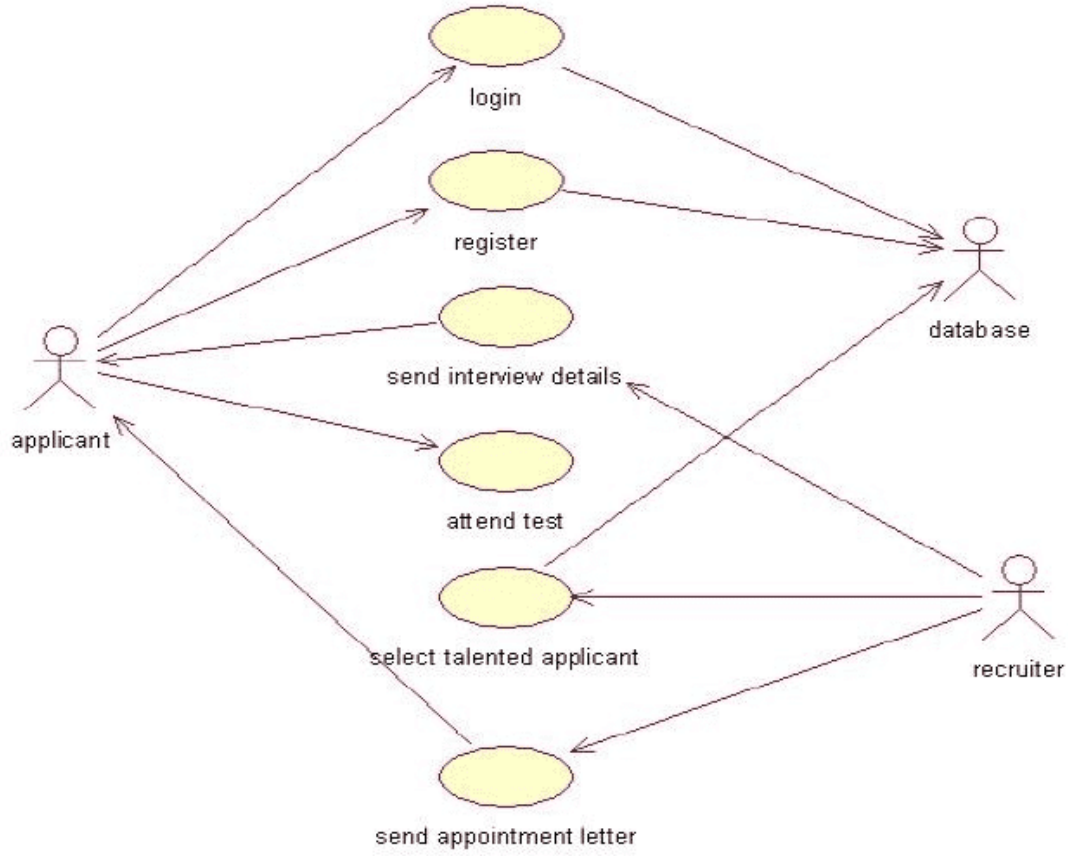
The following UML diagrams describe the process involved in the online recruitment system

- Use case diagram
- Class diagram
- Sequence diagram
- Collaboration diagram
- State chart diagram
- Activity diagram
- Component diagram
- Deployment diagram

• Package diagram

USE CASE DIAGRAM

A use case is a methodology used in system analysis to identify, clarify, and organize system requirements. The use case is made up of a set of possible sequences of interactions between systems and users in a particular environment and related to a particular goal. It is represented using ellipse.Actor is any external entity that makes use of the system being modelled. It is represented using stick figure.



DOCUMENTATION OF USE CASE DIAGRAM

The actors in this use case diagram are applicant, recruiter and database. The use cases are the activities performed by actors.

The actors in this use case diagram are

• **Applicant** - logins the recruitment system and register for the job and attend the test conducted at some venue.

• **Recruiter** - send the interview details, select talented applicant and send appointment letter to them.

Databases - verify the login and register details and selected applicant details

are stored in it.

The use cases in this use case diagram are

• **Login -** applicant enter their username and password to enter in to the recruitment system

• **Register** – applicant register in to the recruitment system for job.

• **Send interview details** – recruiter send interview details to the applicant.

• **Attend test –** applicant appears for the test.

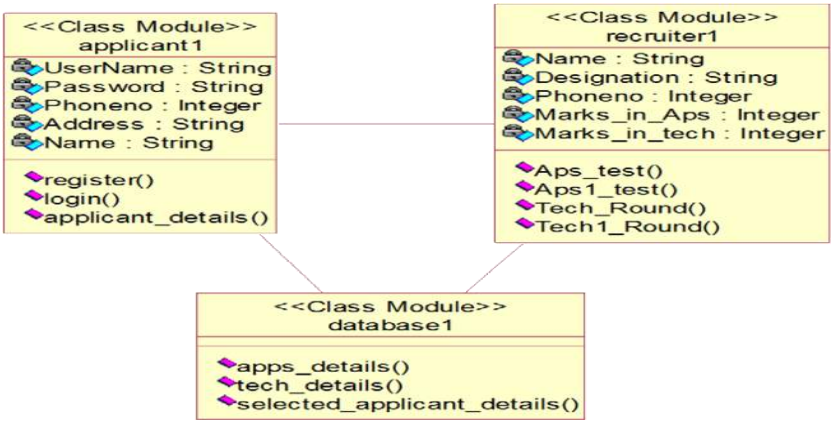
• **Select talented applicant** – based on the outcome of test talented applicant is selected.

• **Send appointment letter** – appointment letter is sent to the selected applicant by recruiter.

• **CLASS DIAGRAM**

A class diagram in the unified modeling language (UML) is a type of static structure diagram that describes the structure of a system by showing the system's classes, their attributes, and the relationships between the classes. It is represented using a rectangle with three compartments. Top compartment have the classname, middle compartment the attributes and the bottom compartment with operations.

DOCUMENTATION OF CLASS DIAGRAM



This class diagram has three classes applicant, recruiter and database.

• **Applicant** – is the class name. Its attributes are username, password, name, phone no and address. The operations performed in the applicant class are login, register and giving applicant details.

• **Recruiter** – is the class name. Its attributes are name, designation, phone no, marks in apps and marks in technical. The operations performed are selecting applicants based on apps and technical.

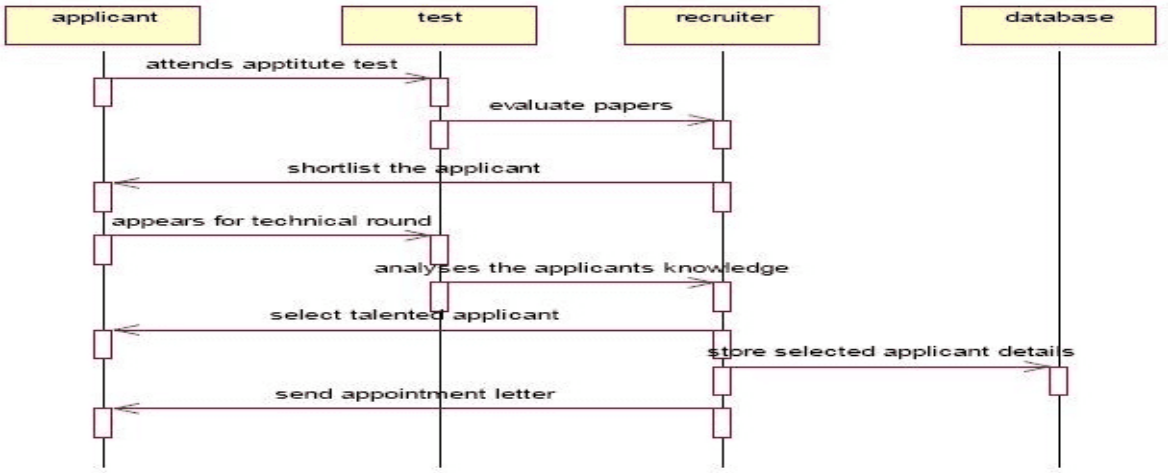
• **Database** – is the class name. The operations performed are storing applicant details, verifying login and storing selected applicant details.

SEQUENCE DIAGRAM

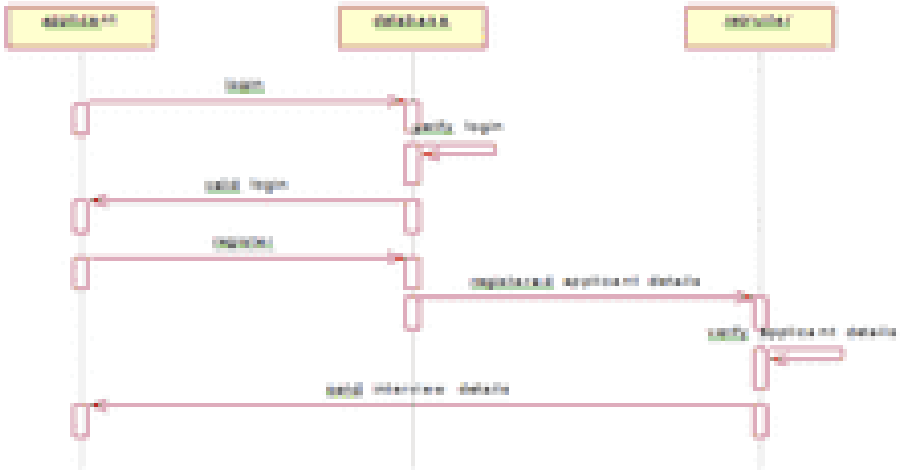
A sequence diagram in Unified Modeling Language (UML) is a kind of interaction diagram that shows how processes operate with one another and in what order. It is a construct of a Message Sequence Chart. There are two dimensions.

1. Vertical dimension-represent time.
2. Horizontal dimension-represent different objects.

FOR SELECTING APPLICANT



FOR REGISTER



DOCUMENTATION OF SEQUENCE DIAGRAM

REGISTER

This sequence diagram describes the sequence of steps to show

- The applicant login in to the recruitment system and register for job.
- The verification done in the database and recruiter
- The interview details are send to the applicant by recruiter.

SELECTING APPLICANT

This sequence diagram shows steps to show

- The applicant attend aptitute test and they are short listed based on evaluation

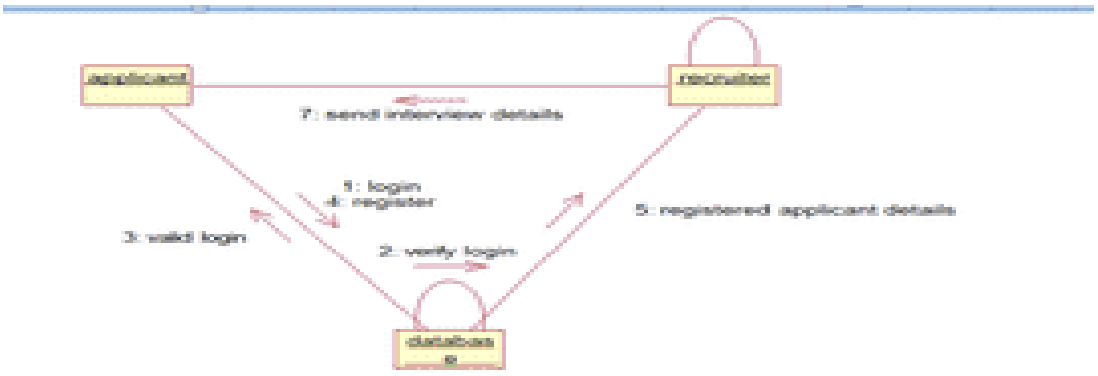
• The applicant appear for technical round

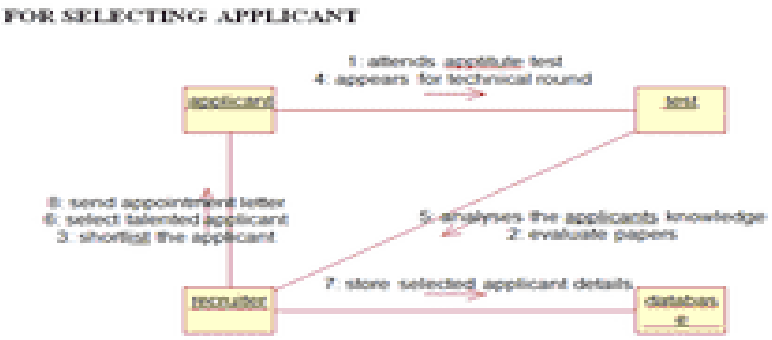
• The talented applicant is selected.

• This detail is stored in the database.

COLLABRATION DIAGRAM

A collaboration diagram, also called a communication diagram or interaction diagram,. A sophisticated modeling tool can easily convert a collaboration diagram into a sequence diagram and the vice versa. A collaboration diagram resembles a flowchart that portrays the roles, functionality and behavior of individual objects as well as the overall operation of the system in real time





FOR REGISTER

DOCUMENTATION OF COLLABRATION DIAGRAM

REGISTER

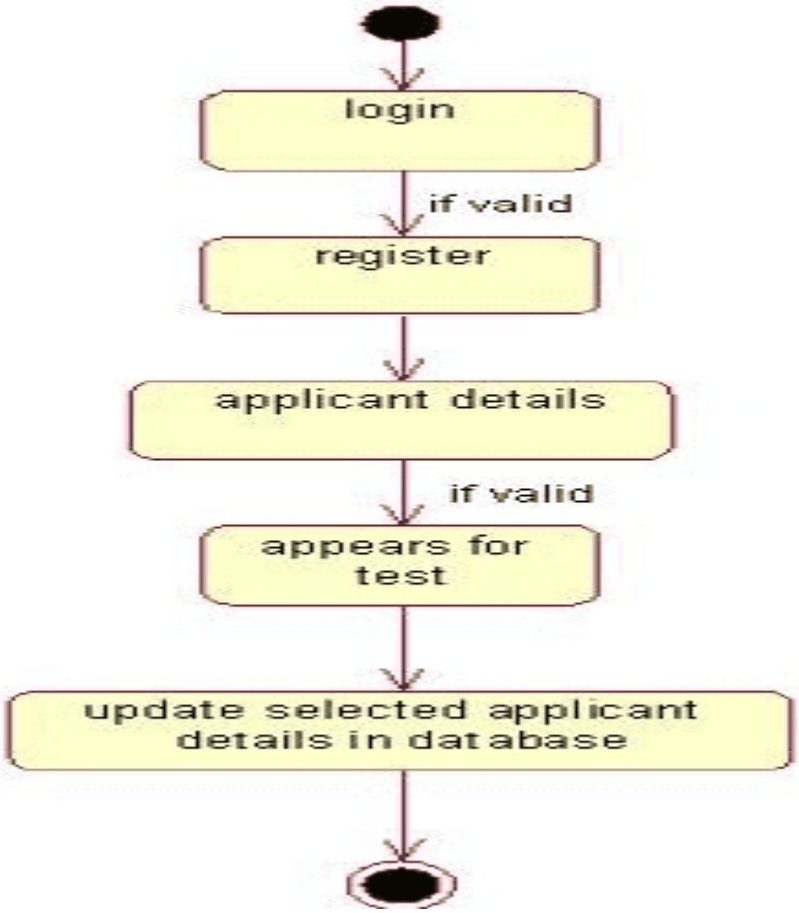
This collaboration diagram is to show how the applicant login and register in the recruitment system. Here the sequence is numbered according to the flow of execution.

SELECTING APPLICANT

This collaboration diagram is to show the selection process of the applicant for the job. The flow of execution of this selection process is represented using the numbers.

STATE CHART DIAGRAM

The purpose of state chart diagram is to understand the algorithm involved in performing a method. It is also called as state diagram. A state is represented as a round box, which may contain one or more compartments. An initial state is represented as small dot. A final state is represented as circle surrounding a small dot.



DOCUMENTATION OF STATE CHART DIAGRAM

This state diagram describes the behaviour of the system.

• First state is login where the applicant login to the recruitment system.

• The next state is register where the applicant register for job.

• Then verify the applicant details and sent interview details.

• The applicant appears for test.

• Update database with details of selected applicant.

ACTIVITY DIAGRAM

Activity diagrams are graphical representations of workflows of stepwise activities and actions with support for choice, iteration and concurrency. In the Unified Modeling Language, activity diagrams can be used to describe the business and operational step-by-step workflows of components in a system. An activity diagram shows the overall flow of control. An activity is shown as an

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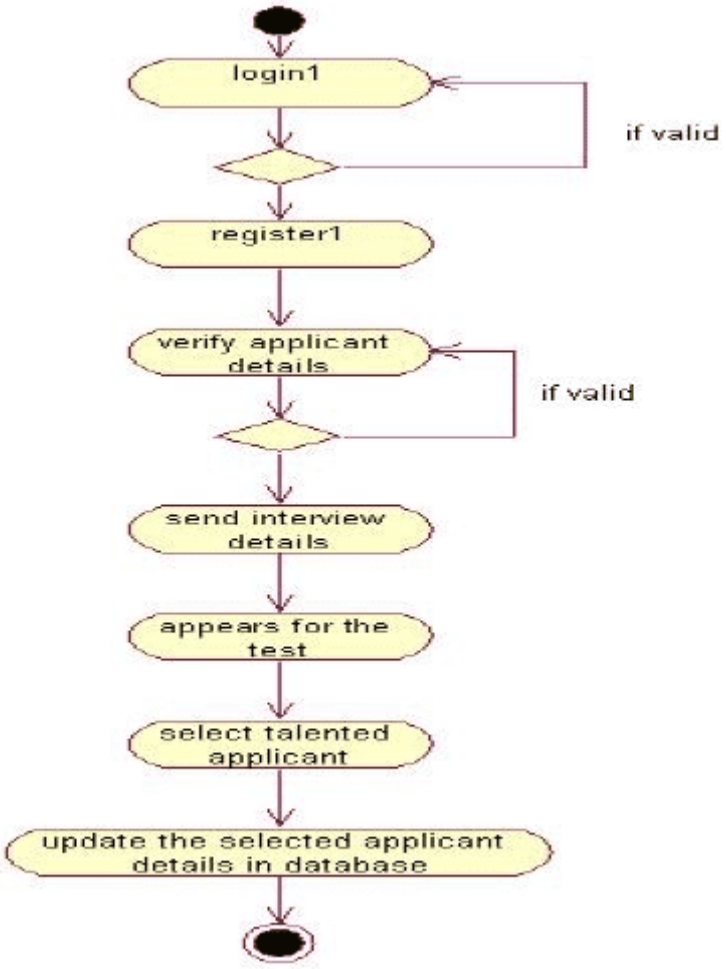


DOCUMENTATION OF ACTIVITY DIAGRAM

This activity diagram flow of stepwise activities performed in recruitment system.

• First the applicant login then registers.

• The applicant details are verified and interview details are send to applicant by recruiter.

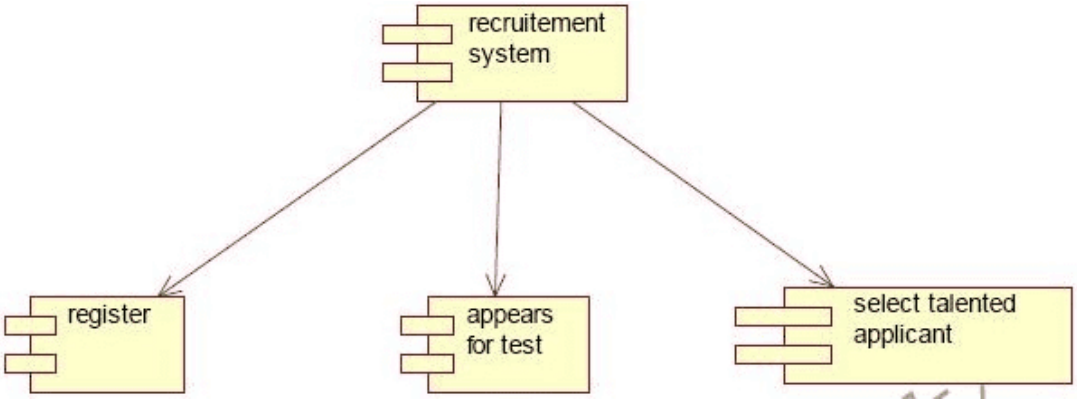
• Applicants appear for test.

• Recruiter select talented applicant.

• Update the selected applicant details in the database.

COMPONENT DIAGRAM

The component diagram's main purpose is to show the structural relationships between the components of a system. It is represented by boxed figure. Dependencies are represented by communication association.

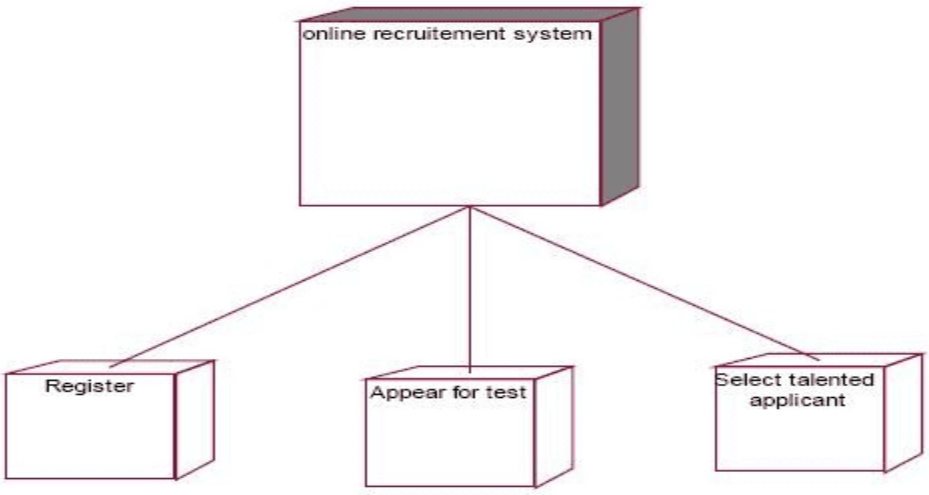


DOCUMENTATION OF COMPONENT DIAGRAM

The main component in this component diagram is online recruitment systems. And register, attend test and select talented applicants are the components comes under the main component.

DEPLOYMENT DIAGRAM

A deployment diagram in the unified modeling language serves to model the physical deployment of artifacts on deployment targets. Deployment diagrams show "the allocation of artifacts to nodes according to the Deployments defined between them. It is represented by 3-dimensional box. Dependencies are represented by communication association.



DOCUMENTATION OF DEPLOYMENT DIAGRAM

The processor in this deployment diagram is the online recruitment system which is the main part and the devices are the register, appear for test and select talented applicant which are the some of the main activities performed in the system.

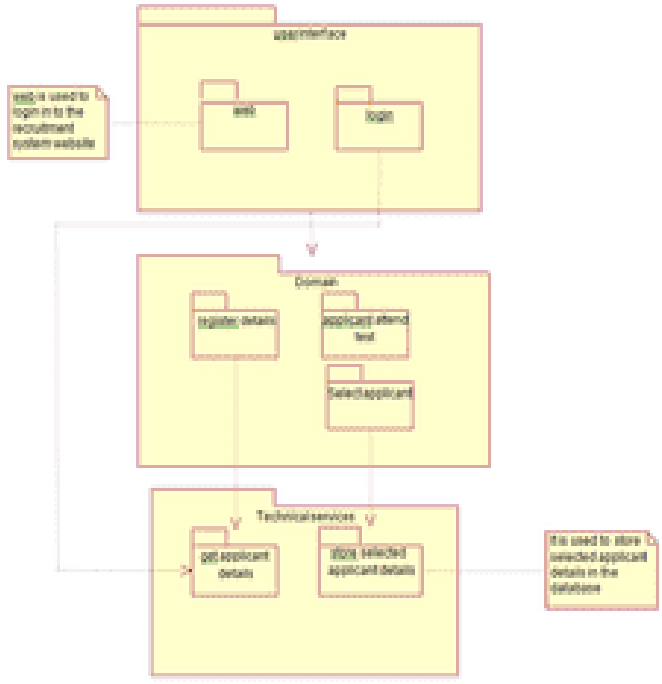
PACKAGE DIAGRAM

A package diagram in unified modeling language that depicts the dependencies between the packages that make up a model. A Package Diagram (PD) shows a grouping of elements in the OO model, and is a Cradle extension to UML. PDs can be used to show groups of classes in Class Diagrams (CDs), groups of components or processes in Component Diagrams (CPDs), or groups of processors in Deployment Diagrams (DPDs).
There are three types of layer. They are

• **User interface layer -** software objects representing domain concepts that fulfill application requirements, such as calculation a sale total.

• **Domain layer** – layer that contains domain objects to handle application logic work.

• **Technical services layer** – general purpose objects and subsystems that provide supporting technical services, such as interfacing with a database or error logging.



DOCUMENTATION OF PACKAGE DIAGRAM

The three layers in the online recruitment system are

• **The User interface layer** - consists of the web and login. This layer describes how the applicant logins to the website and apply for the job.

• **The Domain layer** – shows the activities that are performed in the online recruitment system. The activities are register, attend test and select talented applicant.

• **The Technical service layer -** the applicant details, verification details and the selected applicant details are stored in the database.

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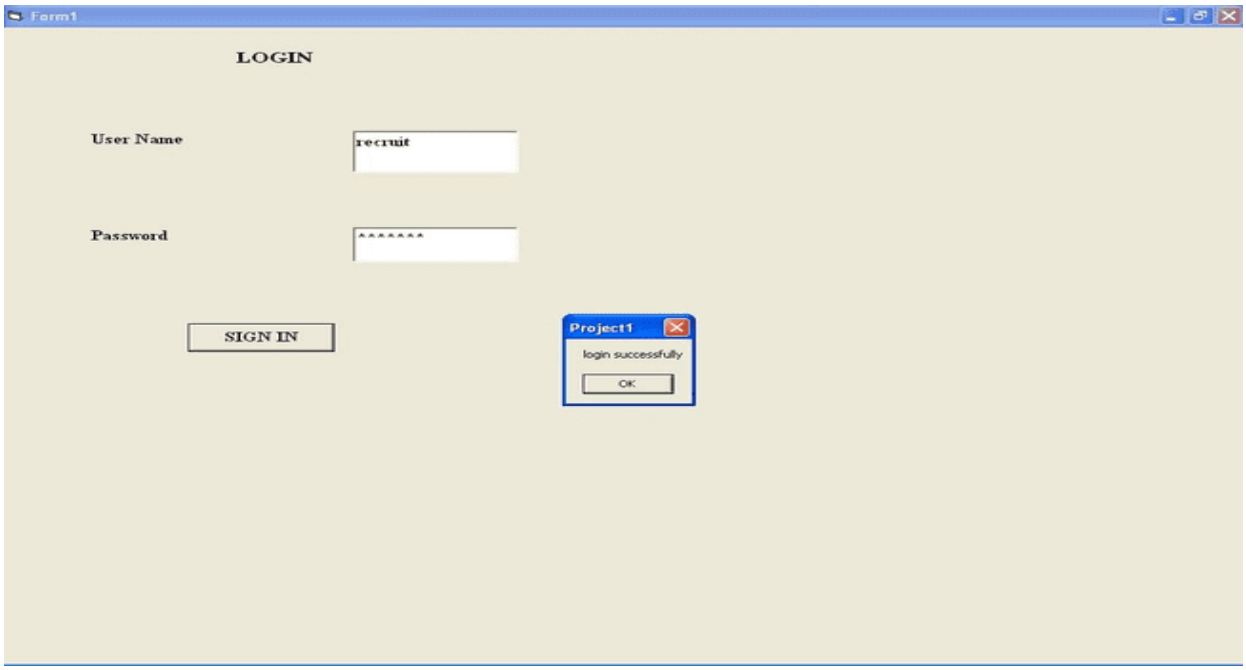
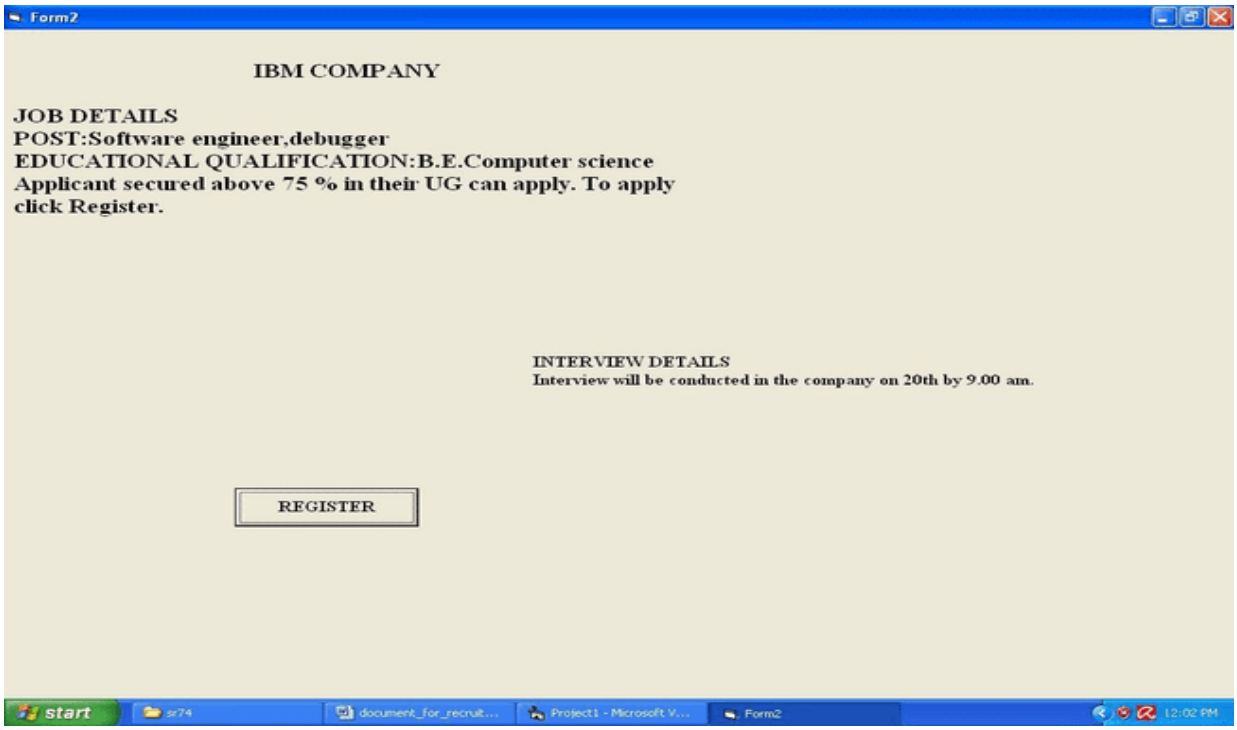


FORM2


Form2
IBM COMPANY
JOB DETAILS
POST:Software engineer,debugger
EDUCATIONAL QUALIFICATION:B.E.Computer science
Applicant secured above 75 % in their UG can apply. To apply
click Register.
INTERVIEW DETAILS
Interview will be conducted in the company on 20th by 9.00 am.
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sr74
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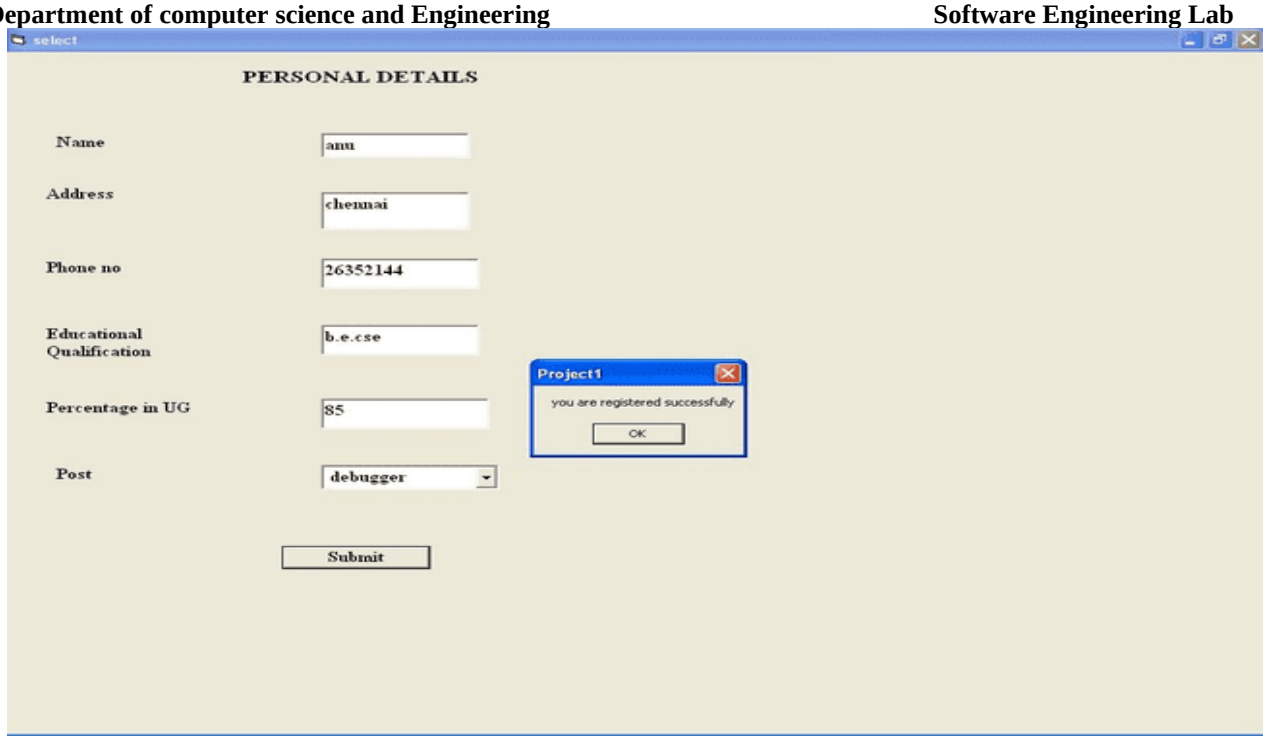
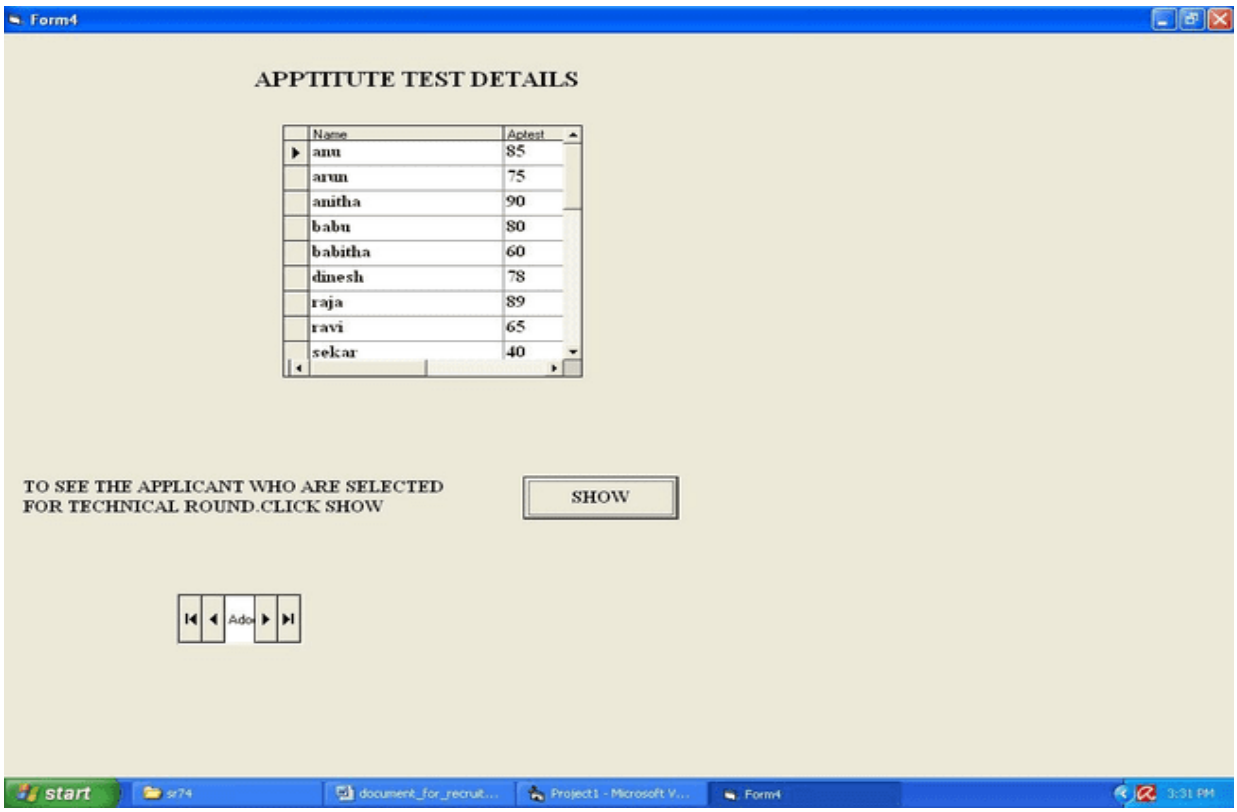
Project1 - Microsoft V...
Form2
12:02 PM

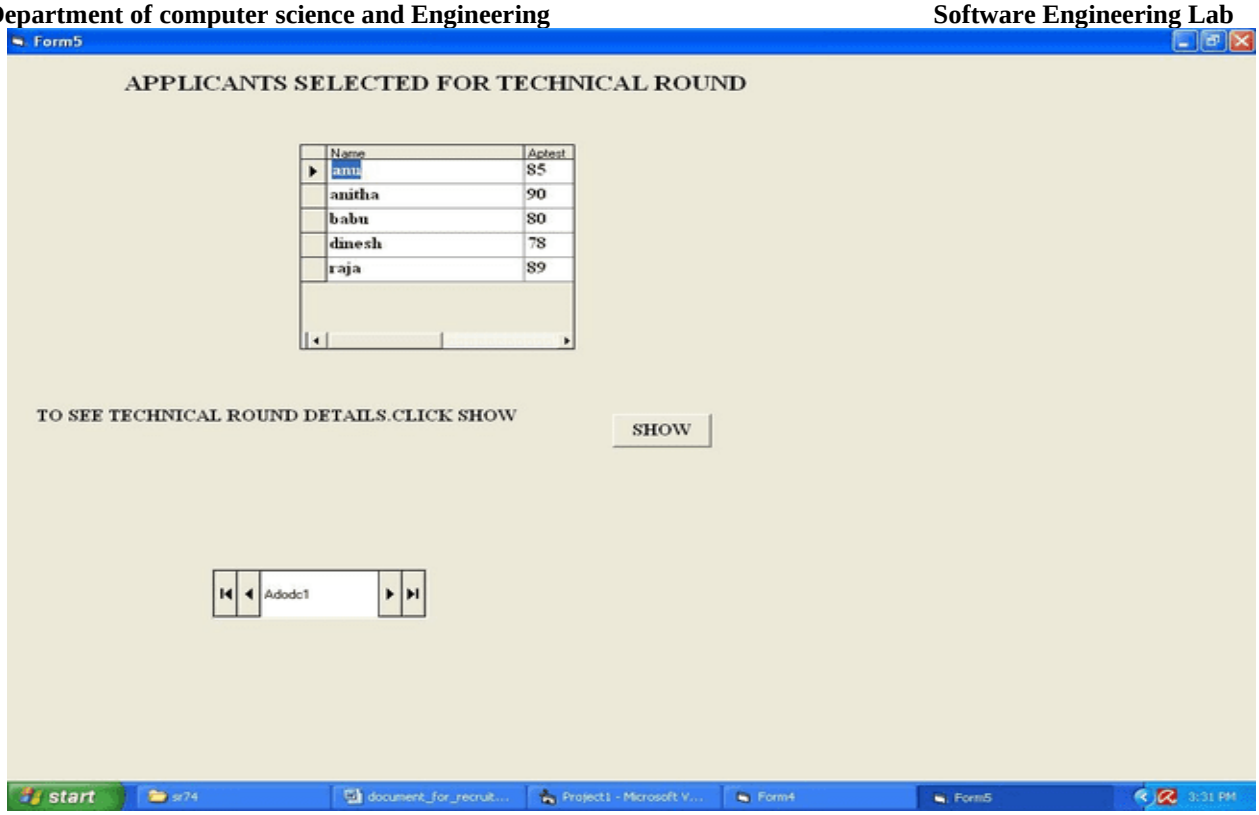
FORM3


select
PERSONAL DETAILS
Name
anu
Address
chennai
Phone no
26352144
Educational Qualification
b.e.cse
Percentage in UG
85
Post
debugger
Submit
Project1
you are registered successfully
OK

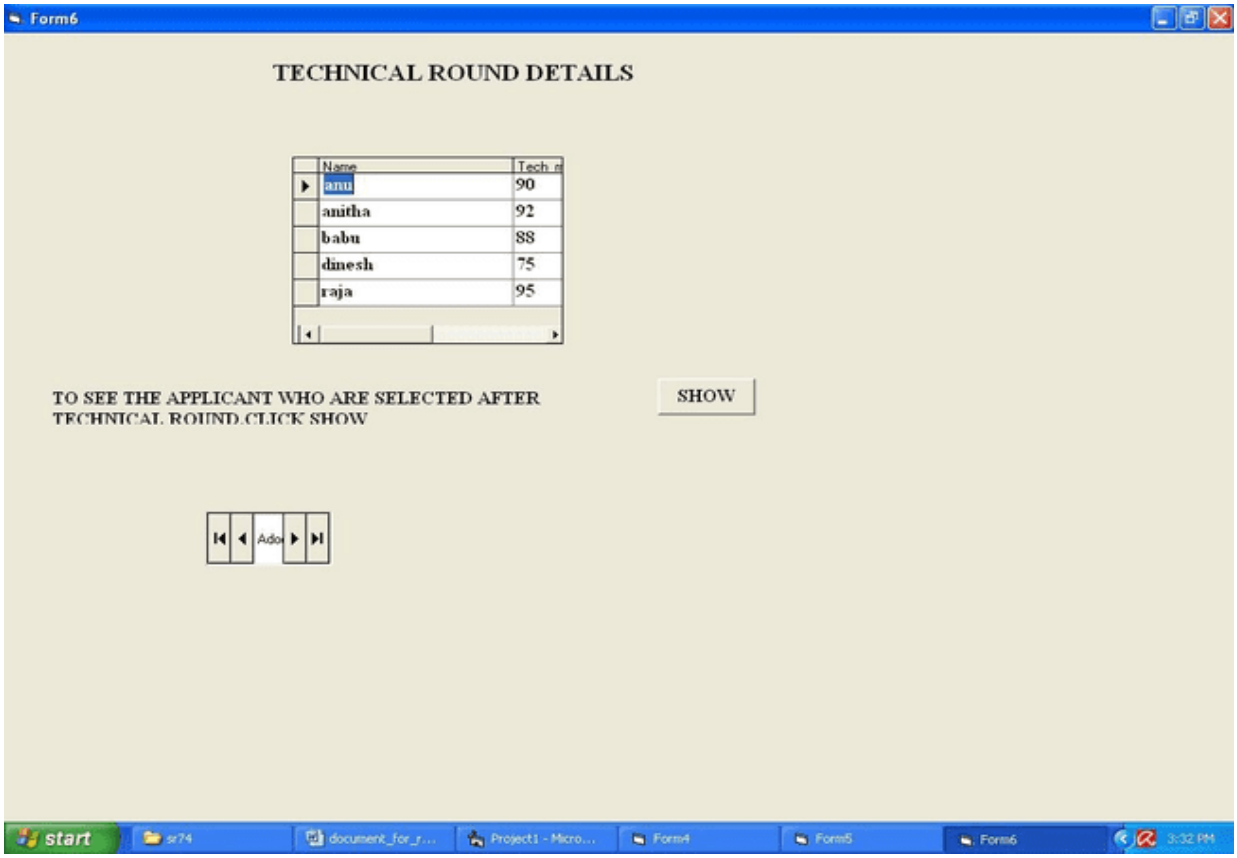
FORM4


Form4
APPTITUTE TEST DETAILS
Name
Aptest
anu 85
arun 75
anitha 90
babu 80
babitha 60
dinesh 78
raja 89
ravi 65
sekar 40
TO SEE THE APPLICANT WHO ARE SELECTED FOR TECHNICAL ROUND.CLICK SHOW
SHOW
start

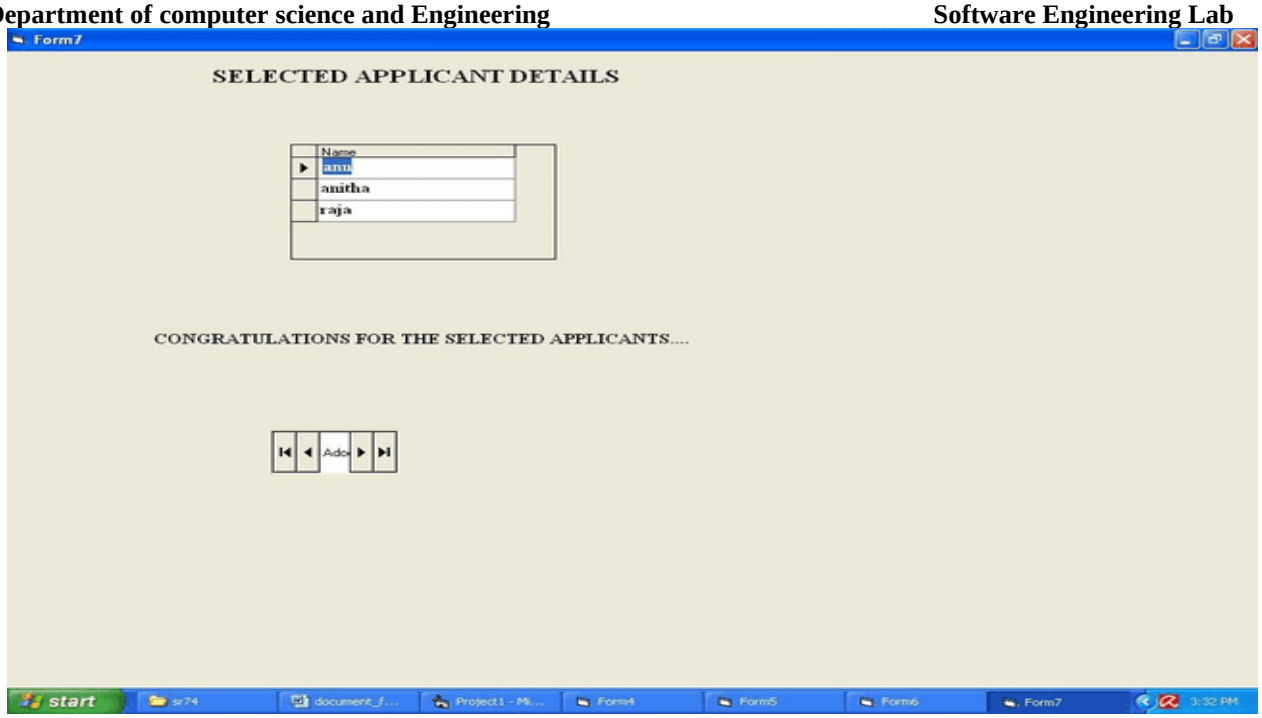
FORM5


Form5
APPLICANTS SELECTED FOR TECHNICAL ROUND
Name
Aptest
anu
85
anitha
90
babu
80
dinesh
78
raja
89
TO SEE TECHNICAL ROUND DETAILS.CLICK SHOW
SHOW
Adodc1
start
document_for_recruit...
Project1 - Microsoft V...
Form4
Form5
3:31 PM

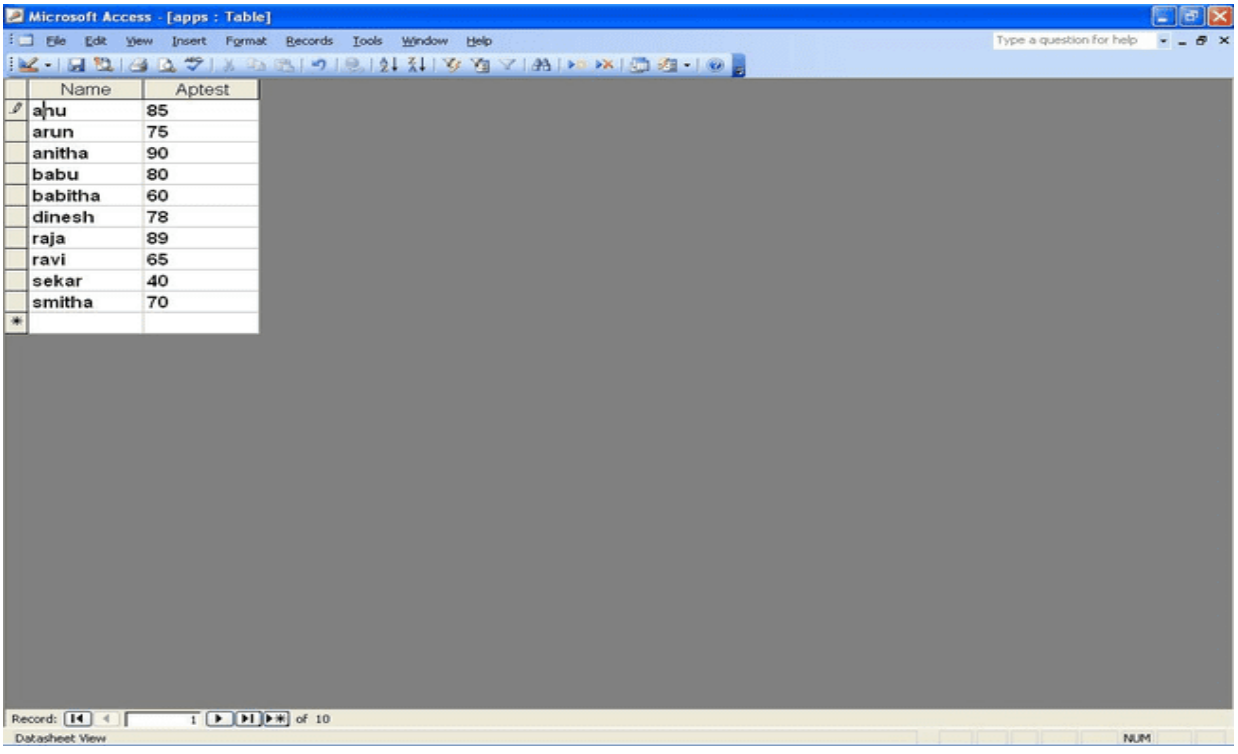
FORM6


Form6
TECHNICAL ROUND DETAILS
Name
Tech
anu
90
anitha
92
babu
88
dinesh
75
raja
95
TO SEE THE APPLICANT WHO ARE SELECTED AFTER TECHNICAL ROUND.CLICK SHOW
SHOW
start
document_for_r...
Project1 - Micro...
Form4
Form5
Form6
3:32 PM

FORM7



FORM 8



RESULT

Thus the project to develop online recruitment system using Rational Rose Software and to implement the project in Visual Basic is done successfully.