SRM INSTITUTE OF SCIENCE & TECHNOLOGY

NCR CAMPUS, MODINAGAR

(FACULTY OF SCIENCE & HUMANITIES)

DEPARTMENT OF COMPUTER APPLICATIONS

PRACTICAL FILE

OBJECT ORIENTED ANALYSIS AND DESIGN

[PCA20C07J]

MCA 2ND YEAR, 3RD SEMESTER

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Register No.: **RA2332241030073**

BONAFIDE CERTIFICATE

Certified to be the Bonafide record of the work done by **NIKKI** of MCA 2nd year, 3rd Semester for the award of **Master's** degree course in the FACULTY OF SCIENCE & HUMANITIES in DEPARTMENT OF COMPUTER APPLICATIONS in **Object Oriented Analysis and Design [PCA20C07J]** laboratory during the Academic year 2023-24.

SUBJECT IN-CHARGE **HEAD - COMPUTER APPLICATIONS**

Submitted for the university examination held on_____

INTERNAL EXAMINER 1 **INTERNAL EXAMINER 2**

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EX.NO.1: CASE TOOLS

INTRODUCTION:

Case tools known as computer-aided software engineering tools is a kind of component-based development which allows its users to rapidly develop information systems. The main goal of case technology is the automation of the entire information systems development life cycle process using a set of integrated software tools, such as modeling, methodology and automatic code generation. Component based manufacturing has several advantages over custom development. The main advantages are the availability of high quality, defect free products at low cost and at a faster time. The prefabricated components are customized as per the requirements of the customers. The components used are pre-built, ready-tested and add value and differentiation by rapid customization to the targeted customers. However, the products we get from case tools are only a skeleton of the final product required and a lot of programming must be done by hand to get a fully finished, good product.

CHARACTERISTICS OF CASE:

- Some of the characteristics of case tools that make it better than customized development are:
    - It is a graphic oriented tool.
    - It supports decomposition of process.
- Some typical case tools are:
    - Unified modeling language
    - Data modeling tools
    - Source code generation tools

INTRODUCTION TO UML (UNIFIED MODELING LANGUAGE):

The uml is a language for specifying, constructing, visualizing, and documenting the software system and its components. The uml is a graphical language with sets of rules and semantics. The rules and semantics of a model are expressed in english in a form known as ocl (object constraint language). Ocl uses simple logic for specifying the properties of a system. The umlis not intended to be a visual programming language. However it has a much closer mappingto object-oriented programming languages, so that the best of both can be obtained. The uml is much simpler than other methods preceding it. Uml is appropriate for modeling systems,ranging from enterprise information system to distributed web based application and even to real time embedded system. It is a very expensive language addressing all views needed to develop and then to display system even though understand to use. Learning to apply uml effectively starts forming a conceptual mode of languages which requires learning.

Three major language elements:

- Uml basic building blocks
- Rules that dictate how this building blocks put together
- Some common mechanism that apply throughout the language the primary goals in the design of uml are:
    - Provides users ready to use, expressive visual modeling language as well so they can develop and exchange meaningful models.
    - Provide extensibility and specialization mechanisms to extend the coreconcepts.
    - Be independent of particular programming languages and developmentprocesses.
    - Provide formal basis for understanding the modeling language.
    - Encourage the growth of the oo tools market.
    - Support higher-level development concepts.
    - Integrate best practices and methodologies.

Every complex system is best approached through a small set of nearly independent views of a model. Every model can be expressed at different levels of fidelity. The best models are connected to reality.

The uml defines nine graphical diagrams:

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

1. Uml class diagram:

   The uml class diagram is also known as object modeling. It is a static analysis diagram. These diagrams show the static structure of the model. A class diagram is a connection of static model elements, such as classes and their relationships, connected as a graph to each other and to their contents.
2. Use-case diagram:

   The functionality of a system can be described in a number of different use- cases, each of which represents a specific flow of events in a system. It is a graph of actors, a set of use-cases enclosed in a boundary, communication,

associations between the actors and the use-cases, and generalization among the use-cases.

3. Behavior diagram:

   It is a dynamic model unlike all the others mentioned before. The objects of an object oriented system are not static and are not easily understood by static diagrams. The behavior of the class's instance (an object) is represented in this diagram. Every use-case of the system has an associated behavior diagram that indicates the behavior of the object. In conjunction with the use-case diagram we may provide a script or interaction diagram to show a time line of events. It consists of sequence and collaboration diagrams.

4. Interaction diagram

   It is the combination of sequence and collaboration diagram. It is used to depict the flow of events in the system over a timeline. The interaction diagram is a dynamic model which shows how the system behaves during dynamic execution.

5. State chart diagram:

   It consists of state, events and activities. State diagrams are a familiar technique to describe the behavior of a system. They describe all of the possible states that a particular object can get into and how the object's state changes as a result of events that reach the object. In most oo techniques, state diagrams are drawn for a single class to show the lifetime behavior of a single object.

6. Activity diagram:

   It shows organization and their dependence among the set of components. These diagrams are particularly useful in connection with workflow and in describing behavior that has a lot of parallel processing. An activity is a state of doing something: either a real-world process, or the execution of a software routine.

7. Implementation diagram:

   It shows the implementation phase of the systems development, such as the source code structure and the run-time implementation structure. These are relatively simple high level diagrams compared to the others seen so far. They are of two sub-diagrams, the component diagram and the deployment diagram.

8. Component diagram:

   These are organizational parts of a uml model. These are boxes to which a model can be decomposed. They show the structure of the code itself. They model the physical components such as source code, user interface in a design. It is similar to the concept of packages.

9. Deployment diagram:

   The deployment diagram shows the structure of the runtime system. It shows the configuration of runtime processing elements and the software components that live in them. They are usually used in conjunction with deployment diagrams to show how physical modules of code are distributed on the system.

NOTATION ELEMENTS:

These are explanatory parts of uml model. They are boxes which may apply to describe and remark about any element in the model. They provide the information for understanding the necessary details of the diagrams.

Relations in the uml:

These are four kinds of relationships used in an uml diagram, they are:

- Dependency: it is a semantic relationship between two things in which a change one thing affects the semantics of other things. Graphically a dependency is represented bya non-continuous line.
- Association: it is a structural relationship that describes asset of links. A link is being connected among objects. Graphically association is represented as a solid line possibly including label.
- Generalization: it is a specialized relationship in which the specialized elements are substitutable for object of the generalized element. Graphically it is a solid line with hollow arrow head parent.
- Realization: it is a semantic relation between classifiers. Graphically it is represented as a cross between generalization and dependency relationship.

Where uml can be used:

Uml is not limited to modeling software. In fact it is expressive to model non-software such as to show in structure and behavior of health case system and to design the hardware of the system.

Conceptual model be uml:

Uml you need to form the conceptual model of uml. This requires three major elements:

- Uml basic building blocks.
- Rules that dictate how this building blocks are put together.
- Some common mechanism that apply throughout the language.

Once you have grasped these ideas, you may be able to read. Uml create some basic ones. As you gain more experience in applying conceptual model using more advanced features of this language.

Building blocks of the uml:

The vocabulary of uml encompasses these kinds of building blocks.

Use case definition:

- Description: a use case is a set of scenarios tied together by a common user goal. A use case is a behavioral diagram that shows a set of use case actions and their relationships.
- Purpose: the purpose of use case is login and exchange messages between sender and receiver (email client).
- Main flow: first, the sender gives his id and enters his login. Now, he enters the message to the receiver id.
- Alternate flow: if the username and id by the sender or receiver is not valid, the administrator will not allow entering and "invalid password" message is displayed.
- Pre-condition: a person has to register himself to obtain a login id.
- Post-condition: the user is not allowed to enter if the password or user name is not valid.

Class diagram:

- A class diagram describes the type of objects in system and various kinds of relationships that exists among them.
- Class diagrams and collaboration diagrams are alternate representations of object models.
- During analysis, we use class diagram to show roles and responsibilities of entities that provide email client system behaviors design. We use to capture the structure of classes that form the email client system architecture.
- A class diagram is represented as:
    - <<class name>>
    - <<attribute 1>>
    - <<attribute n>>
    - <<operation ()>>
- Relationship used: a change in one element affects the other
- Generalization: it is a kind of relationship

State chart:

- The state chart diagram made the dynamic behavior of individual classes.
- State chart shows the sequences of states that an object goes through events and state transitions.
- A state chart contains one state 'start' and multiple 'end' states.
- The important objectives are:
    - Decision: it represents a specific location state chart diagram where the work flow may branch based upon guard conditions.
    - Synchronization: it gives a simultaneous workflow in a state chart diagram. They visually define forks and joints representing parallel workflow.
    - Forks and joins:

        - A fork construct is used to model a single flow of control.
        - Every work must be followed by a corresponding join.
        - Joints have two or more flow that unit into a single flow.
    - State: a state is a condition or situation during a life of an object in which it satisfies condition or waits for some events.
    - Transition: it is a relationship between two activities and between states and activities.
    - Start state: a start state shows the beginning of a workflow or beginning of a state machine on a state chart diagram.
    - End state: it is a final or terminal state.

Activity diagram

- Activity diagram provides a way to model the workflow of a development process. We can also model this code specific information such as class operation using activity diagram. Activity diagrams can model different types of diagrams. There are various tools involved in the activity diagram.
- Activity: an activity represents the performance of a task on duty. It may also represent the execution of a statement in a procedure.
- Decision: a decision represents a condition on situation during the life of an object, which it satisfies some condition or waits for an event.
- Start state: it represents the condition explicitly the beginning of a workflow on an activity.
- Object flow: an object on an activity diagram represents the relationship between activity and object that creates or uses it.
- Synchronization: it enables us to see a simultaneous workflow in an activity.
- End state: an end state represents a final or terminal state on an activity diagram or state chart diagram.

Sequence diagram:

- Sequence diagram is a graphical view of scenario that shows object interaction in a time based sequence what happens first what happens next. Sequence diagrams are closely related to collaboration diagram. The main difference between sequence and collaboration diagram is that sequence diagram show time based interaction while collaboration diagram shows objects associated with each other.
- The sequence diagram for the e-mail client system consists of the following objectives:
- Object: an object has state, behavior and identity. An object is not based is referred to as an instance.
- The various objects in e-mail client system are:
    - User
    - Website
    - Login
    - Groups

- Message icon: a message icon represents the communication between objects indicating that an action will follow. The message icon is the horizontal solid arrow connecting lifelines together.

Collaboration diagram:

- Collaboration diagram and sequence diagrams are alternate representations of an interaction. A collaboration diagram is an interaction diagram that shows the order of messages that implement an operation or a transaction. Collaboration diagram is an interaction diagram that shows the order of messages that implement an operation or a transaction.
- Collaboration diagram shows object s, their links and their messages. They can also contain simple class instances and class utility instances.
- During, analysis indicates the semantics of the primary and secondary interactions. Design, shows the semantics of mechanisms in the logical design of system.
- Toggling between the sequence and collaboration diagrams. When we work in either a sequence or collaboration diagram, it is possible to view the corresponding diagram by pressing f5 key.

CONCLUSION: Thus the study for case tools was done.

EX.NO.2: PASSPORT AUTOMATION SYSTEM

AIM: To create an automated system to perform the passport process.

(I) PROBLEM STATEMENT

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. 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.

(II) SOFTWARE REQUIREMENT SPECIFICATION:

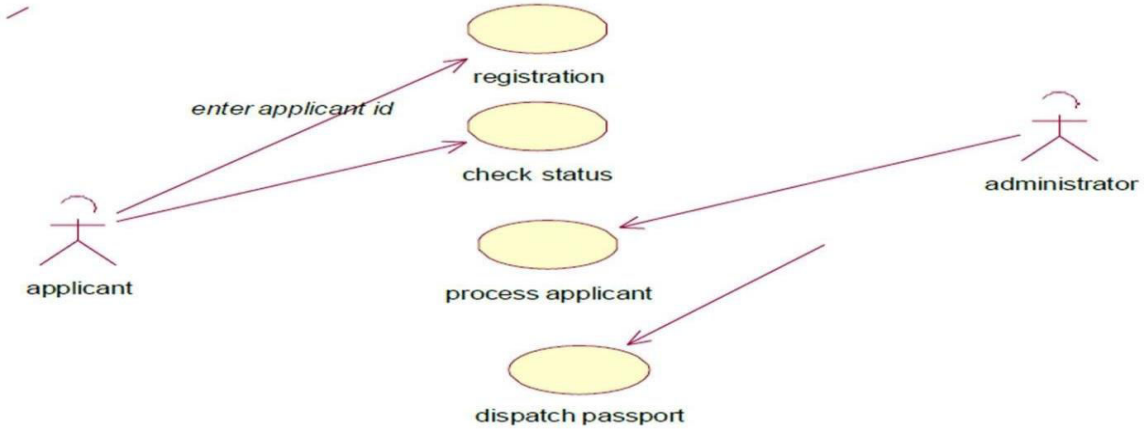
software Interface

- Front end client - the applicant and administrator online interface is built using jsp and html. The administrators's local interface is built using java.
- Web server - glassfish application server(oracle corporation).
- Back end - oracle database.

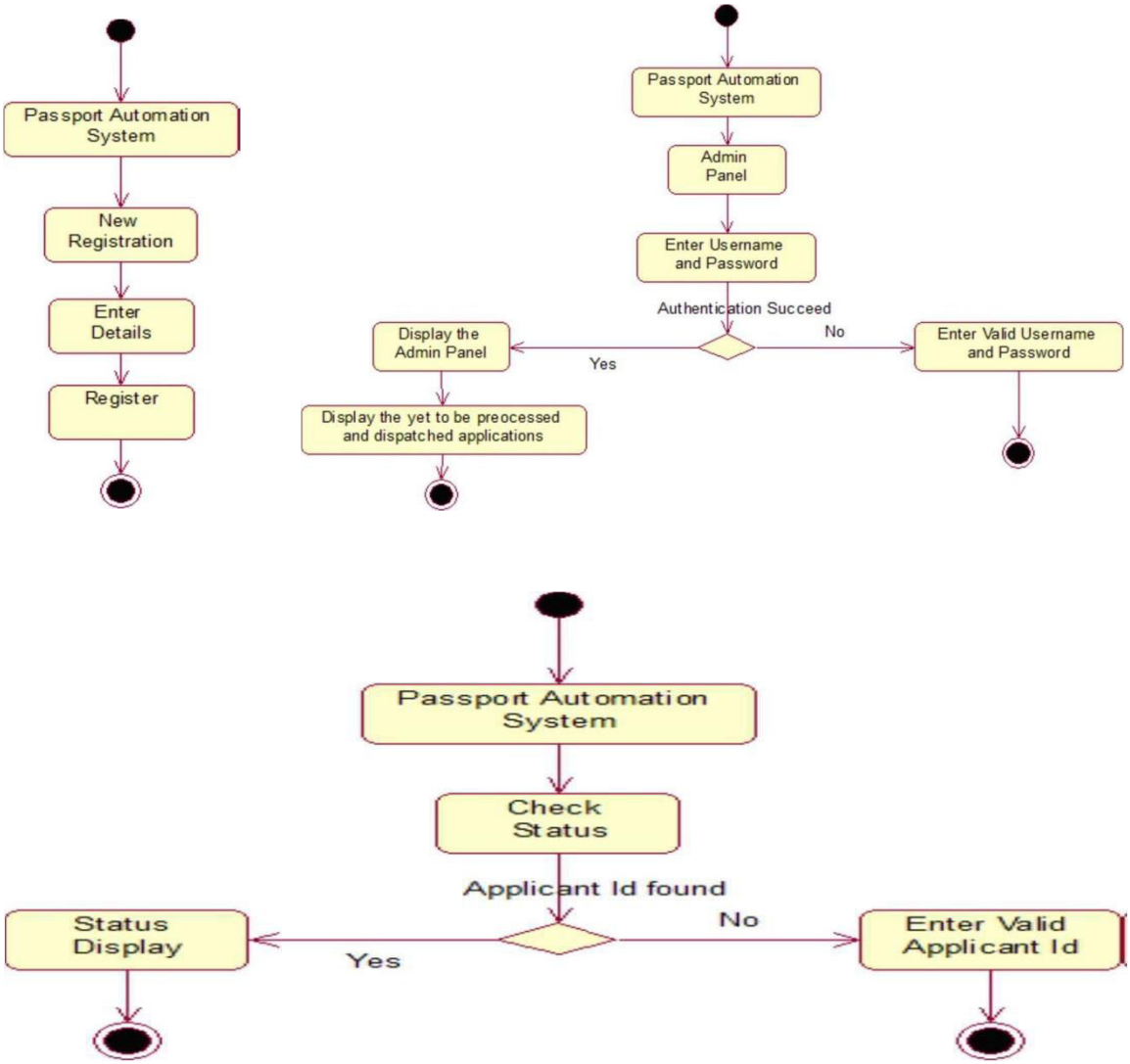
2.2hardware interface

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

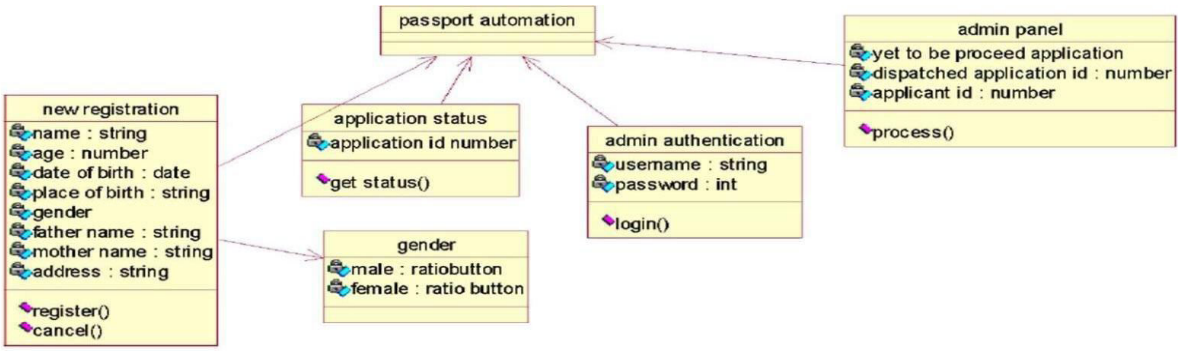
(III) USE-CASE DIAGRAM:



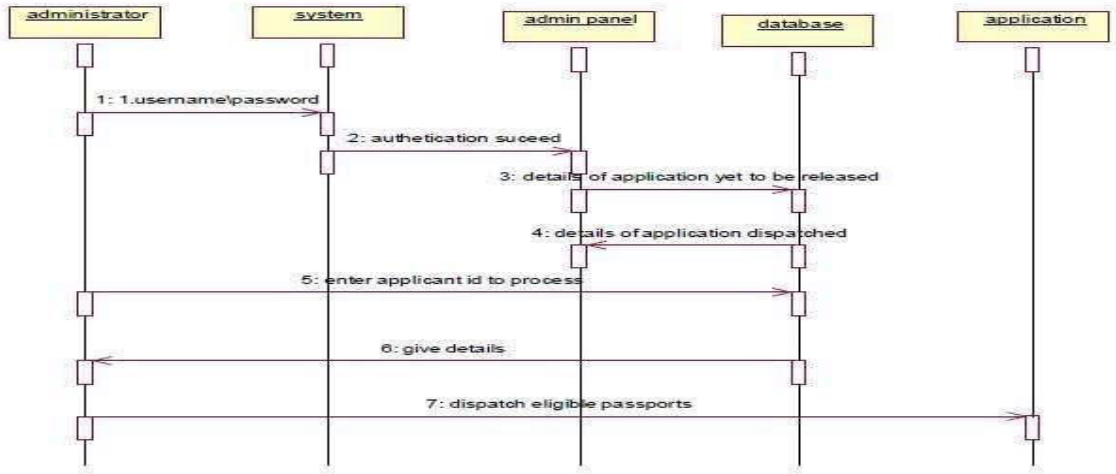
(IV) ACTIVITY DIAGRAM:

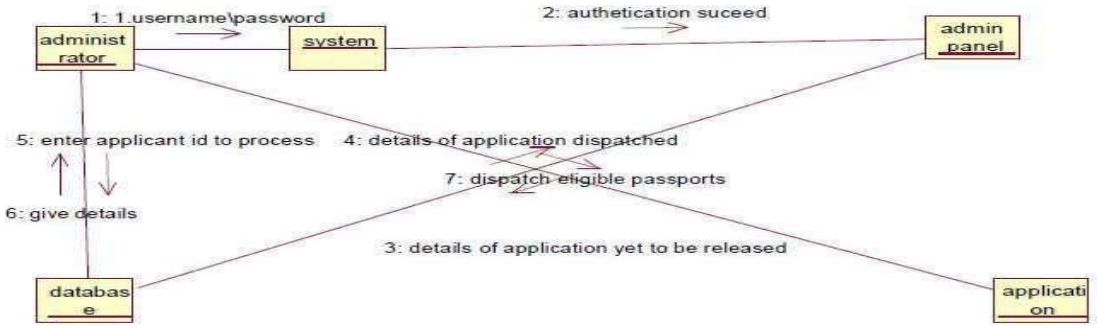


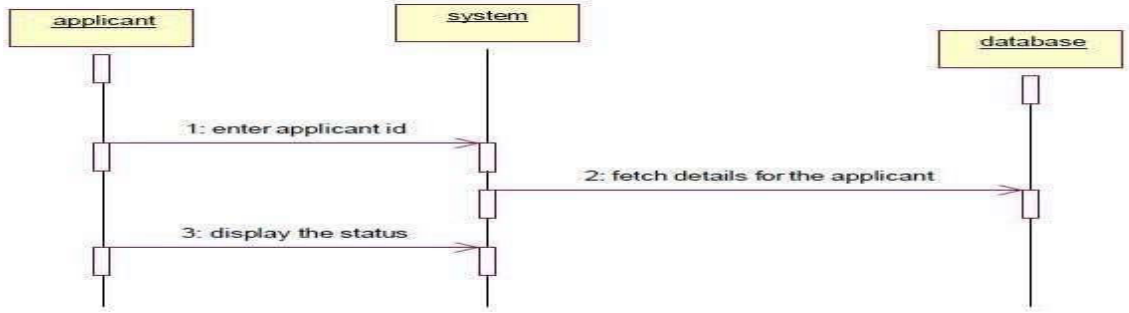
(V) CLASS DIAGRAM:

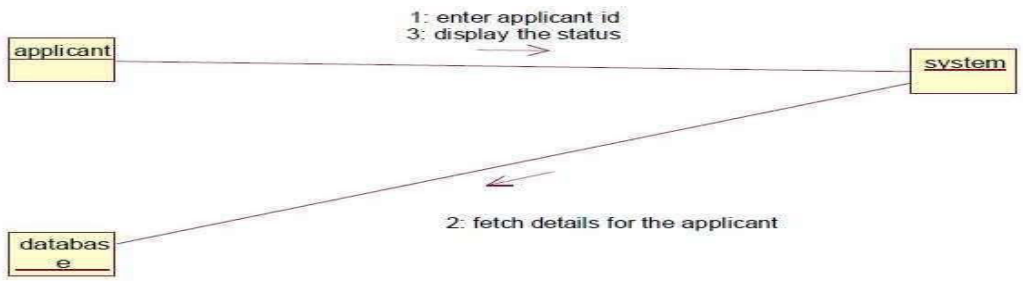


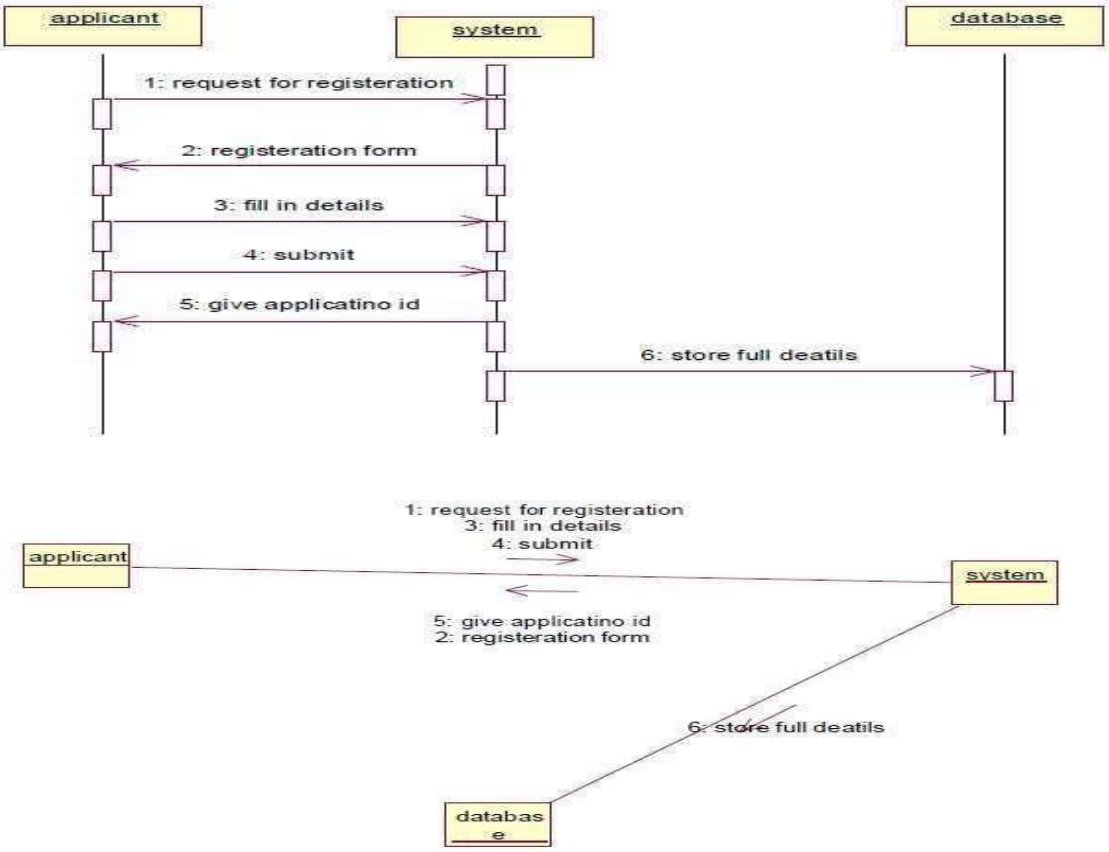
(VI) INTERACTION DIAGRAM: (LEVEL 1, 2 AND 3)



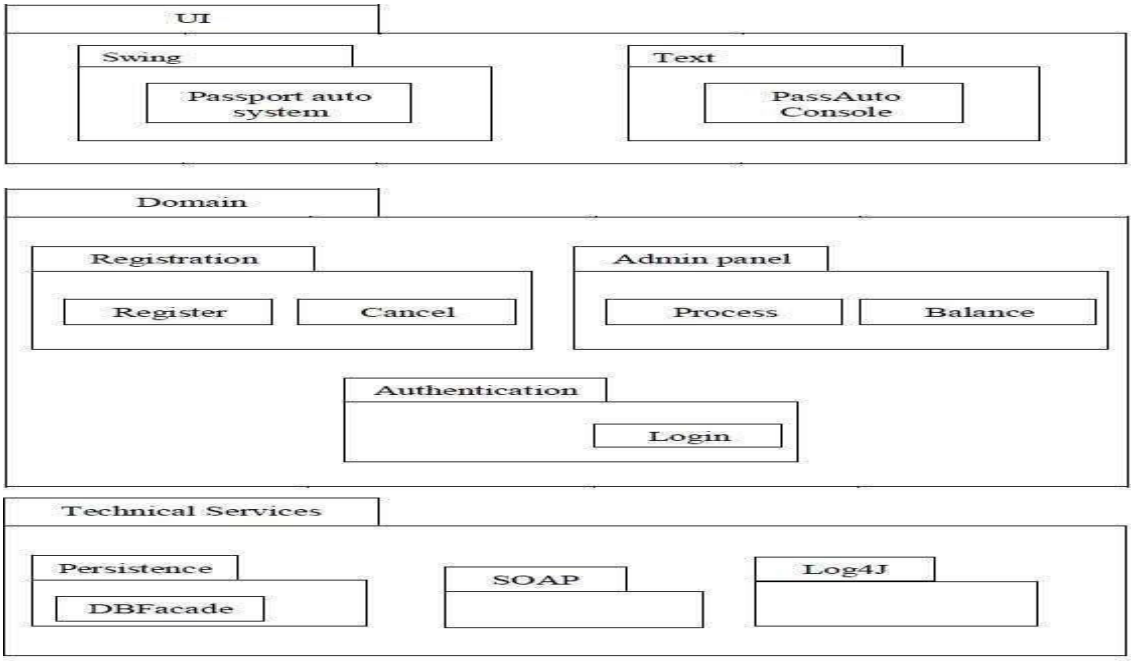






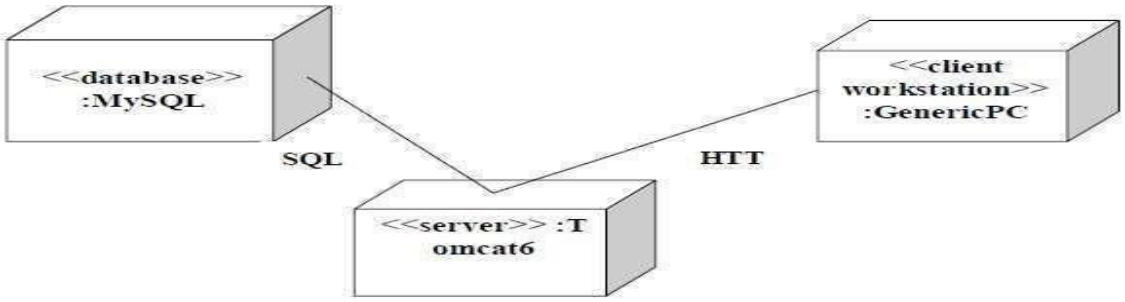


(VII) PARTIAL LAYER LOGICAL ARCHITECTURE DIAGRAM

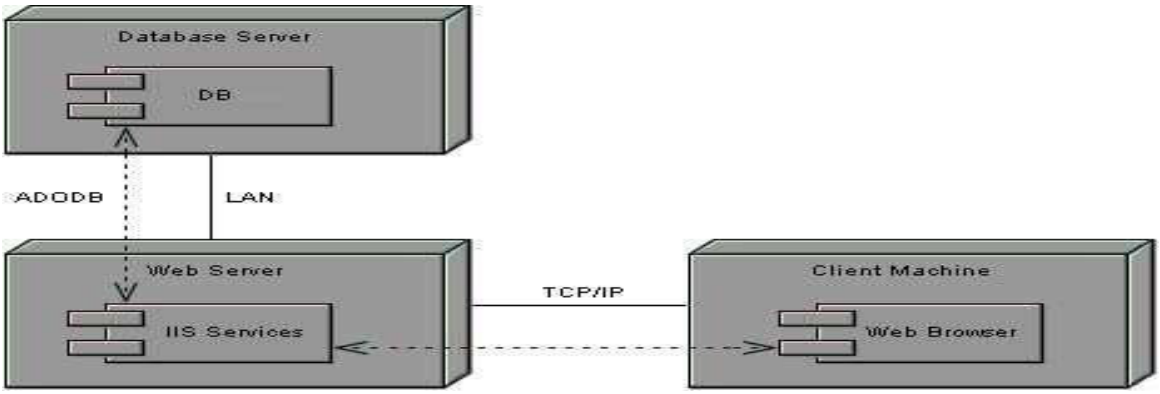


(VIII) DEPLOYMENT DIAGRAM AND COMPONENT DIAGRAM

DEPLOYMENT DIAGRAM



COMPONENT DIAGRAM



RESULT: thus, the mini project for passport automation system has been successfully executed and codes are generated.

EX.NO.3: BOOK BANK SYSTEM

AIM: to create a system to perform book bank operation

(I) PROBLEM STATEMENT:

A book bank lends books and magazines to member, who is registered in the system. Also, it handles the purchase of new titles for the book bank. Popular titles are brought into multiple copies. Old books and magazines are removed when they are out or date or poor in condition. A member can reserve a book or magazine that is not currently available in the book bank, so that when it is returned or purchased by the book bank, that person is notified. The book bank can easily create, replace and delete information about the tiles, members, loans and reservations from the system.

(II) SOFTWARE REQUIREMENTS SPECIFICATION:

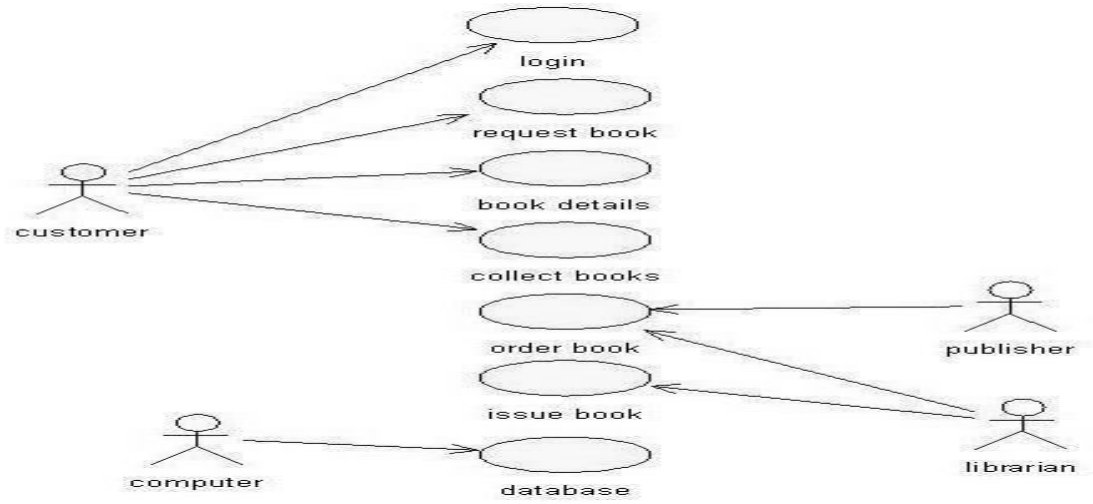
software interface

- Front end client - the student and librarian online interface is built using jsp and html. The librarians local interface is built using java.
- Web server - glassfish application server (oracle corporation).
- Back end - oracle database

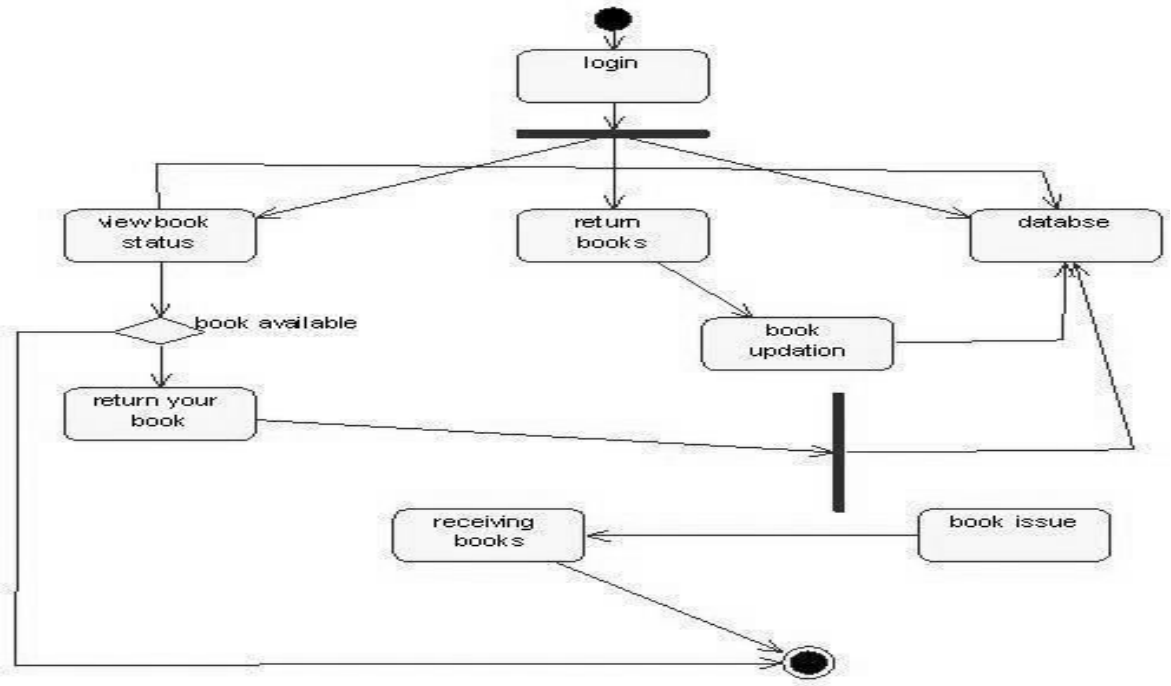
2.2hardware interface

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

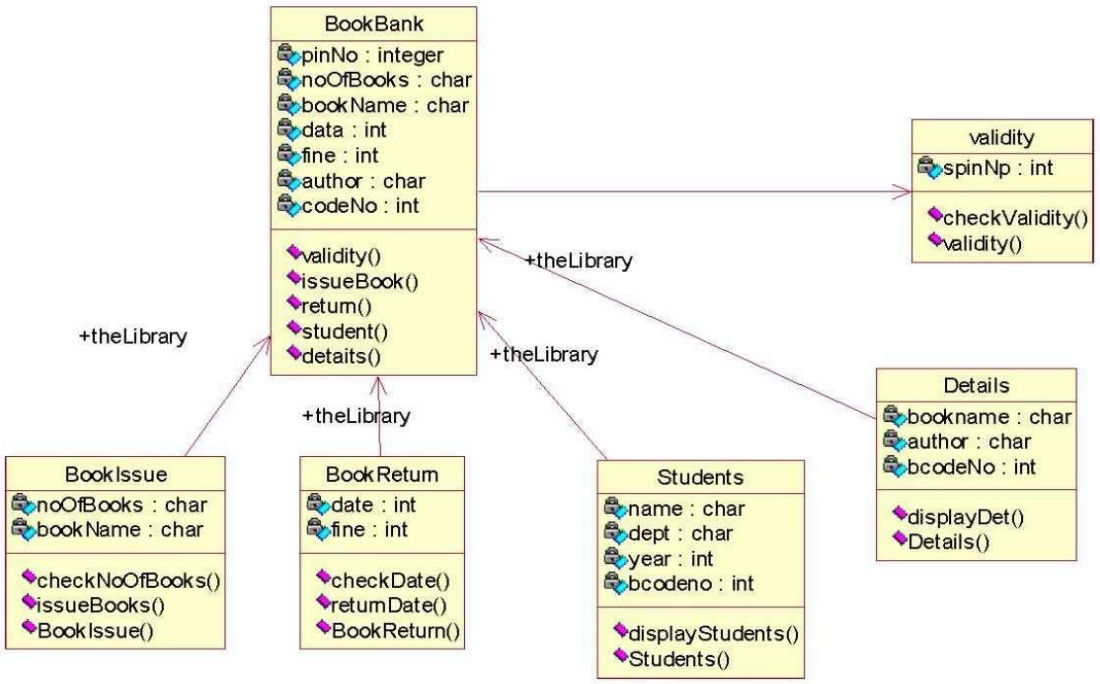
(III) USE-CASE DIAGRAM:



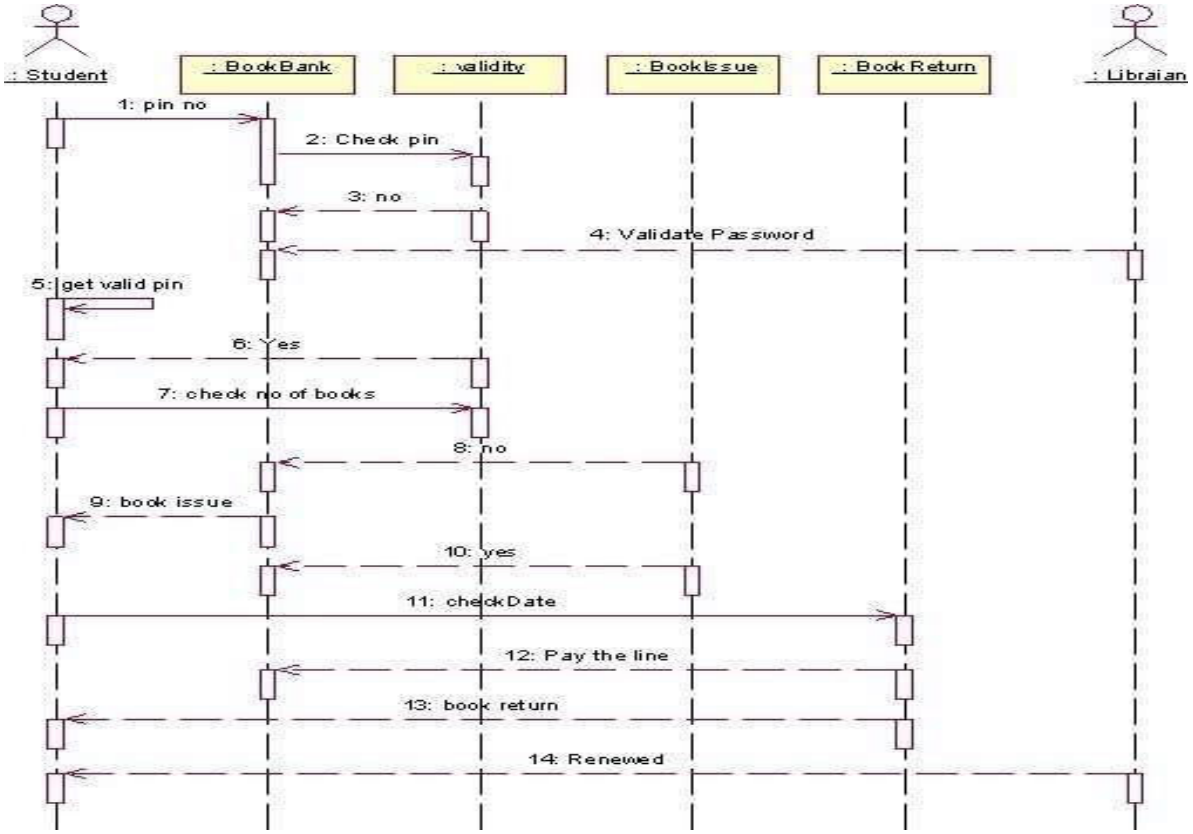
(IV) ACTIVITY DIAGRAM:

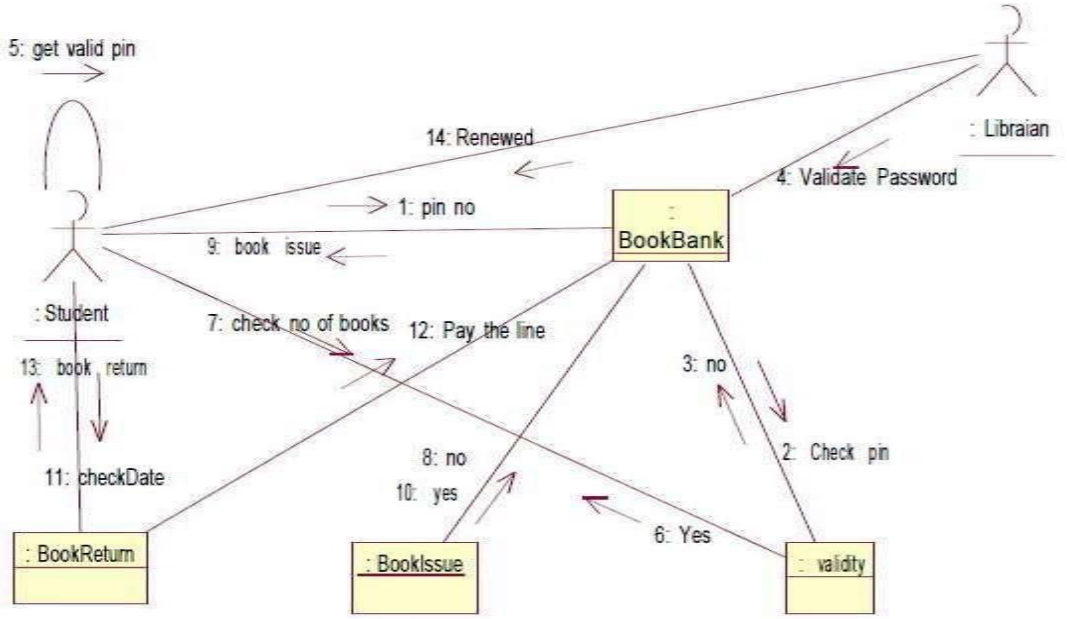


(V) CLASS DIAGRAM:

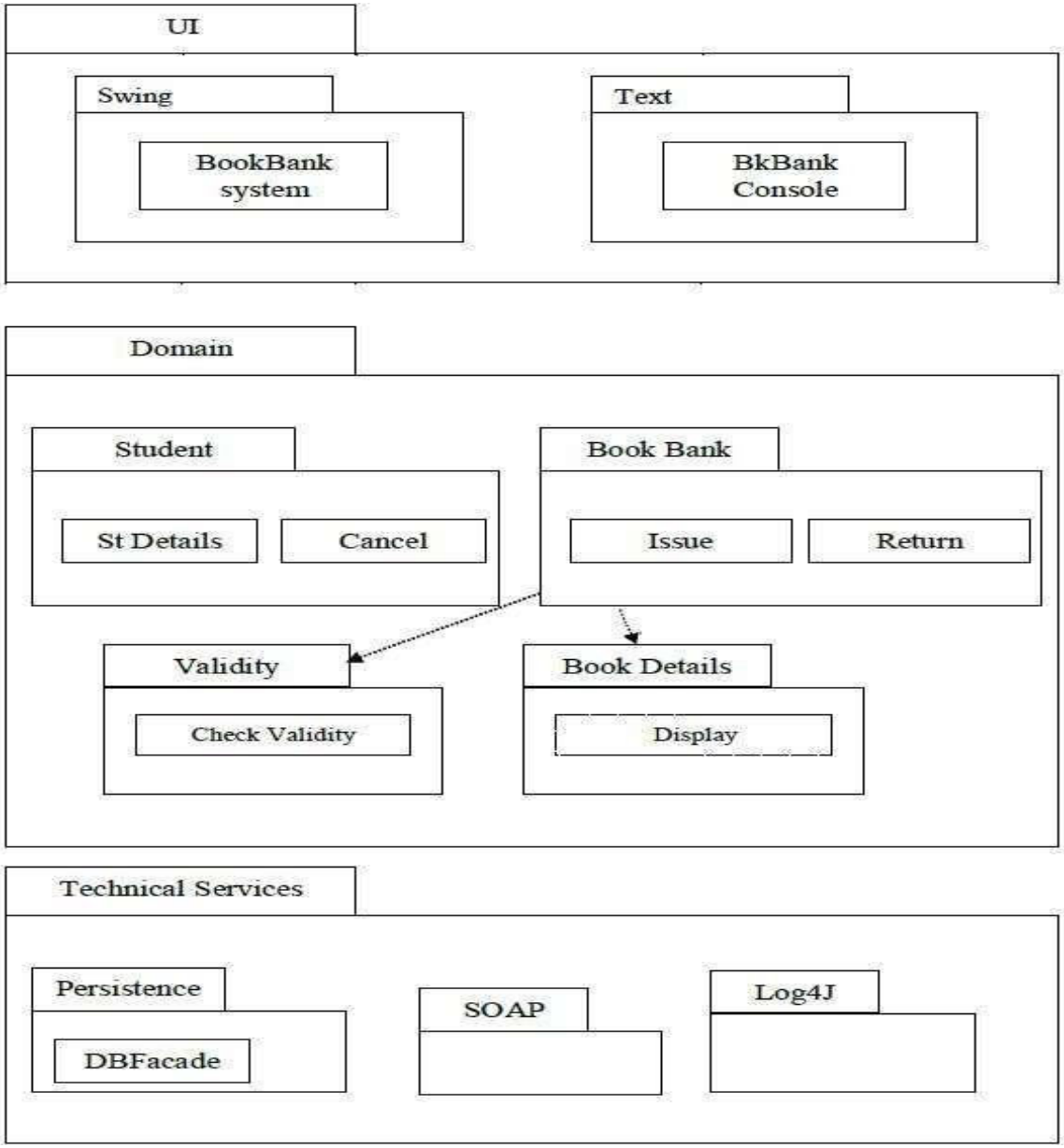


(VI) SEQUENCE DIAGRAM:



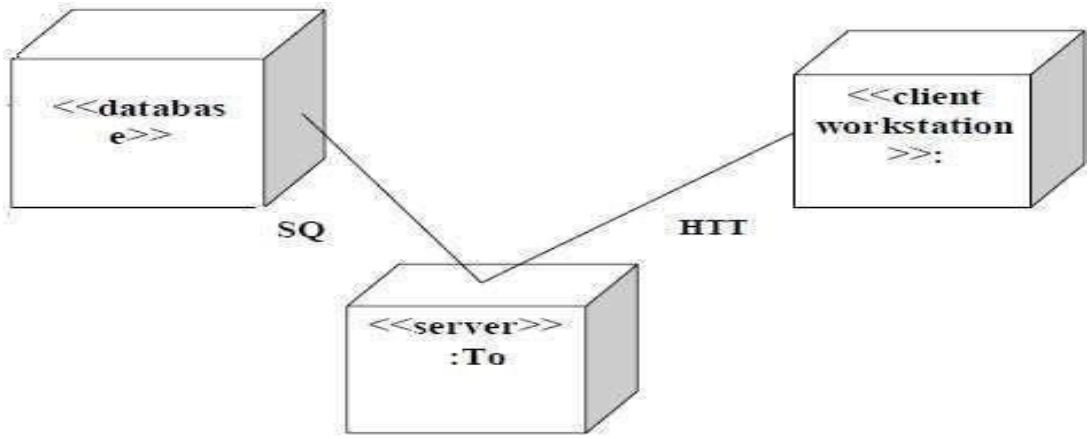


(VII) PARTIAL LAYERD LOGICAL ARCHITECTURE DIAGRAM:

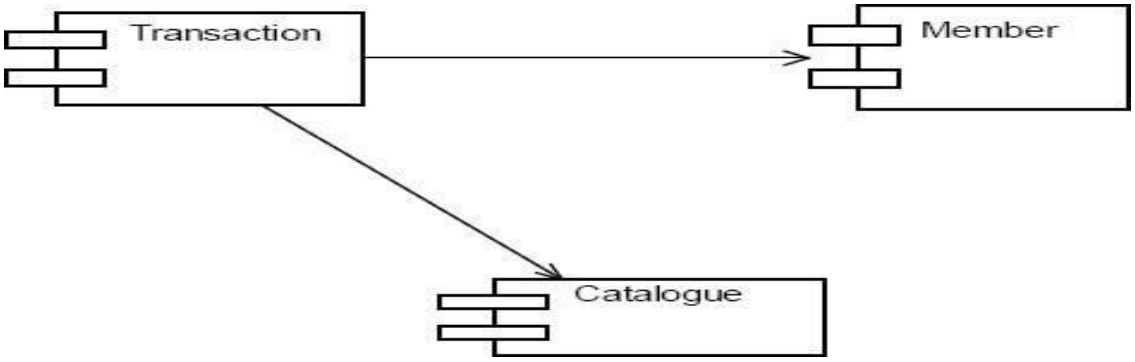


(VIII) DEPLOYMENT DIAGRAM AND COMPONENT DIAGRAM

DEPLOYMENT DIAGRAM



COMPONENT DIAGRAM



RESULT: thus, the mini project for book bank system has been successfully executed andcodes are generated.

EX.NO.4: EXAM REGISTRATION SYSTEM

AIM: to create a system to perform the exam registration system.

(I) PROBLEM STATEMENT:

Exam registration system.is used in the effective dispatch of registration form to all of the students. This system adopts a comprehensive approach to minimize the manual work and schedule resources, time in a cogent manner. The core of the system is to get the online registration form (with details such as name, reg.no etc.,) filled by the student whose testament is verified for its genuineness by the exam registration system with respect to the already existing information in the database.

(II) SOFTWARE REQUIREMENT SPECIFICATION:

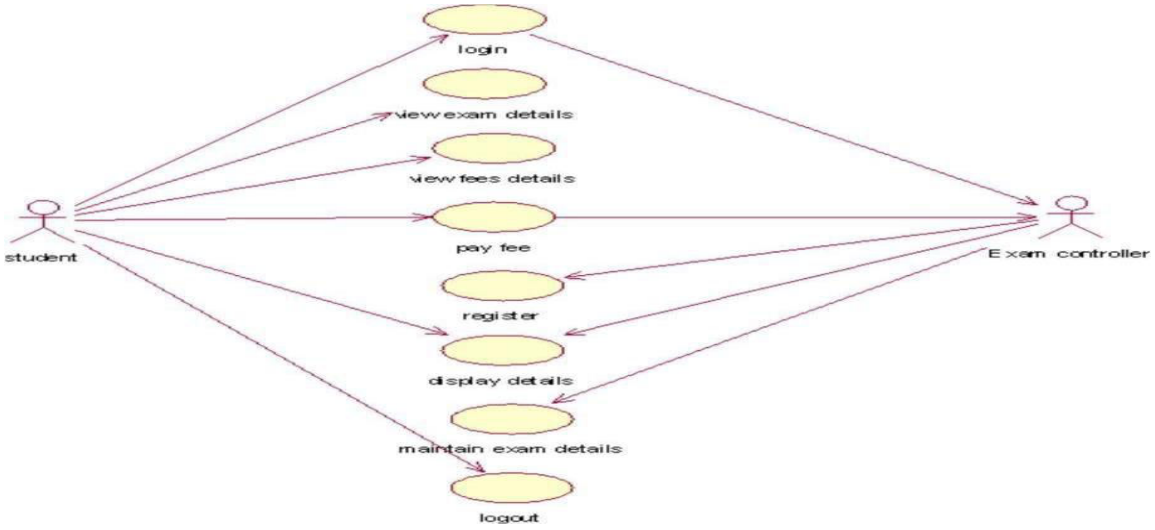
software interface

- Front end client - the student and controller online interface is built using jsp and html. The exam controller's local interface is built using java.
- Web server - glassfish application server(sqlcorporation).
- Back end - sql database.

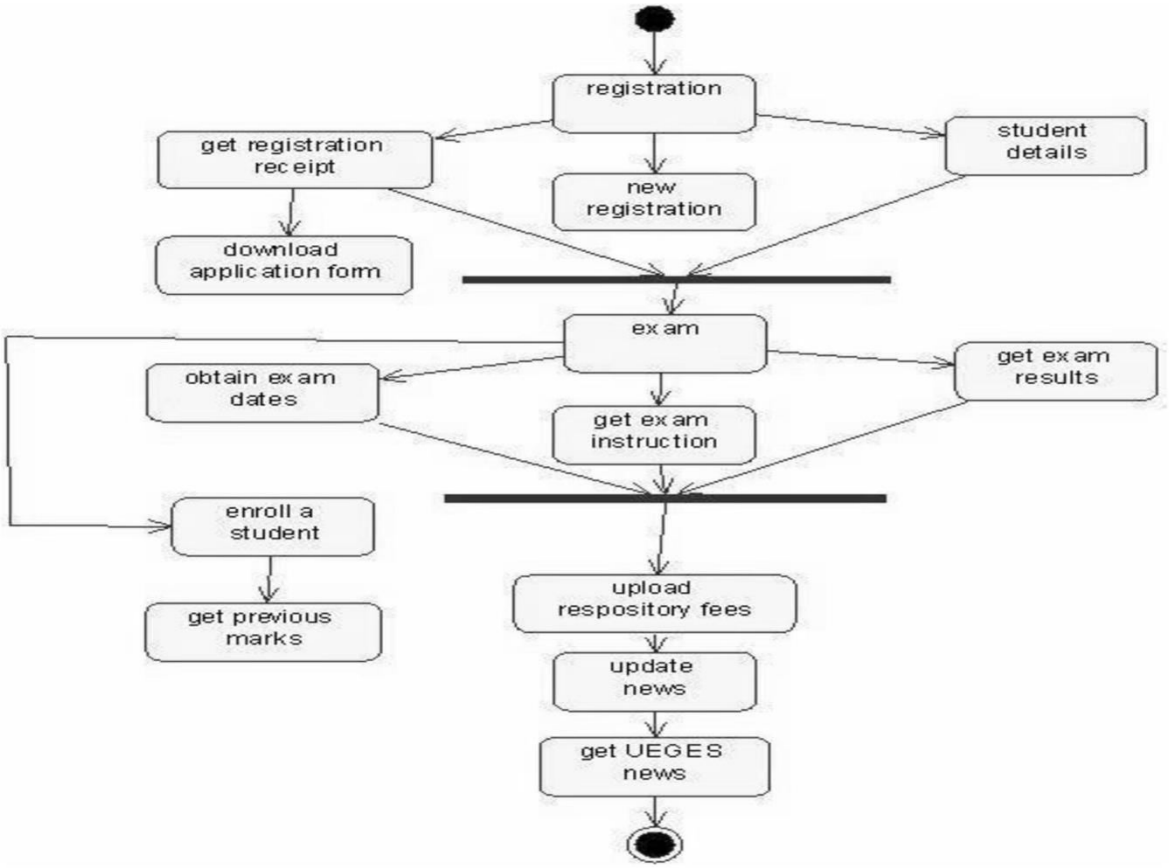
2.2hardware interface

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

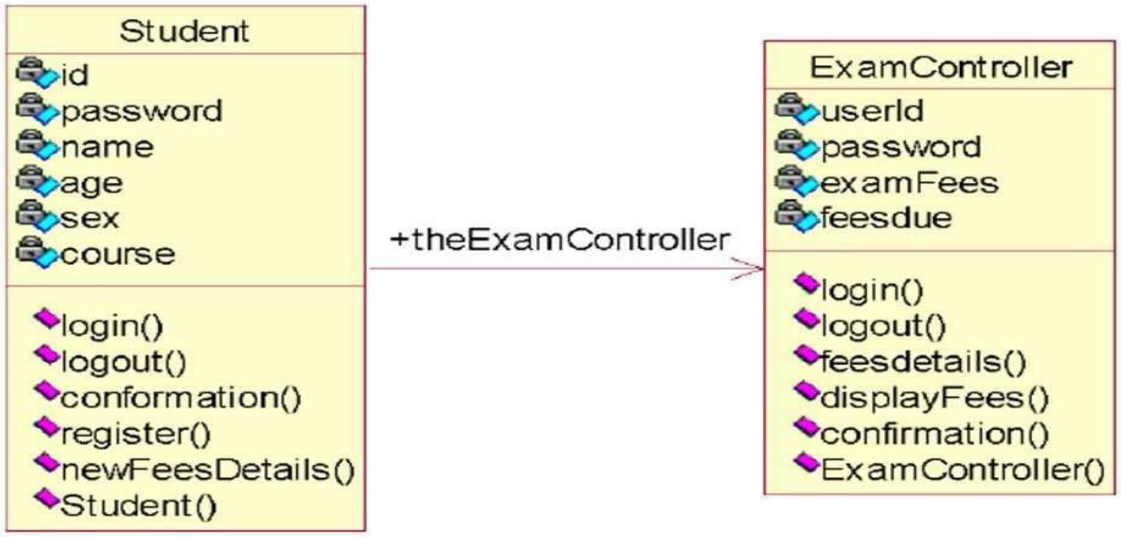
(III) USECASE DIAGRAM:



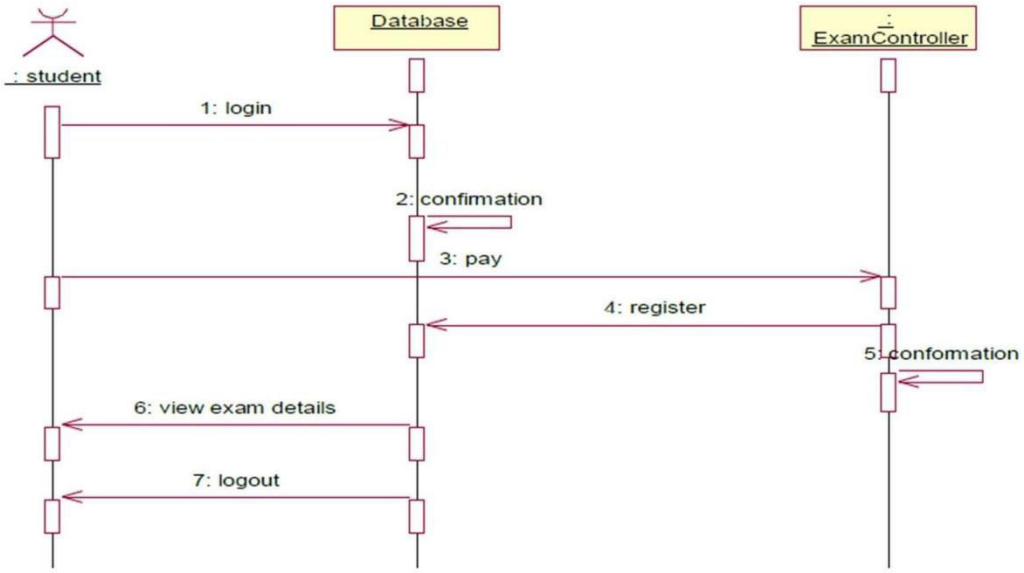
(IV) ACTIVITY DIAGRAM:

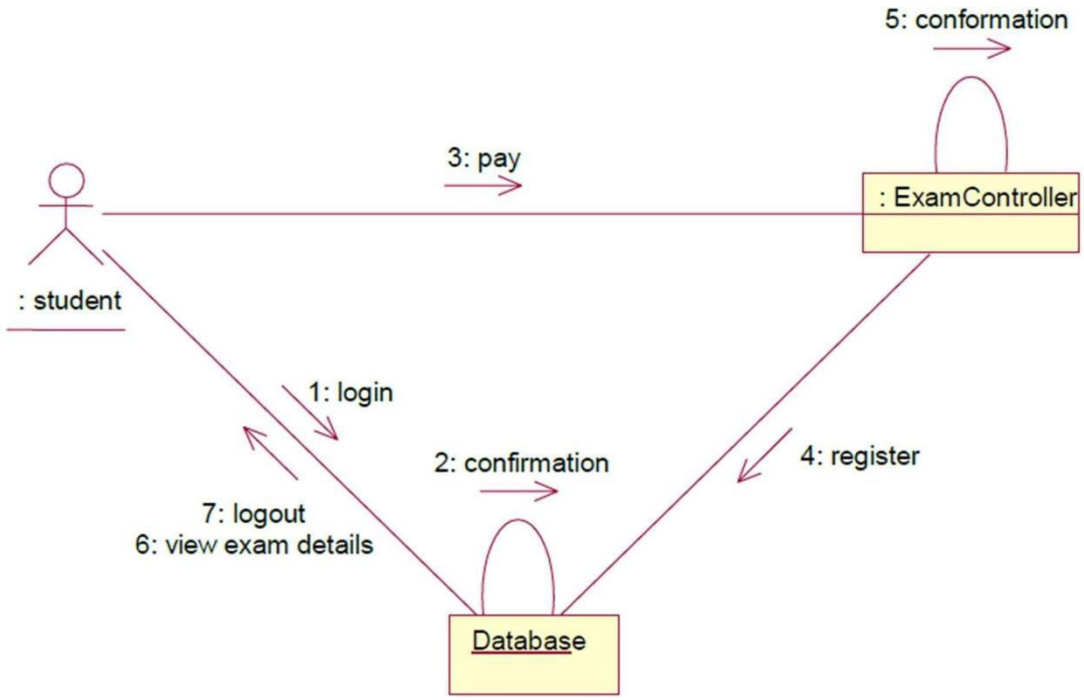


(V) CLASS DIAGRAM:

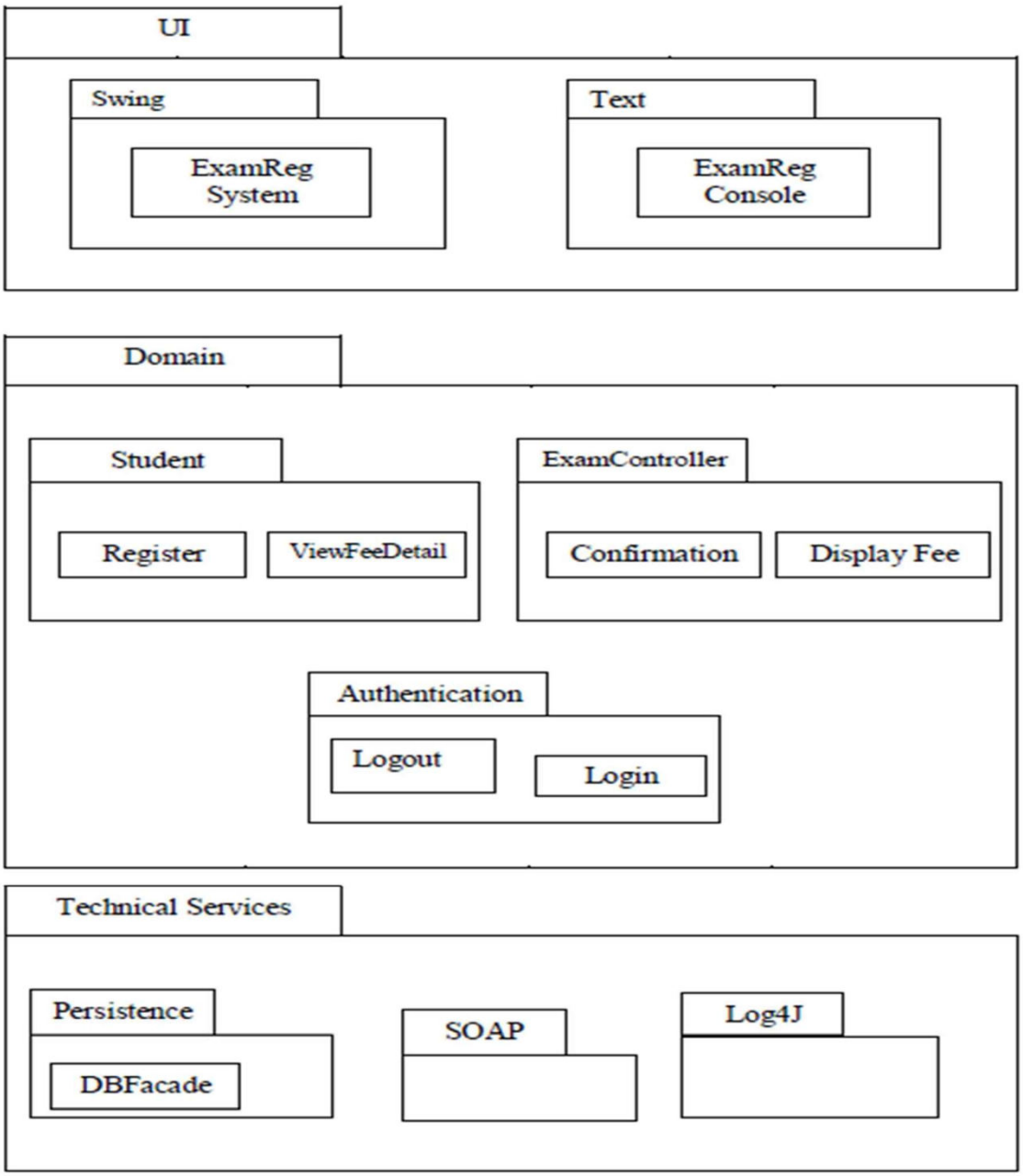


(VI) INTERACTION DIAGRAM:



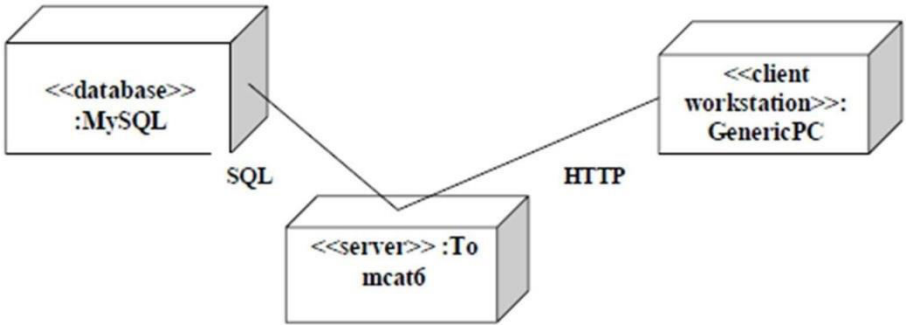


(VII) PARTIAL LAYER LOGICAL ARCHITECTURE DIAGRAM:

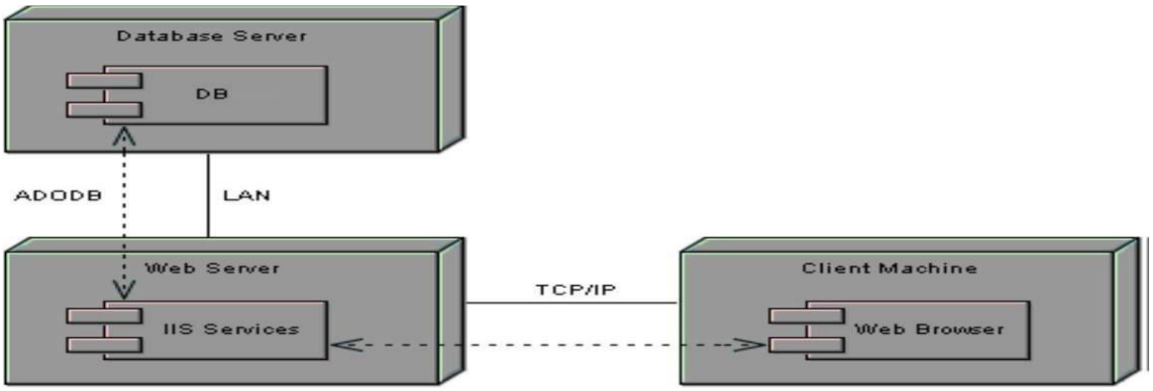


(VIII) DEPLOYMENT DIAGRAM AND COMPONENT DIAGRAM

DEPLOYMENT DIAGRAM



COMPONENT DIAGRAM



RESULT: thus, the mini project for exam registration system has been successfullyexecuted and codes are generated.

EX.NO.5: STOCK MAINTENANCE

AIM: to create a system to perform the stock maintenance

(I) PROBLEM STATEMENT

The stock maintenance system must take care of sales information of the company and must analyze the potential of the trade. It maintains the number of items that are added or removed.the sales person initiates this use case. The sales person is allowed to update information and view the database.

(II) SOFTWARE REQUIREMENT SPECIFICATION

Purpose

The entire process of stock maintenanceis done in a manual manner considering the fact that the number of customers for purchase is increasing every year, a maintenance system isessential to meet the demand. So this system uses several programming and database techniques to elucidate the work involved in this process.

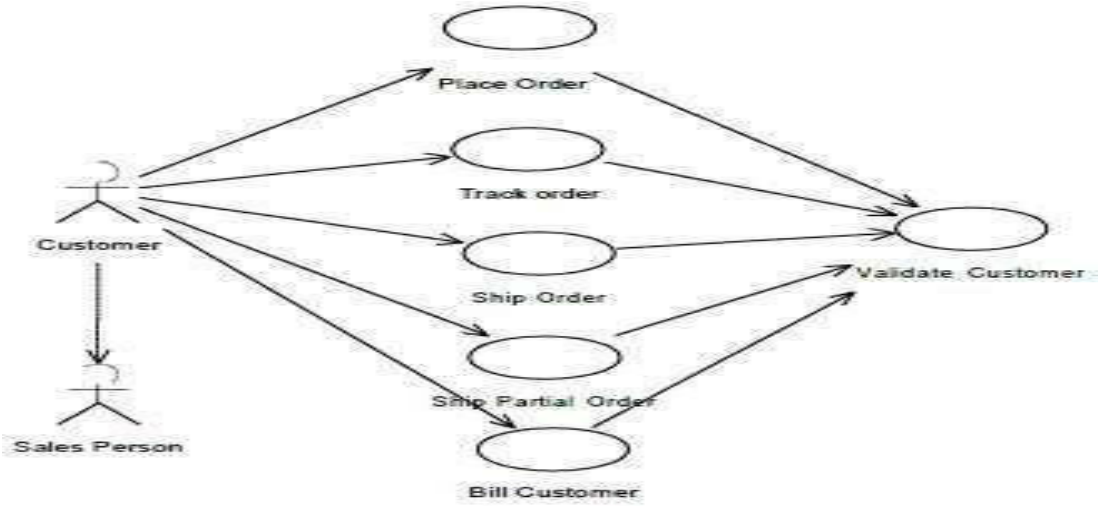
Scope

- The system provides an interface to the customer where they can fill in orders for the item needed.
- The sales person is concerned with the issue of items and can use this system.
- Provide a communication platform between the customer and the sales person.

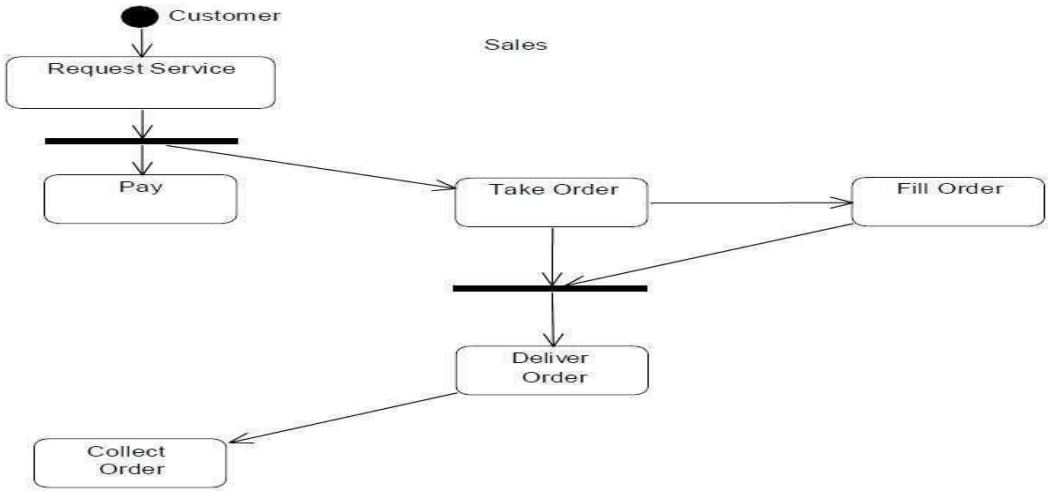
Tools to be used

- Eclipse ide (integrated development environment)
- Rational rose tool (for developing uml patterns)

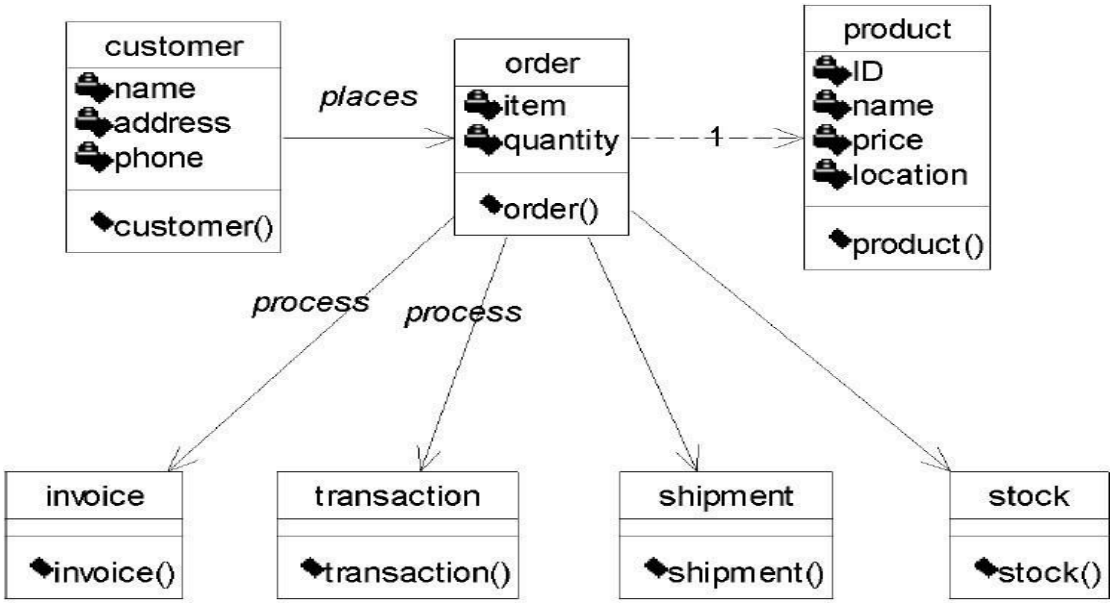
(III) USE CASE DIAGRAM



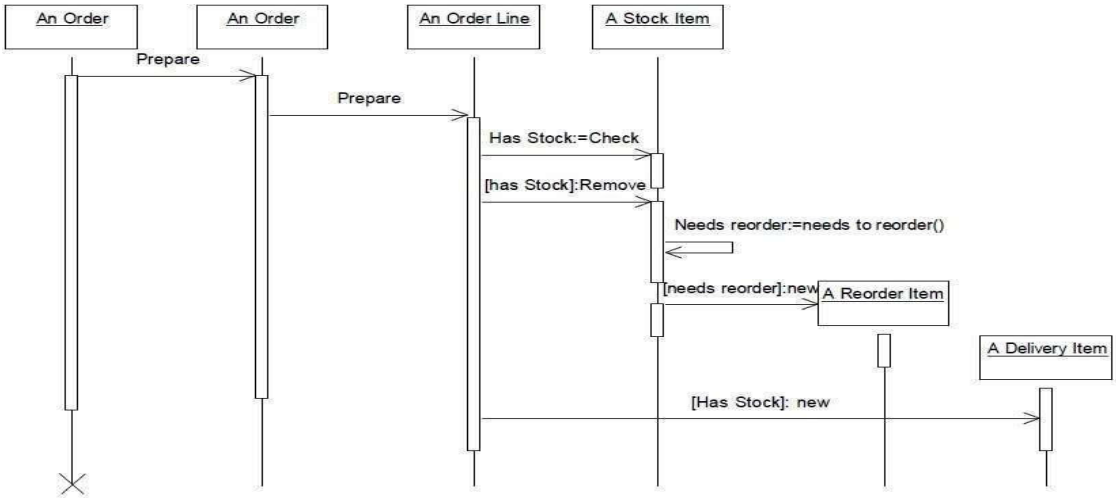
(IV) ACTIVITY DIAGRAM



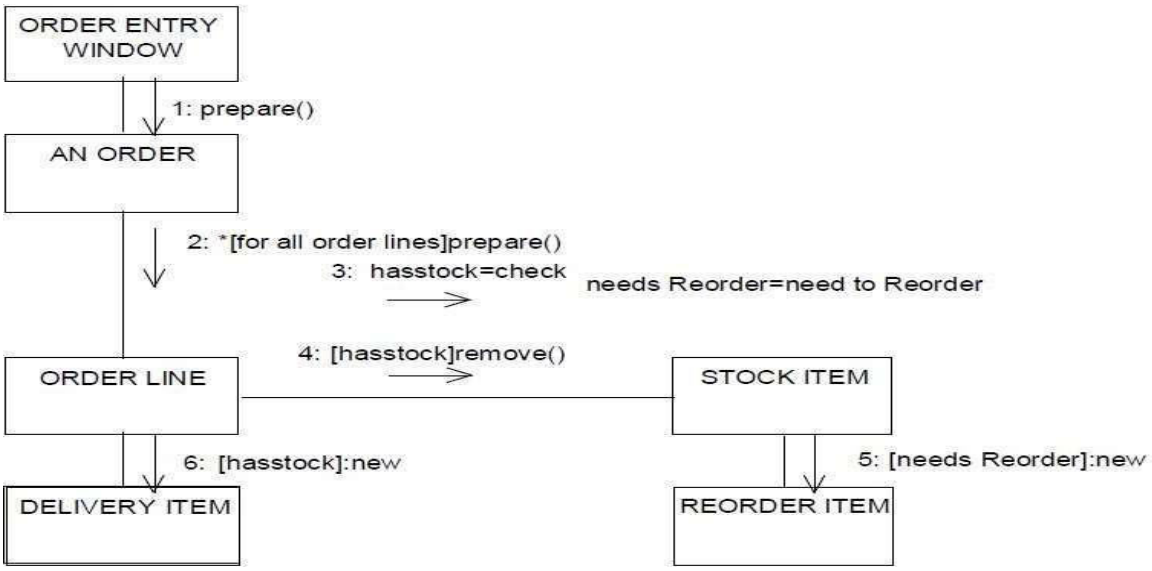
(V) CLASS DIAGRAM



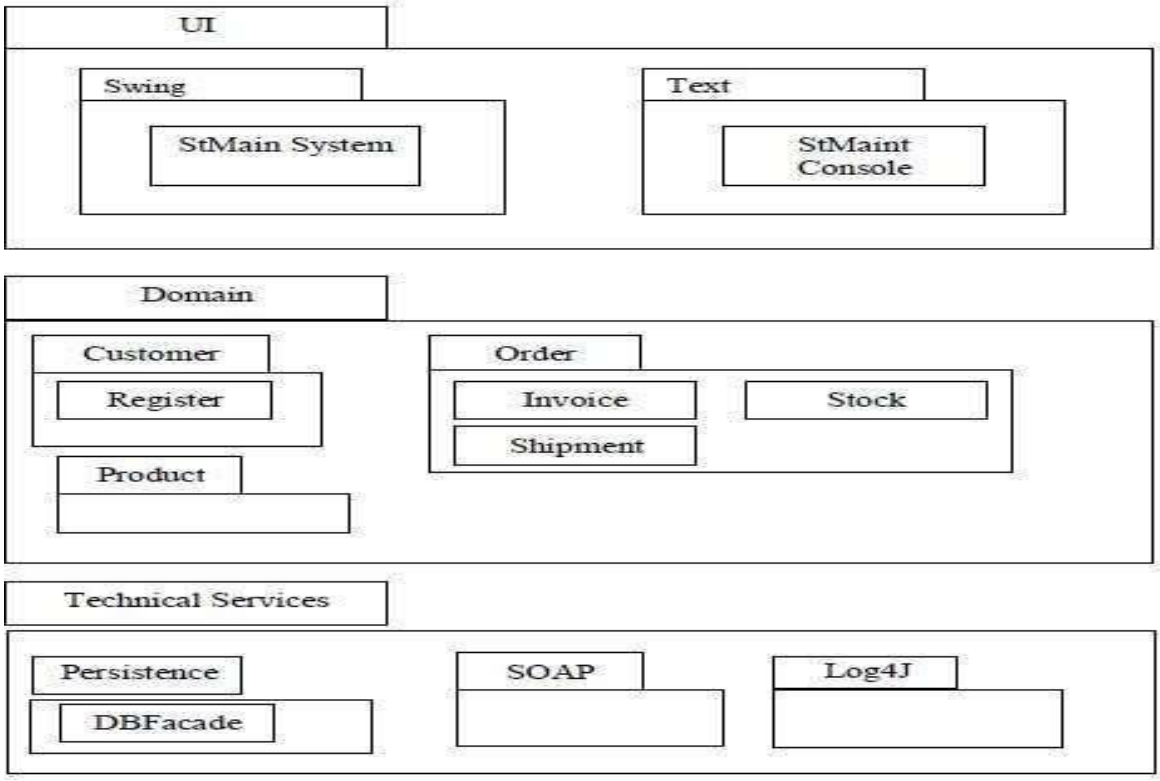
(VI) UML INTERACTION DIAGRAMS



COLLABORATION DIAGRAM

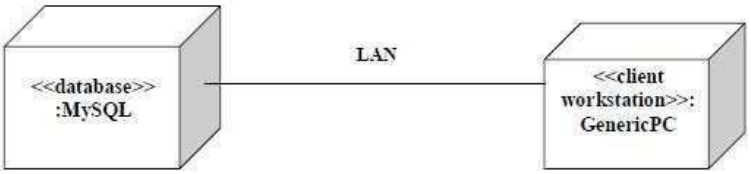


(VII) PARTIAL LAYERD LOGICAL ARCHITECTURE DIAGRAM

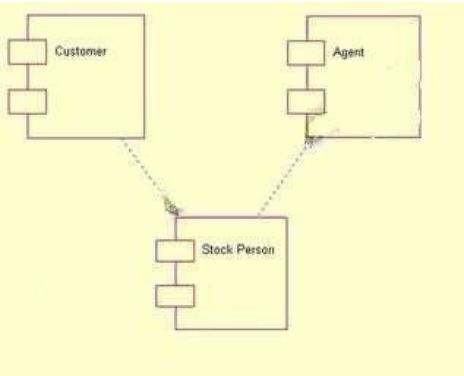


(VIII) DEPLOYMENT DIAGRAM AND COMPONENT DIAGRAM

DEPLOYMENT DIAGRAMS



COMPONENT DIAGRAM



RESULT: thus, the mini project for stock maintenance system has been successfullyexecuted and codes are generated.

EX.NO.6: ONLINE COURSE RESERVATION SYSTEM

AIM: to design an object oriented model for course reservation system.

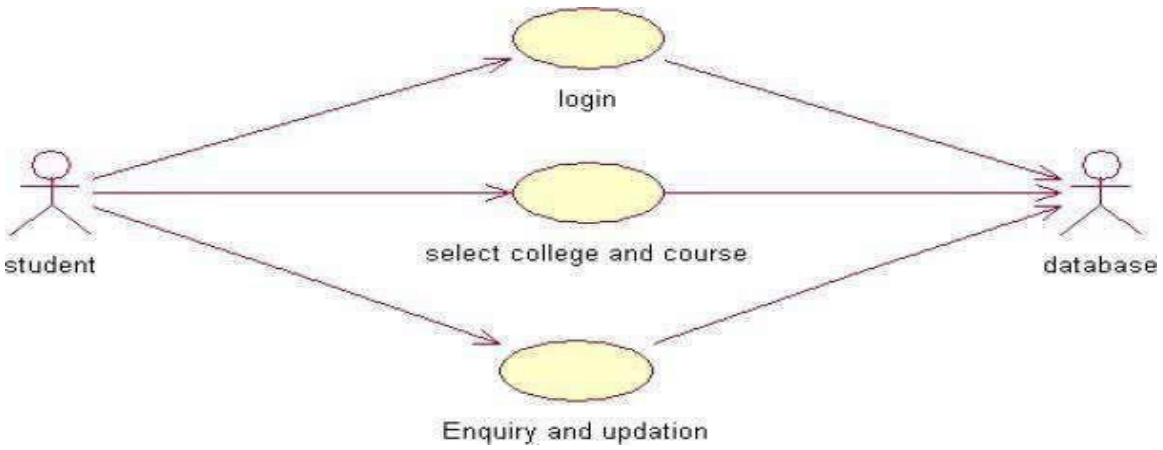
(I) PROBLEM STATEMENT

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

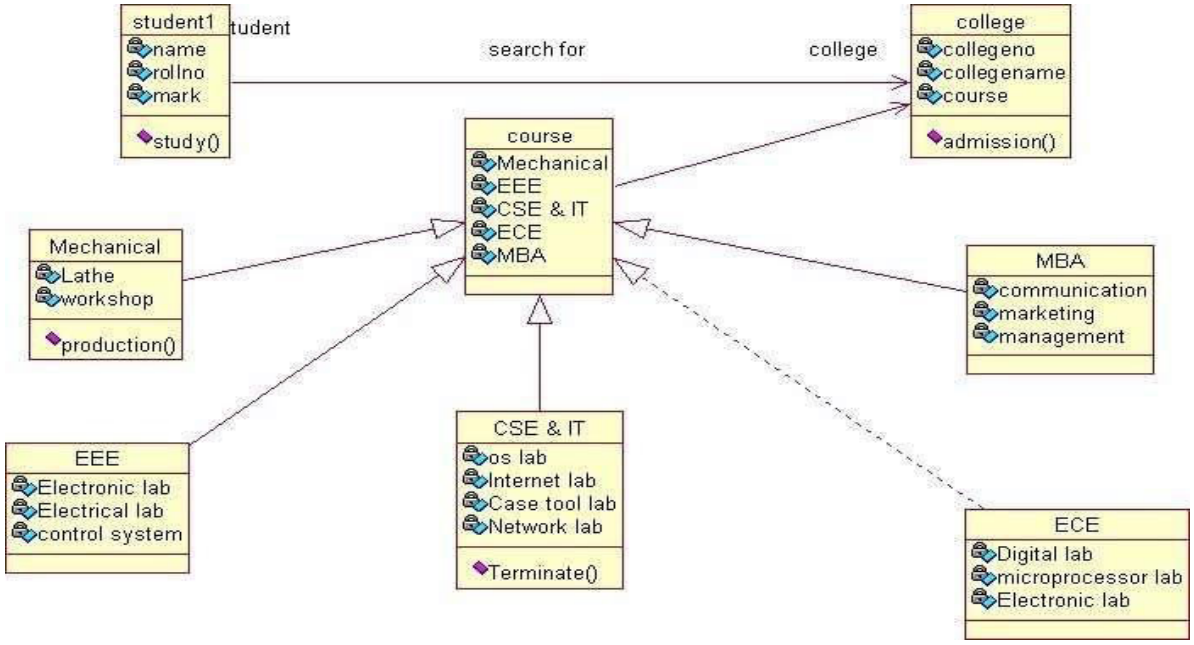
(II) SYSTEM REQUIEMENT SPECIFICATION

- Objectives
  - 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.
  - In this specification, we define about the system requirements that are about from the functionality of the system.
- Scope
  - It specifies the requirement to develop a processing software part that completes the set of requirement.
  - 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

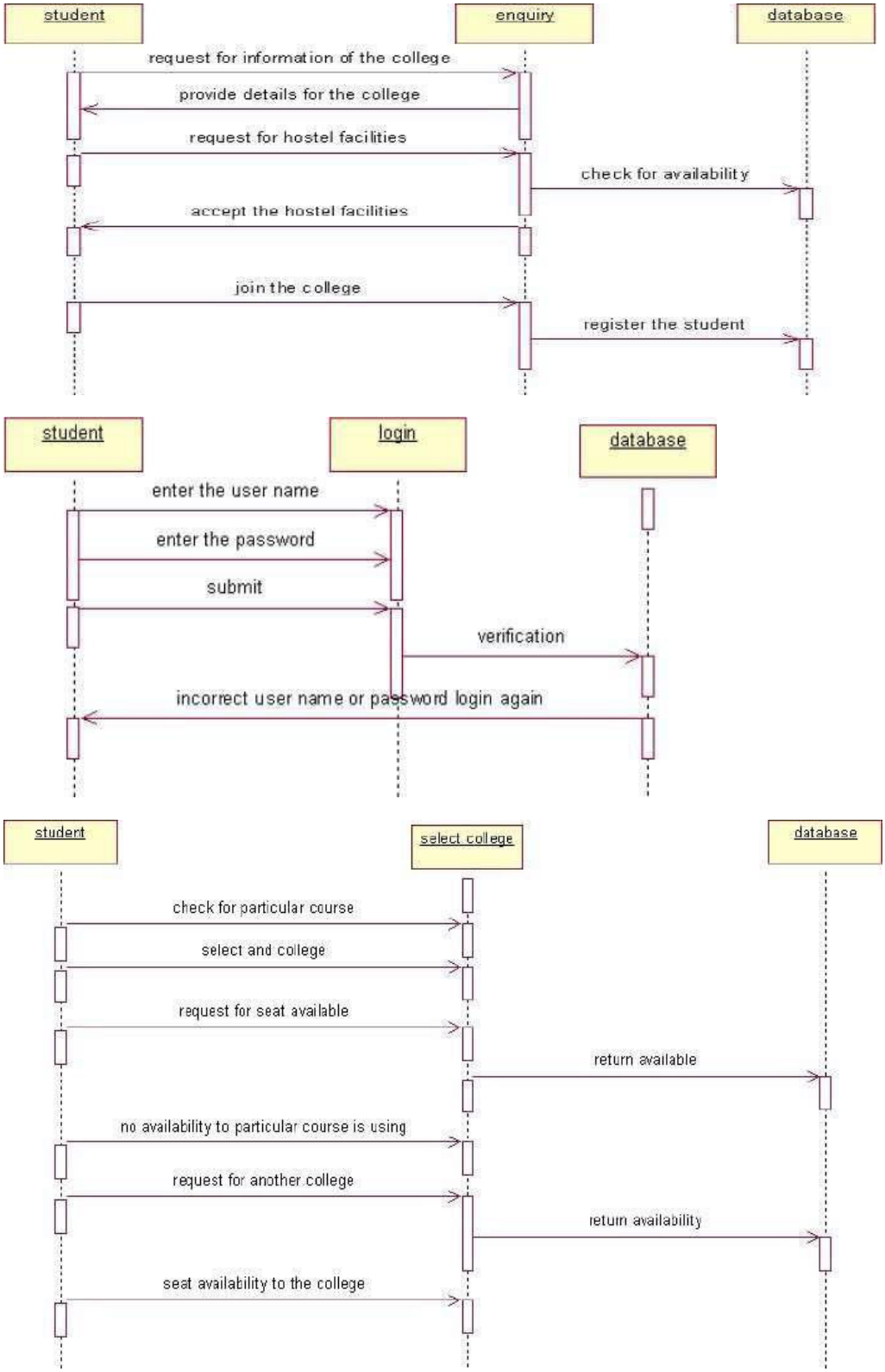
(III) USERCASE DIAGRAM



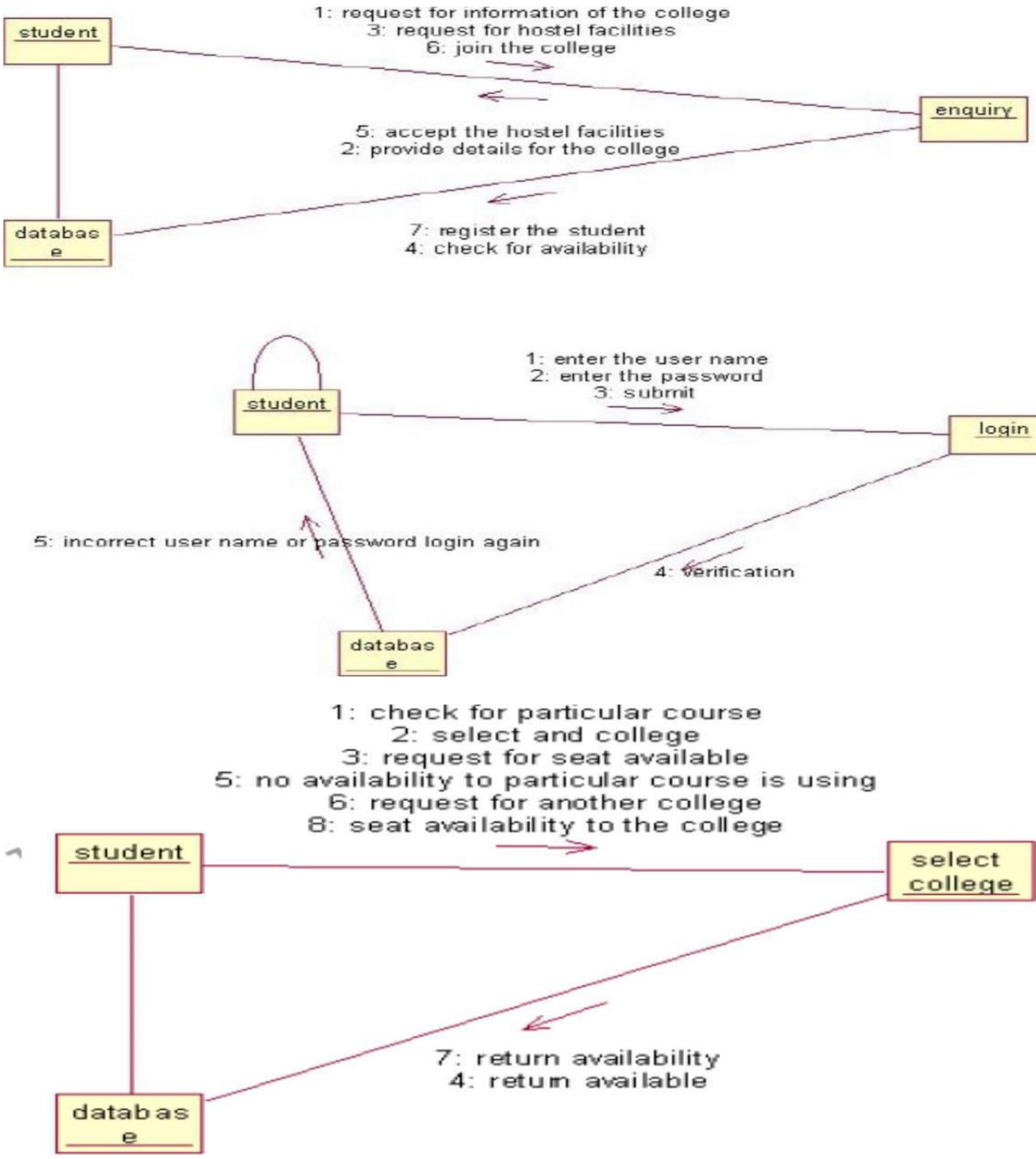
CLASS DIAGRAM:



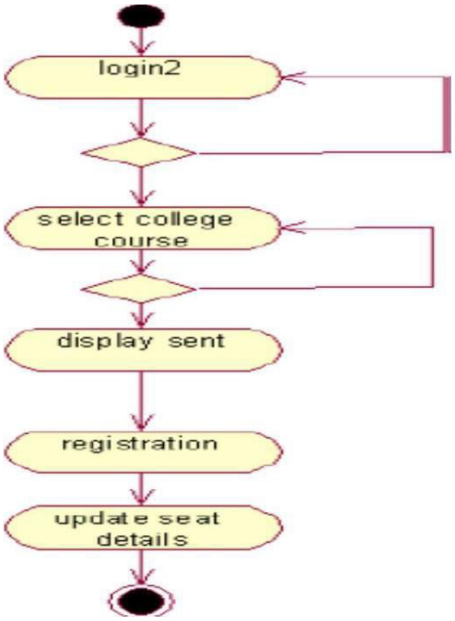
SEQUENCE DIAGRAM



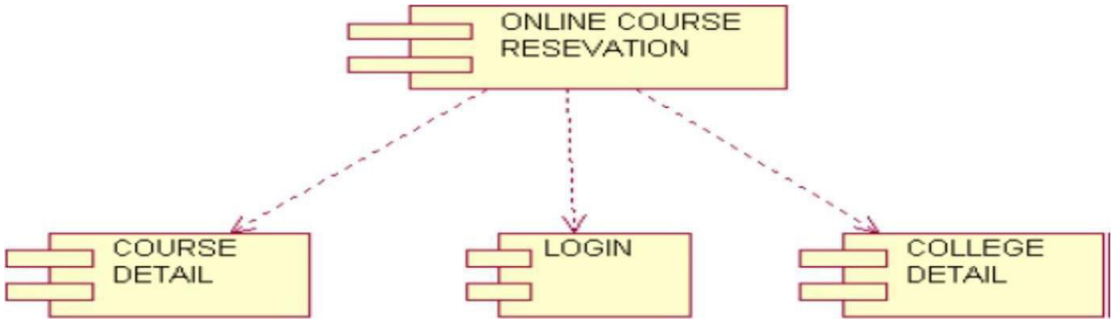
COLLABORATION DIAGRAM



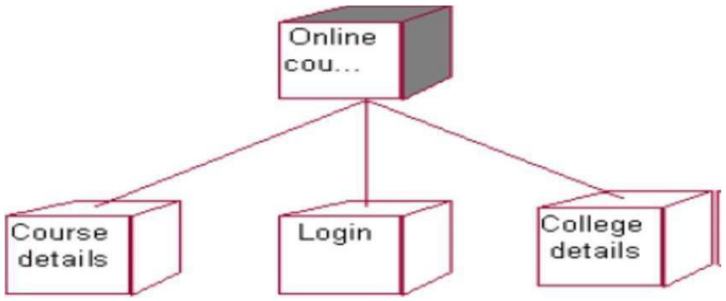
ACTIVIY DIAGRAM



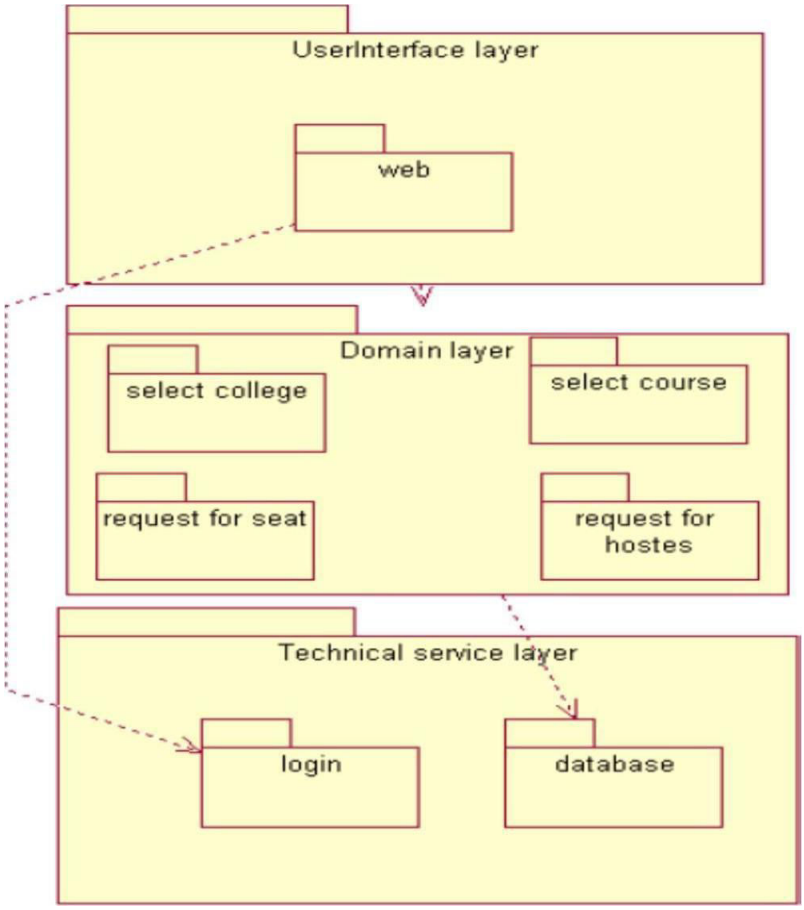
COMPONENT DIAGRAM



DEPLOYMENT DIAGRAM



PACKAGE DIAGRAM



RESULT: Thus the mini project for online course reservation system has beensuccessfully executed and codes are generated.

EX.NO.7: AIRLINE/RAILWAY RESERVATION SYSTEM

AIM: to develop the airline/railway reservation system.

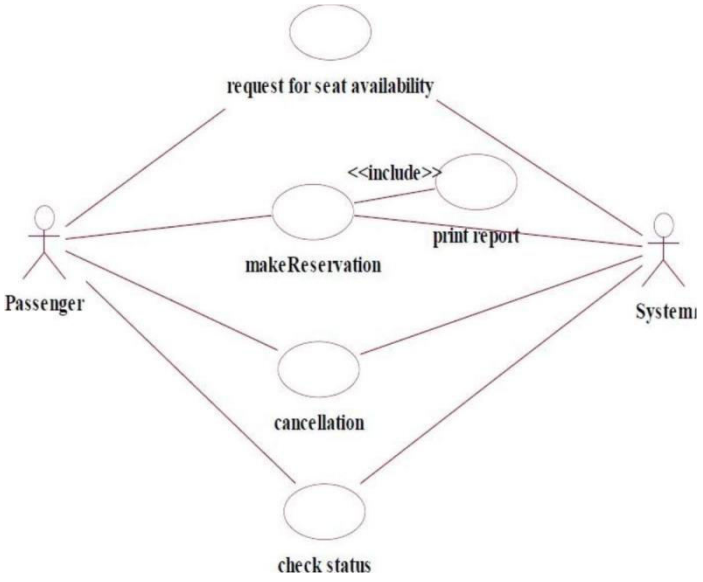
(I) PROBLEM ANALYSIS AND PROJECT PLANNING

In the airline/railway reservation 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.

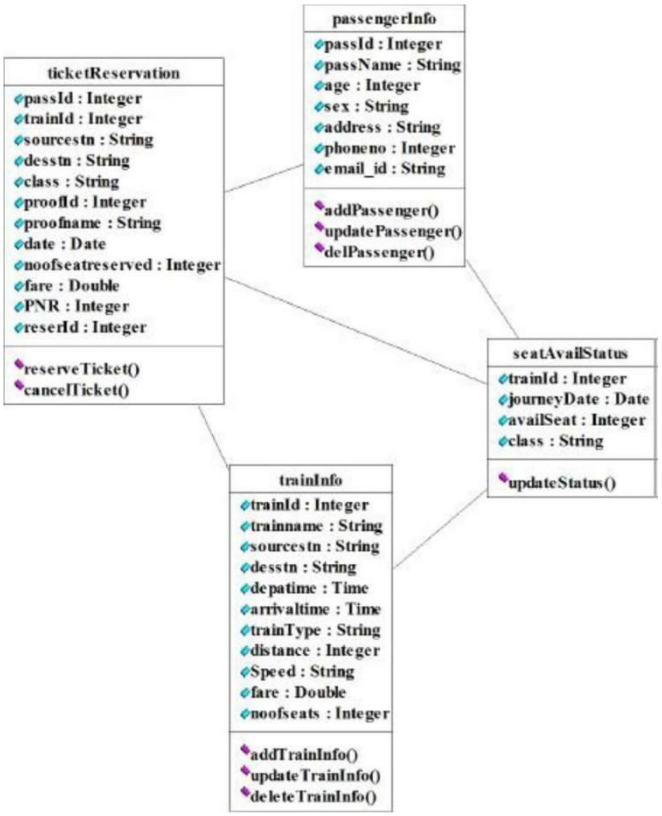
(II) OVERALL DESCRIPTION

- 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.

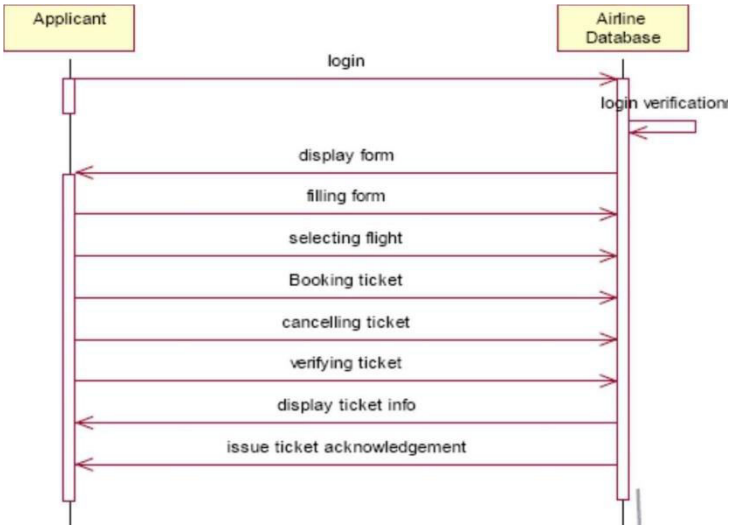
(III) USE CASE DIAGRAM



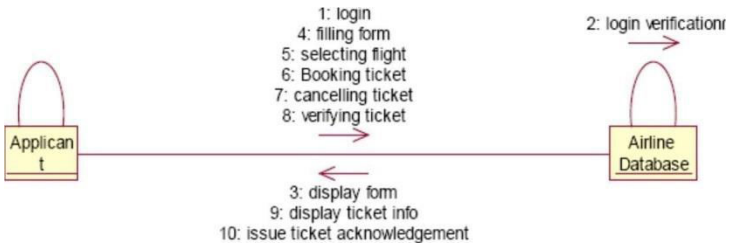
(IV) CLASS DIAGRAM



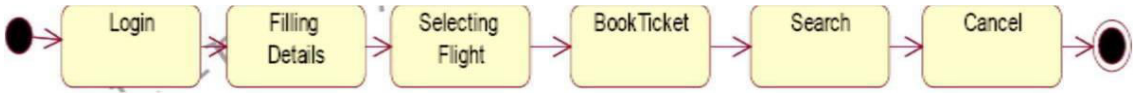
SEQUENCE DIAGRAM



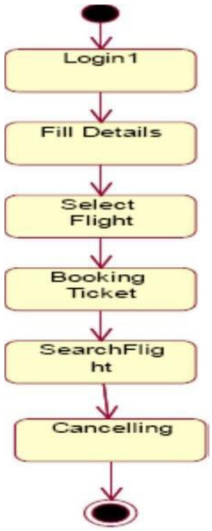
COLLABRATION DIAGRAM



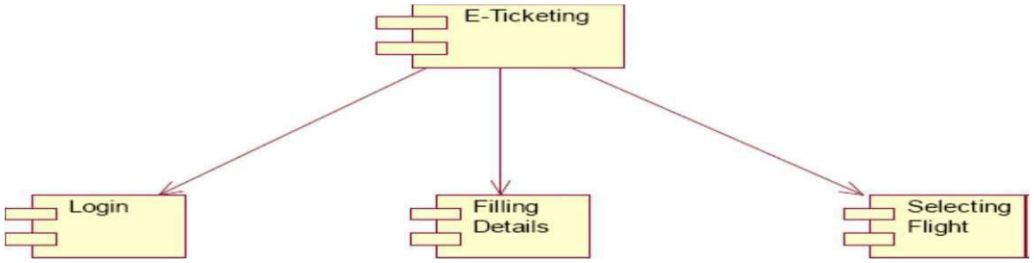
STATE CHART DIAGRAM



ACTIVITY DIAGRAM



COMPONENT DIAGRAM



RESULT: Thus the mini project for airline/railway reservation system has beensuccessfully executed and codes are generated.

EX.NO.8: SOFTWARE PERSONNEL MANAGEMENT SYSTEM

AIM: to implement a software for software personnel management system.

(I) PROBLEM STATEMENT:

Human resource management system project involves new and/or system upgrades of software of send to capture information relating to the hiring termination payment and management of employee. He uses system to plan and analyze all components and performance of metrics driven human resource functions, including recruitment, attendance, compensation, benefits and education. Human resources management systems should align for maximum operating efficiency with financial accounting operations customer relationship management, security and business lines as organization.

(II) SOFTWARE REQUIREMENT SPECIFICATION:

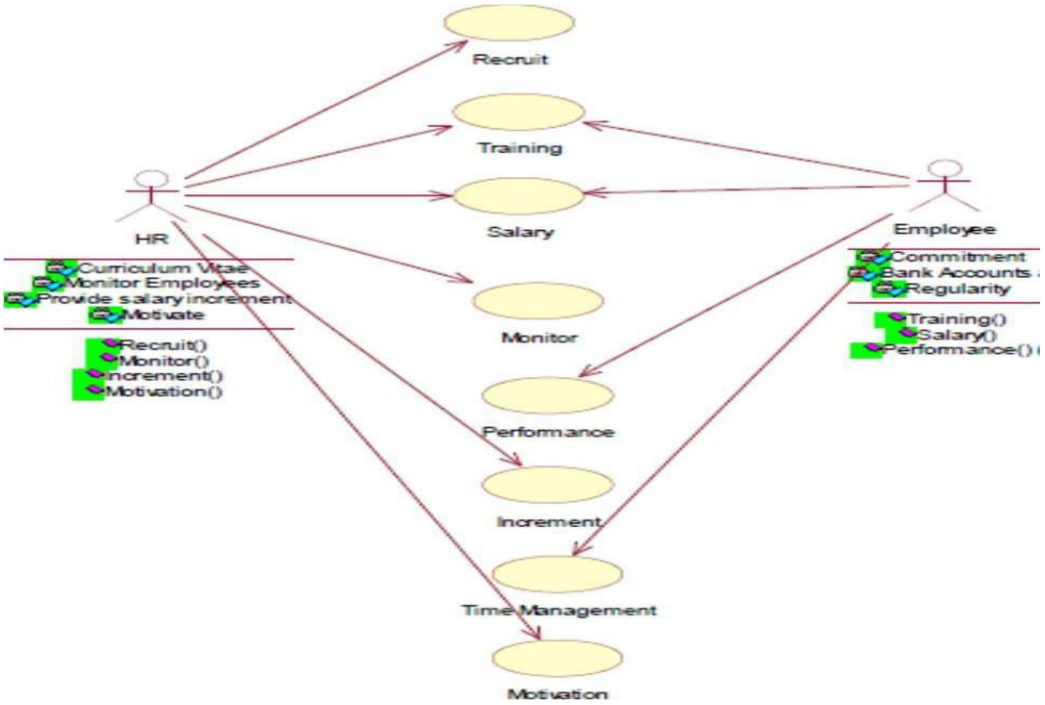
software interface

- Front end client - the applicant and administrator online interface is built using jsp and html. The hr's local interface is built using java.
- Server - glassfish application server(sql corporation).
- Back end - sql database.

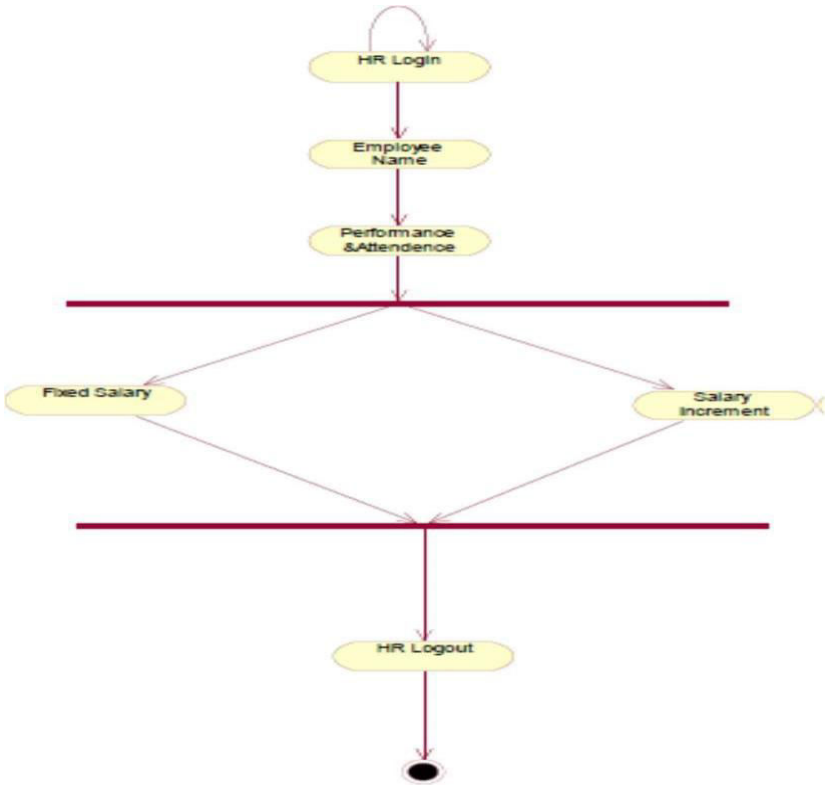
2.2hardware interface

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

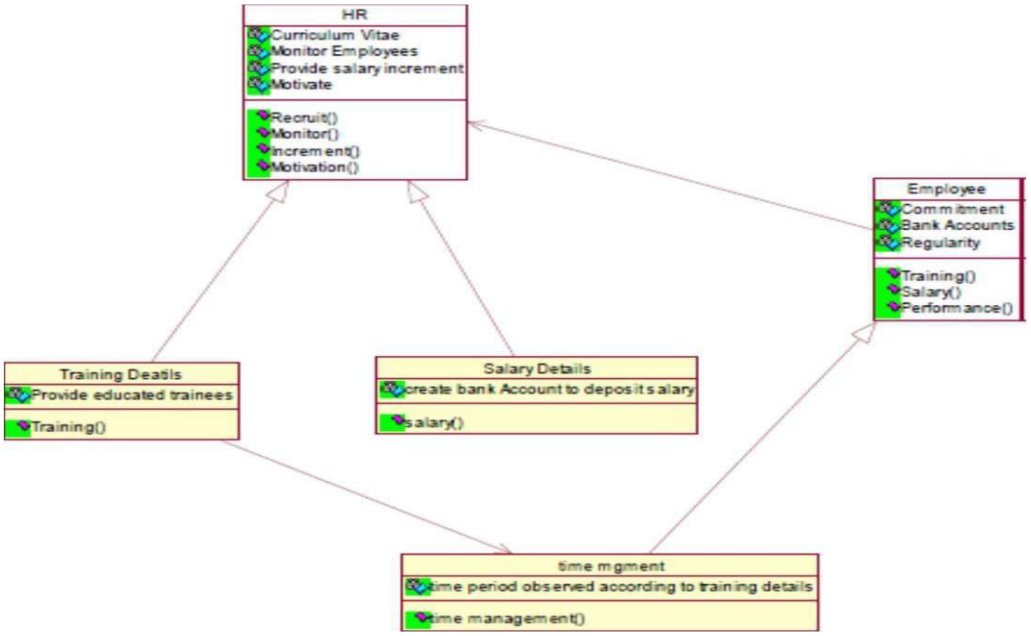
(III) USECASE DIAGRAM:



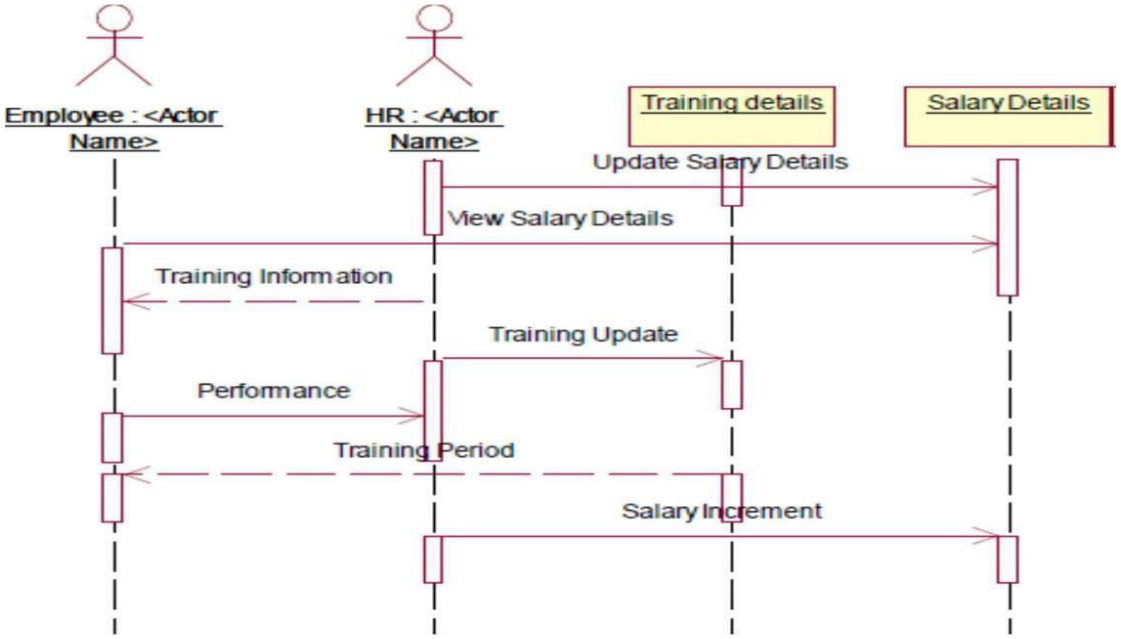
(IV) ACTIVITY DIAGRAM:



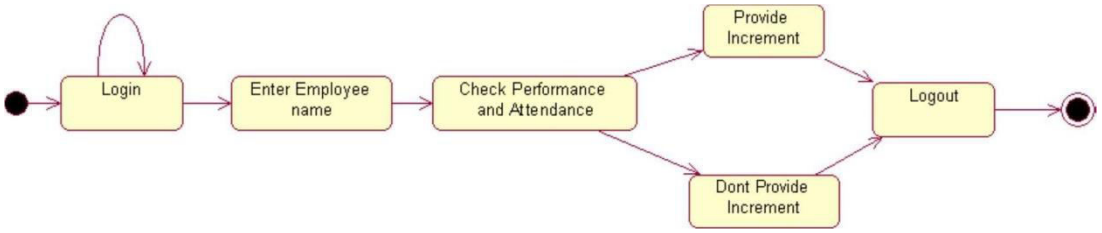
(V) CLASS DIAGRAM:



(VI) INTERACTION DIAGRAM:

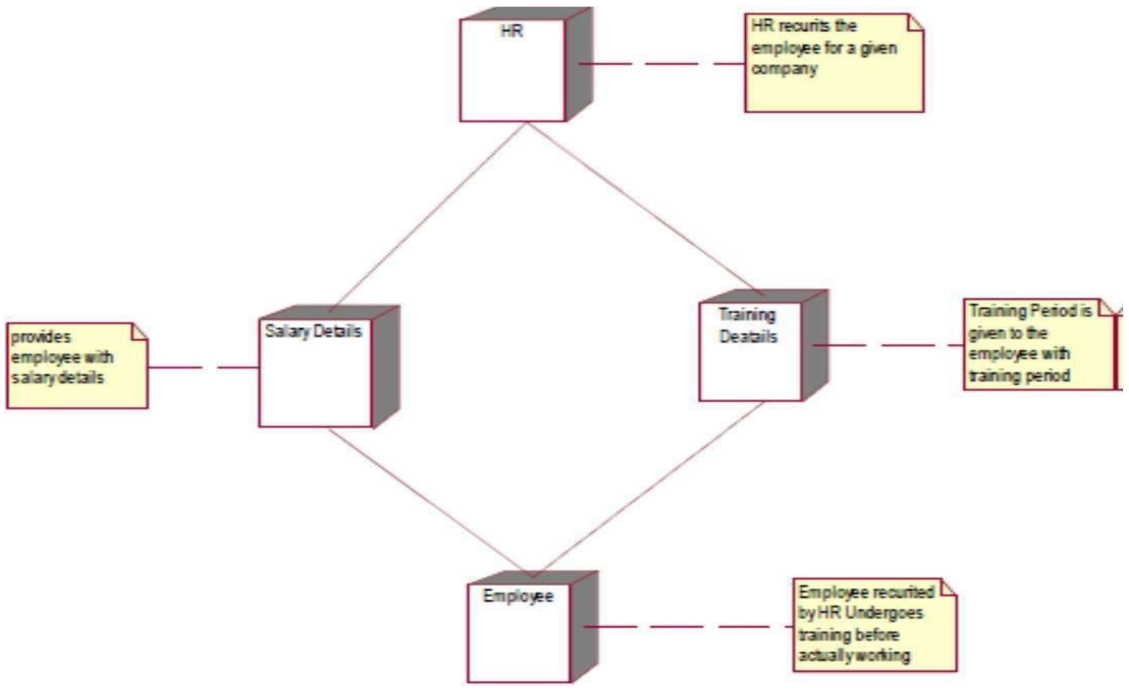


(VII) STATE TRANSITION DIAGRAM

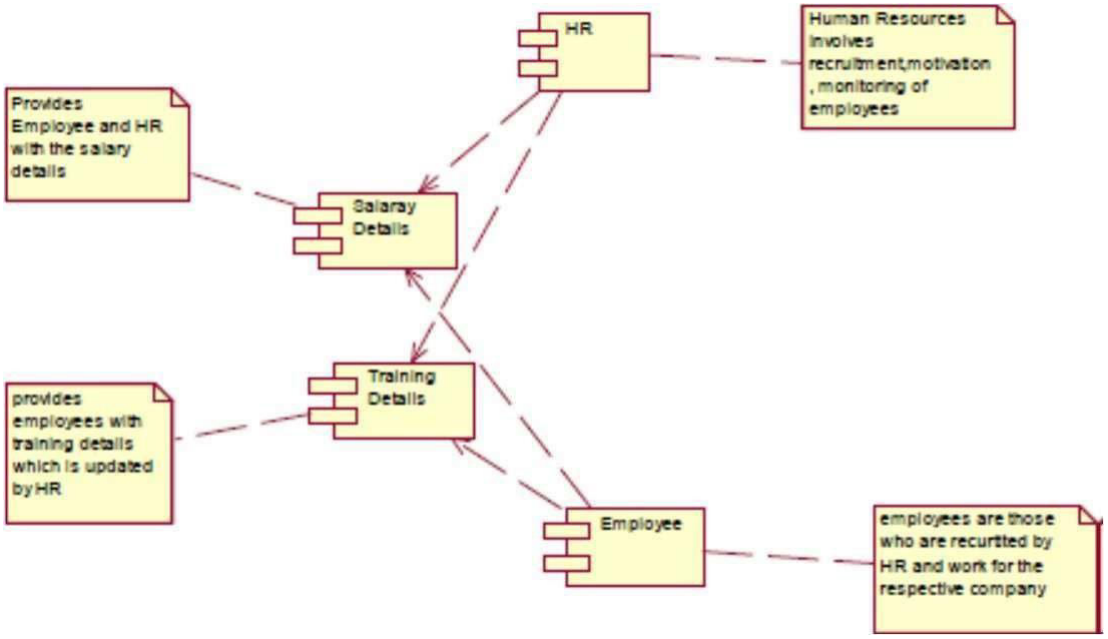


(VIII) DEPLOYMENT DIAGRAM AND COMPONENT DIAGRAM

DEPLOYMENT DIAGRAM



COMPONENT DIAGRAM



RESULT: Thus the mini project for software personnel management system has been successfully executed and codes are generated.

EX.NO.9: CREDIT CARD PROCESSING

AIM: to create a system to perform the credit card processing

(I) PROBLEM STATEMENT:

Credit card processing through offline involves the merchant collecting order information (including credit card numbers), storing this in a database on your site, and entering it using their on-site merchant credit card processing system. Takes time to manually enter credit card information for each order. This solution creates following cons:

(II) SOFTWARE REQUIREMENT SPECIFICATION:

Product Perspective

This solution involves signing up for a free business account. Once this is done and the e-commerce site is properly configured, you can accept payments from visa, mastercard, amex, and discover cards payments.

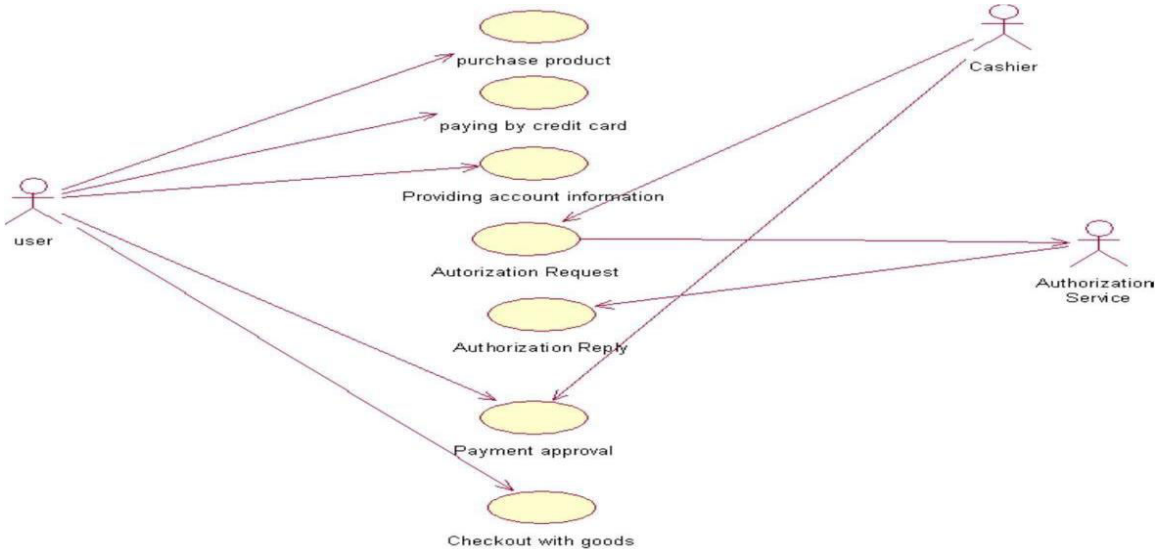
Software interface

- Front end client - the applicant and administrator online interface is built using jsp and html. The administrators's local interface is built using java.
- Web server - glassfish application server(sql corporation).
- Back end - sql database.

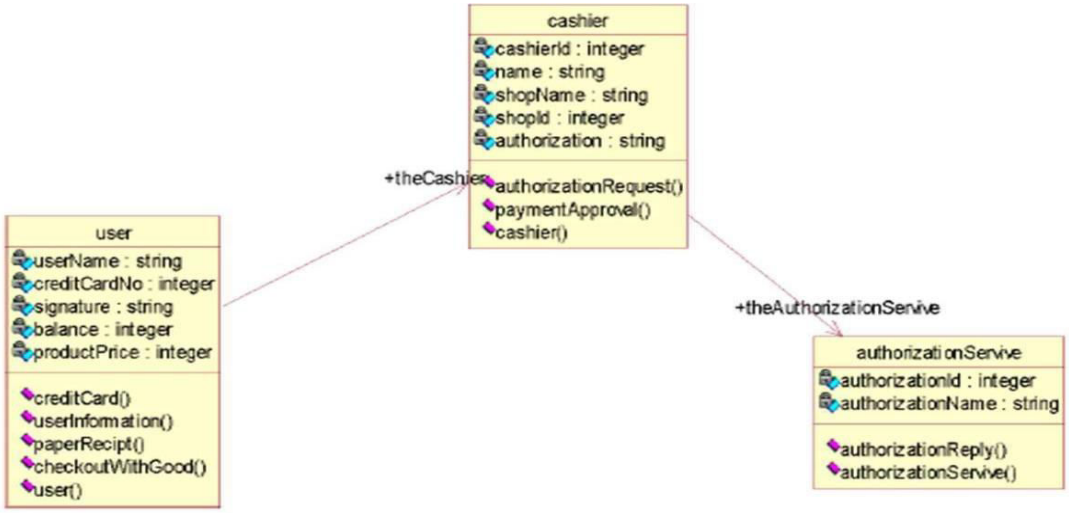
Hardware interface

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

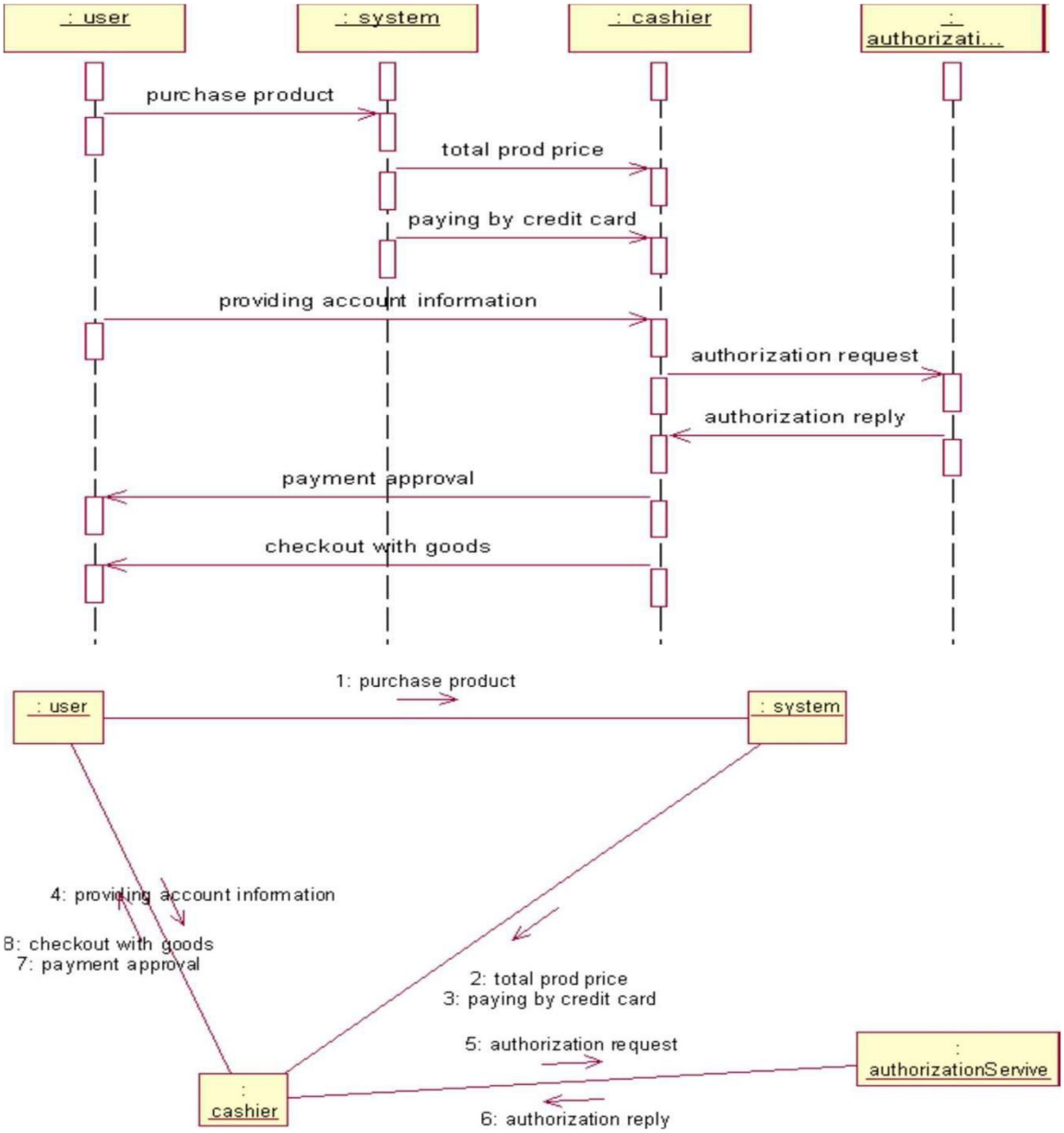
(III) USECASE DIAGRAM: USE-CASE NAME: PAYMENT APPROVAL



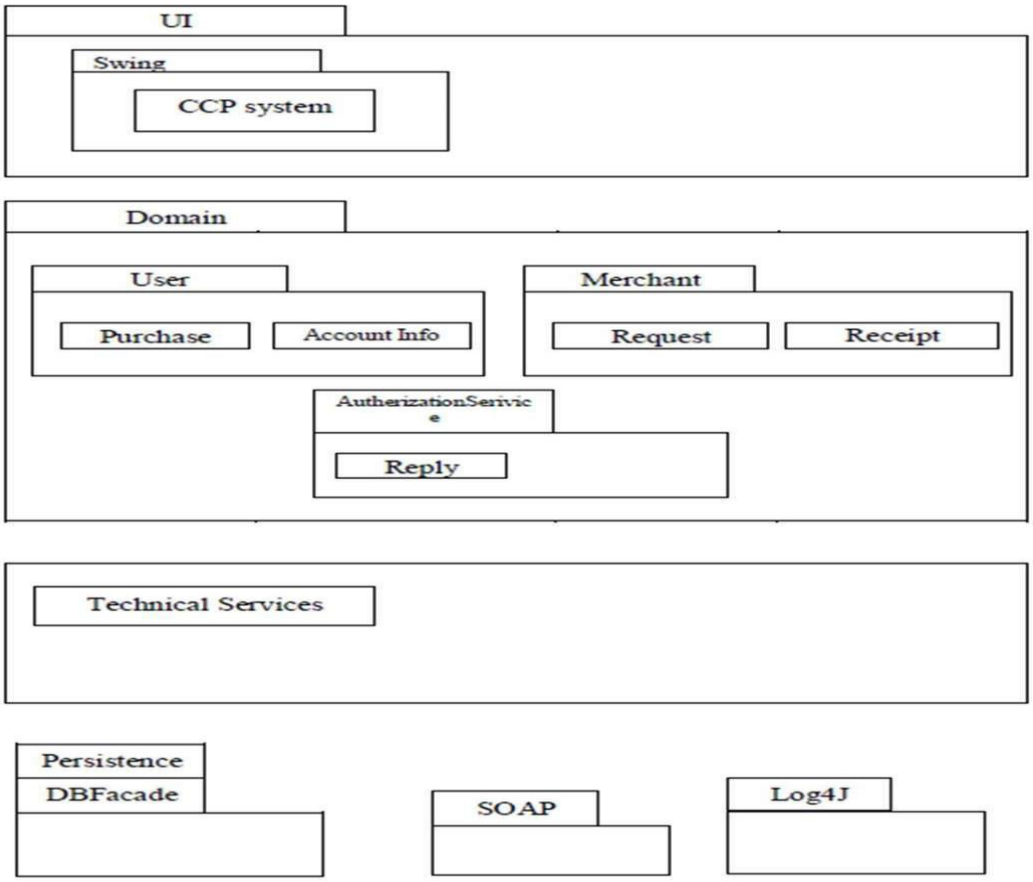
(IV) CLASS DIAGRAM:



(V) INTERACTION DIAGRAM:

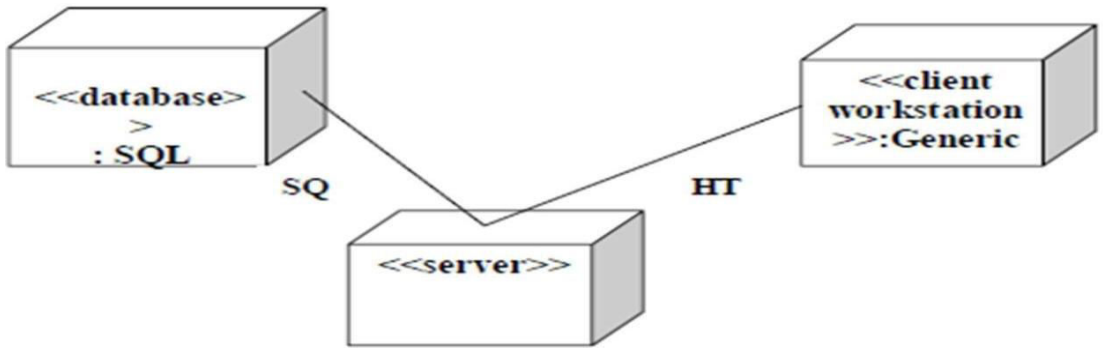


(VI) PARTIAL LAYER LOGICAL ARCHITECTURE DIAGRAM

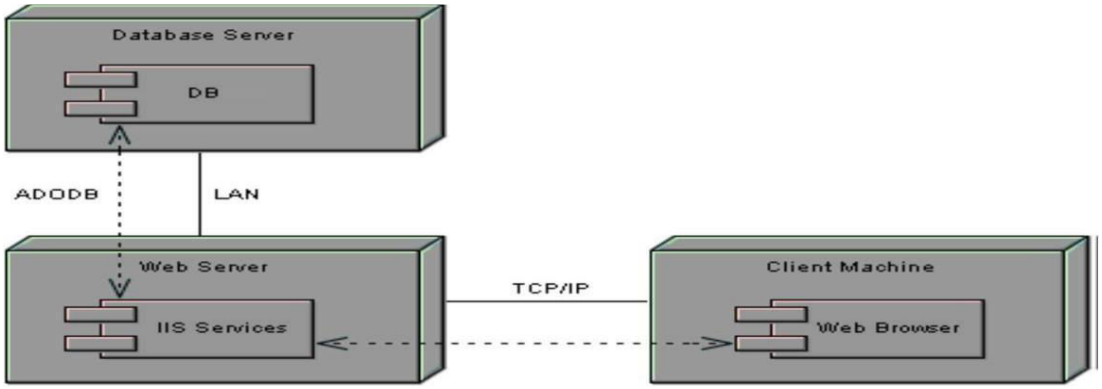


(VII) DEPLOYMENT DIAGRAM AND COMPONENT DIAGRAM

DEPLOYMENT DIAGRAMS



COMPONENT DIAGRAMS



RESULT: Thus the mini project for credit card processing system has been successfully executed and codes are generated.

EX.NO.10: BOOK MANAGEMENT SYSTEM

AIM: to create a system to perform e-book management system.

(I) PROBLEM STATEMENT:

An e-book lends books and magazines to member, who is registered in the system. Also it handles the purchase of new titles for the book bank. Popular titles are brought into multiple copies. Old books and magazines are removed when they are out or date or poor in condition.A member can reserve a book or magazine that is not currently available in the book bank, so that when it is returned or purchased by the book bank, that person is notified. The book bank can easily create, replace and delete information about the tiles, members, loans and reservations from the system.

(II) SOFTWARE RESOURCE SPECIFICATION:

Overall description

It will describe major role of the system components and inter-connections.

Product perspective

The ors acts as an interface between the user and the 'e-book manager'. 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 books or magazines.

Software interface

Front end client - the student and librarian online interface is built using jsp and html. The librarians local interface is built using java.

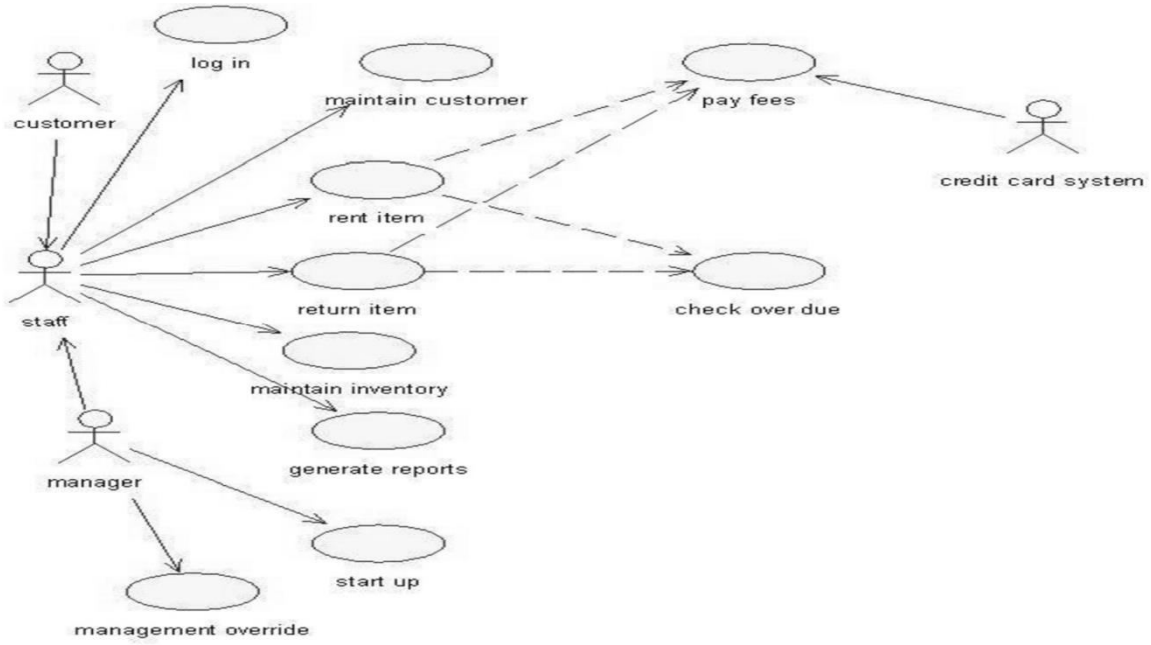
Web server - glassfish application server (oracle corporation).

Back end - oracle database

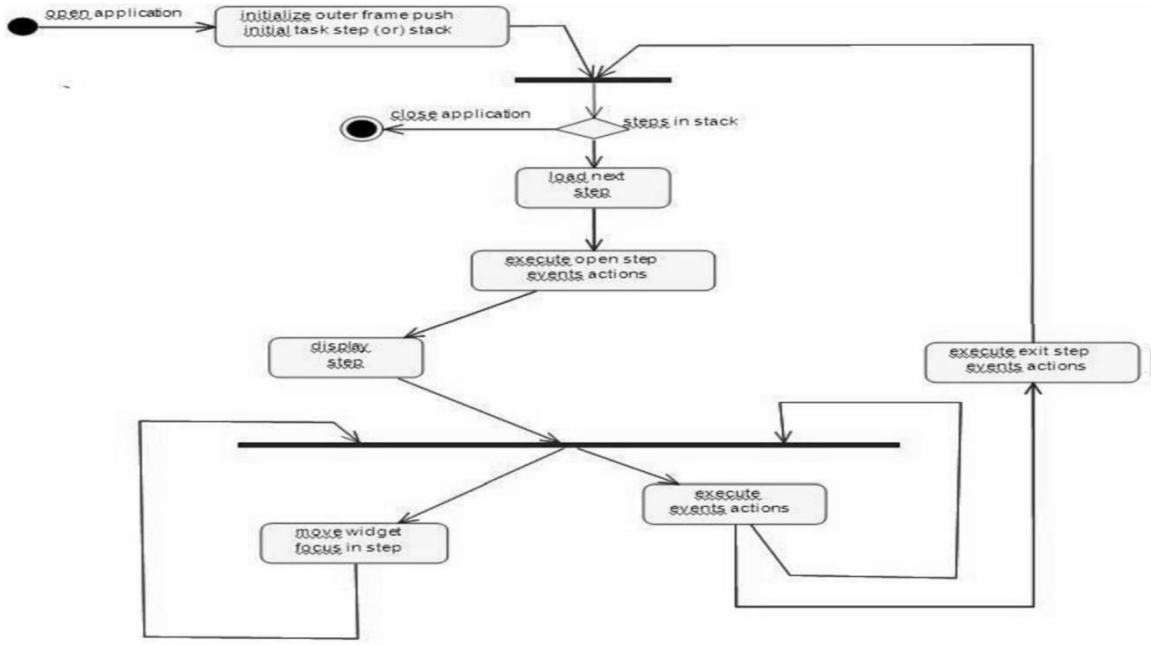
Hardware interface

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

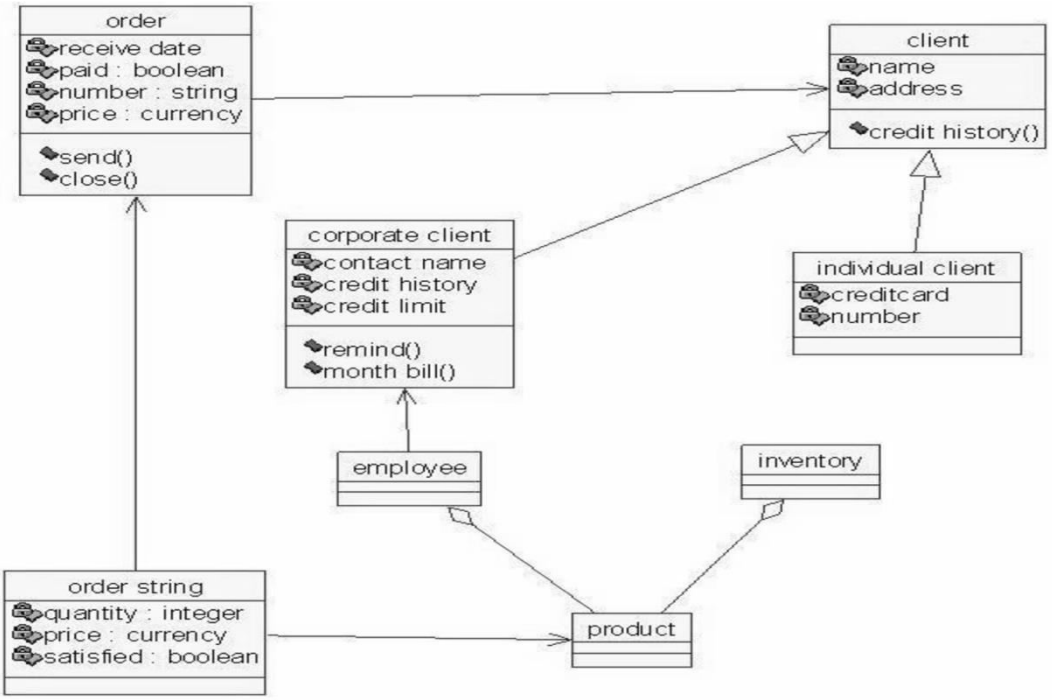
(III) USE-CASE DIAGRAM:



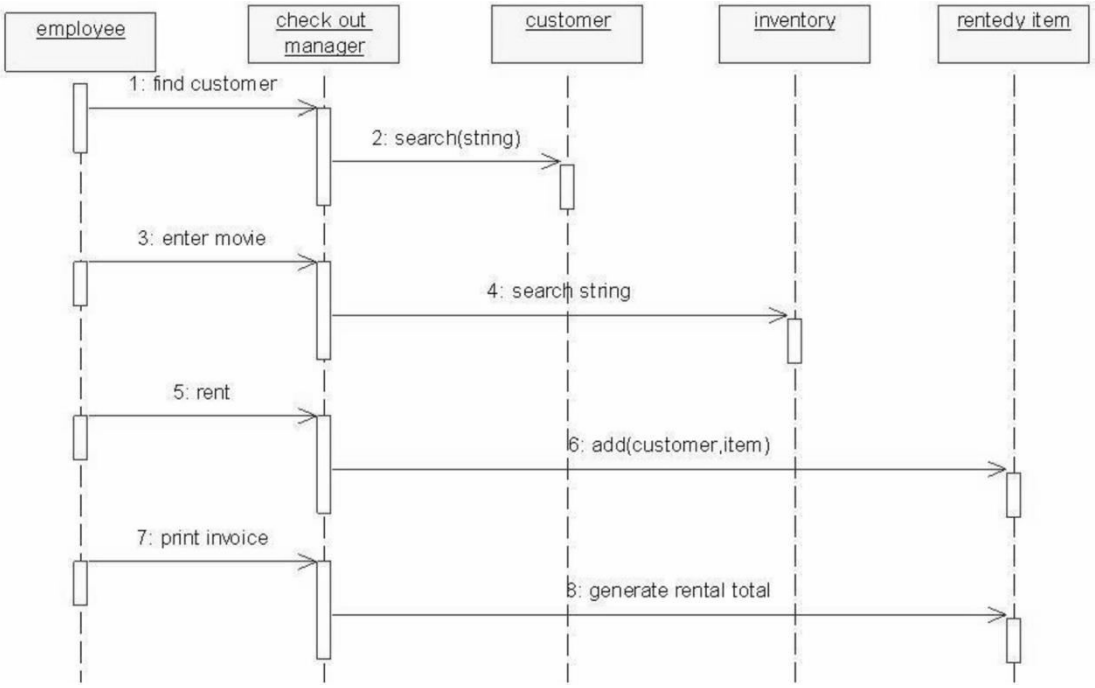
(IV) ACTIVITY DIAGRAM:

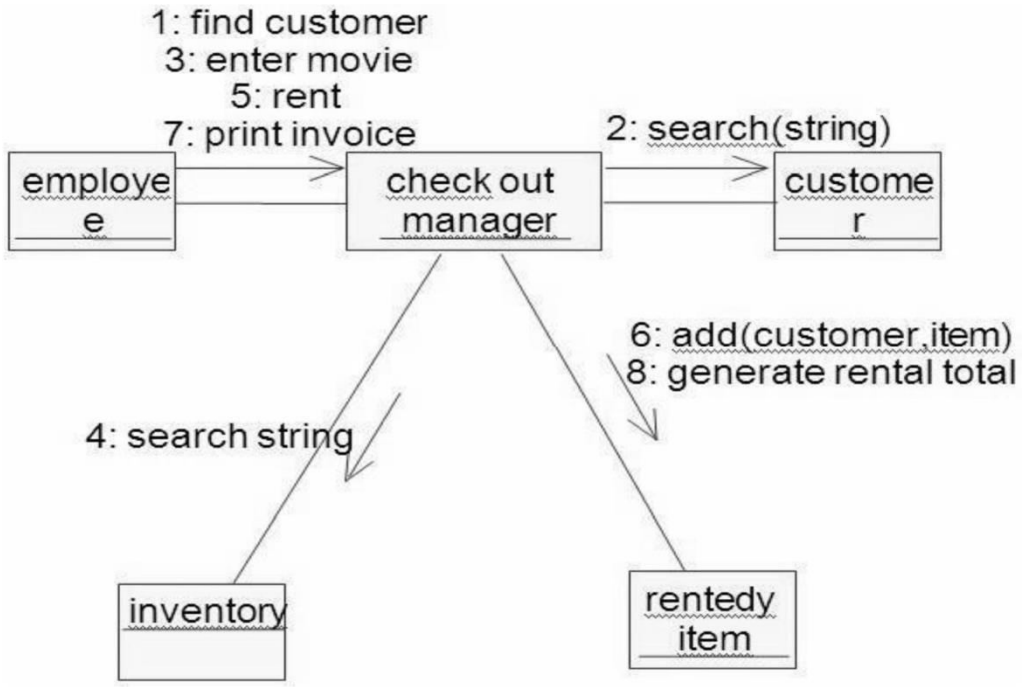


(V) CLASS DIAGRAM

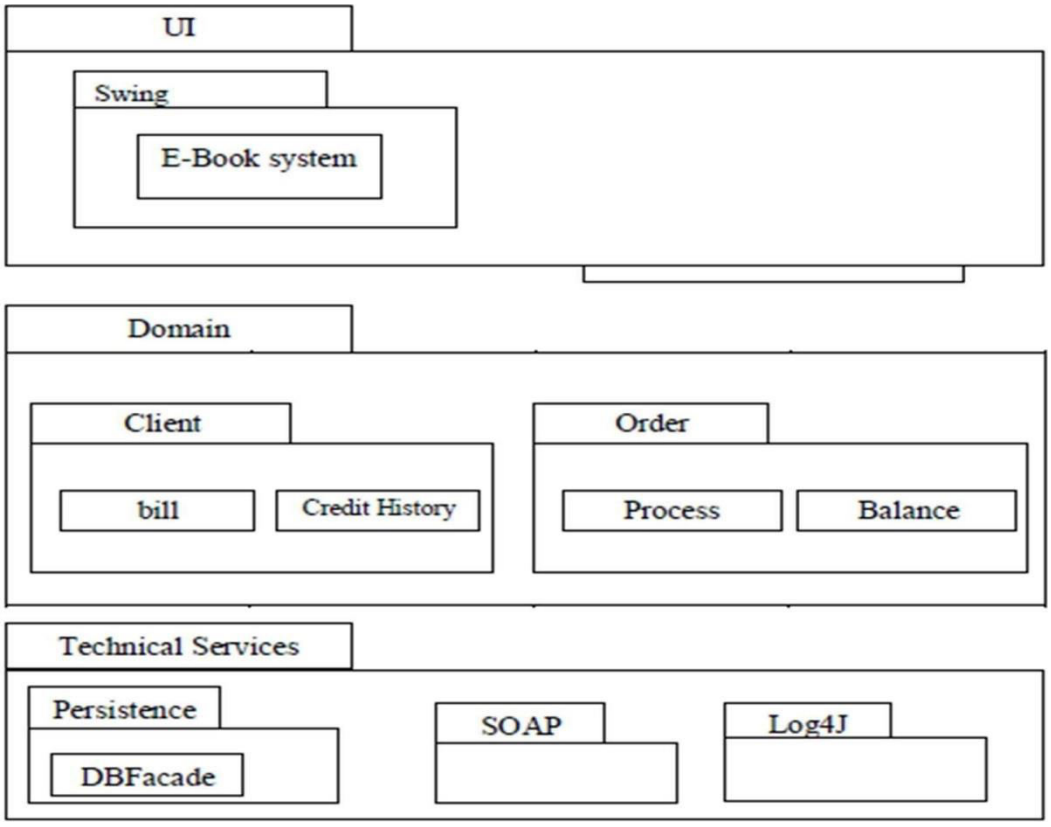


(VI) INTERACTION DIAGRAM:



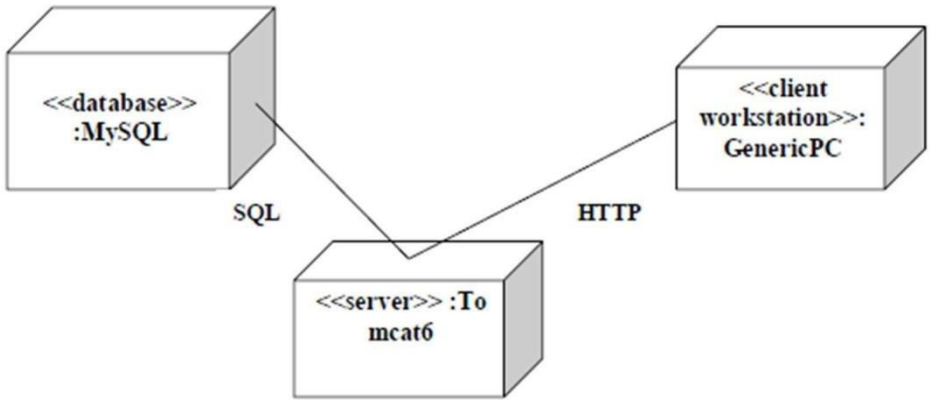


(VII) PARTIAL LAYER LOGICAL ARCHITECTURE DIAGRAM

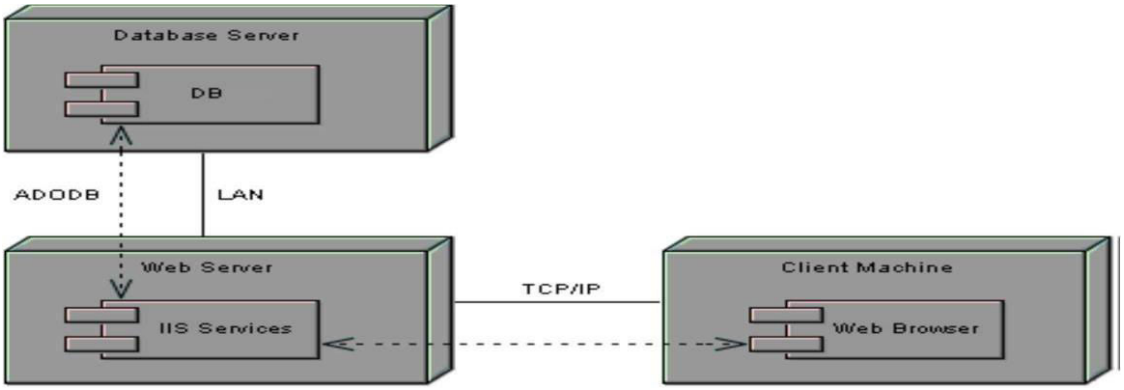


(VIII) DEPLOYMENT DIAGRAM AND COMPONENT DIAGRAM

DEPLOYMENT DIAGRAMS



COMPONENT DIAGRAMS



RESULT: Thus the mini project for e-book system has been successfully executed andcodes are generated.

EX.NO.11: RECRUITMENT SYSTEM

AIM: to create an automated system to perform the recruitment system process.

(I) PROBLEM STATEMENT:

The recruitment system allows the job seekers to enroll their names through the process of registration. The employee also can get the list of available candidates and shortlist for their company requirement. Once the applicant enrolls he receives an id, which helps him in further correspondence. A fees amount is received from the job seekers for enrollment. This system makes the task of the job seeker easier rather than waiting in queue for enrollment. This also reduces the time consumption for both for the job seeker and employee.

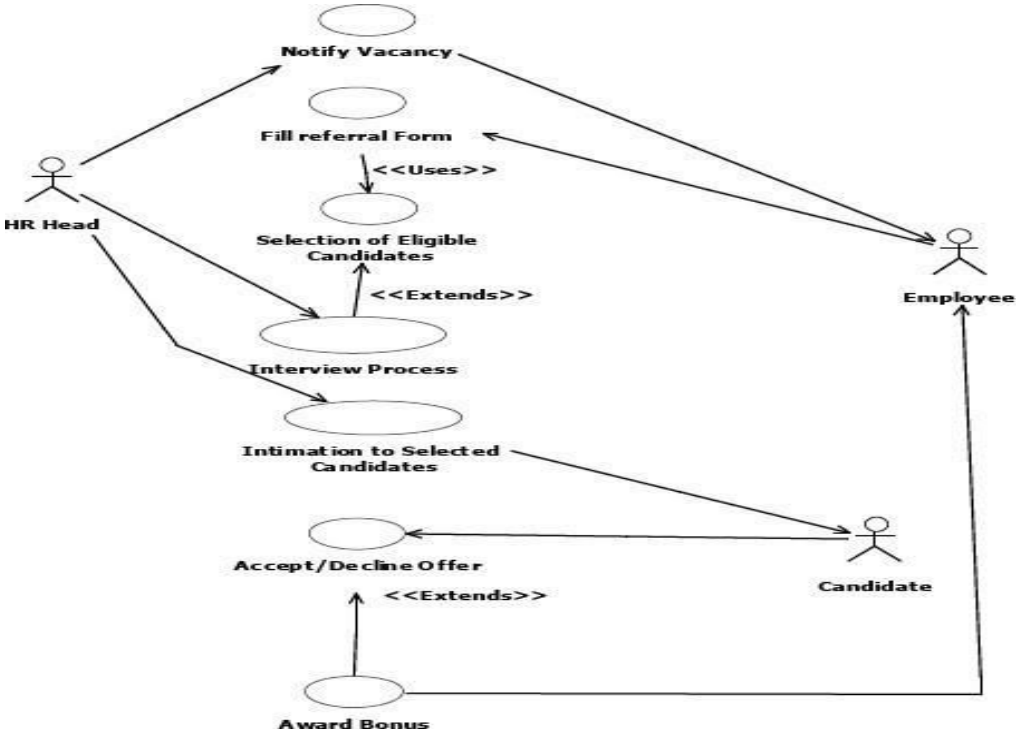
(II) SOFTWARE REQUIREMENT SPECIFICATION:

- Product perspective

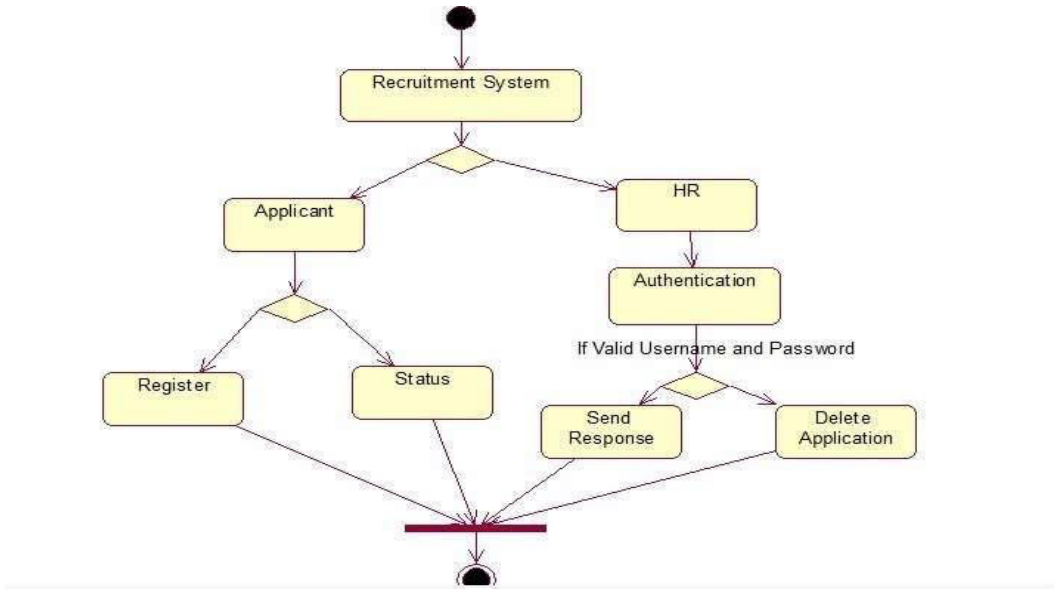
  The pas acts as an interface between the 'applicant' and the 'administrator'. This system tries to make the interface as simple as possible and at the same time not risking the security of data stored in. This minimizes the time duration in which the user receives the recruitment.
- Software interface
  - Front end client - the applicant and administrator online interface is built using jsp and html. The administrators's local interface is built using java.
  - Web server - glassfish application server (sql corporation).
  - Back end - sql database.
- Hardware interface

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

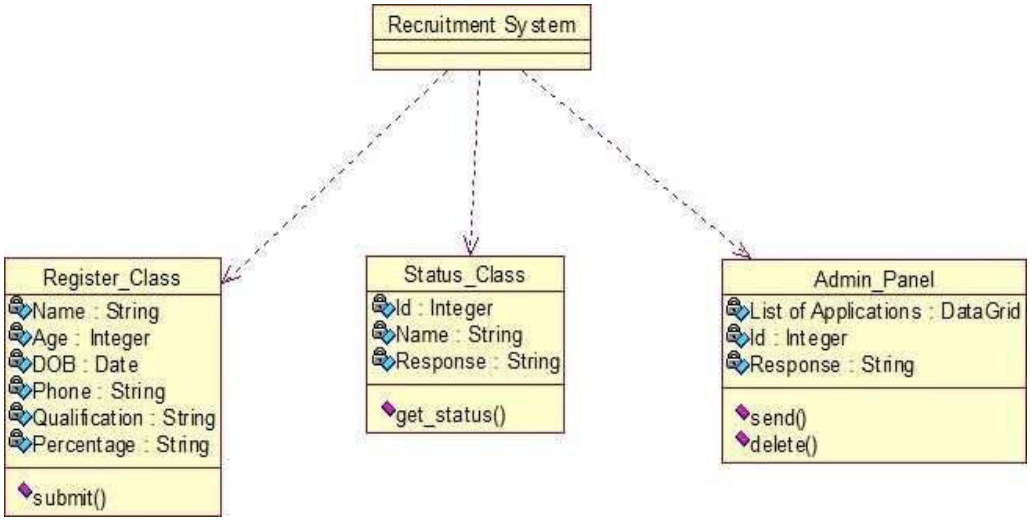
(III) USECASE DIAGRAM:



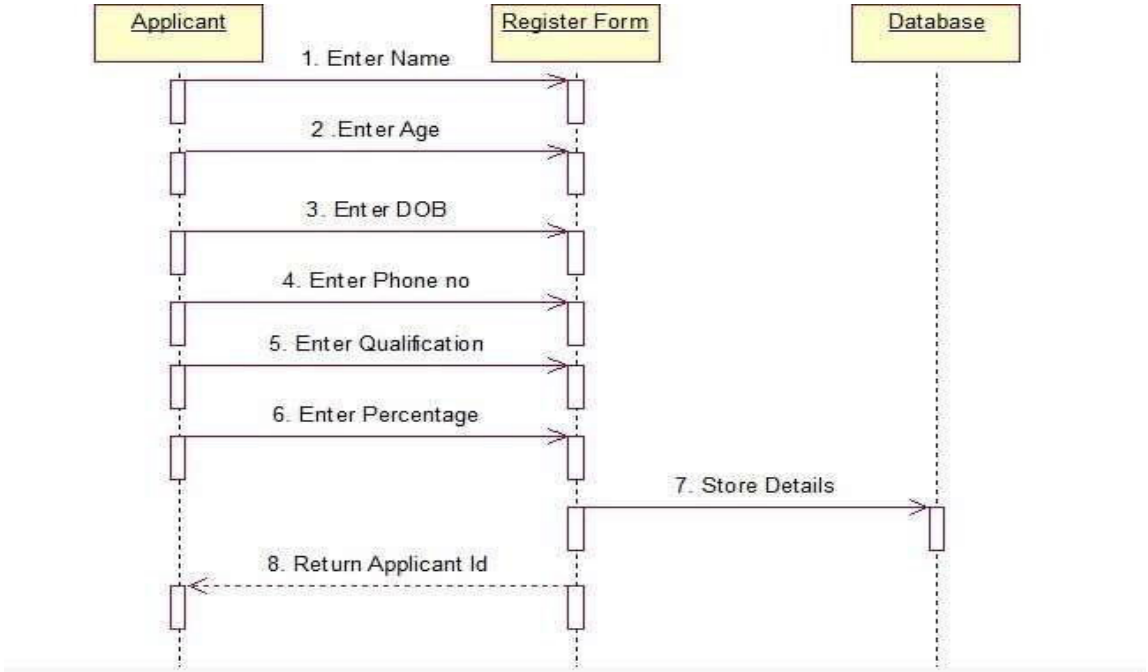
(IV) ACTIVITY DIAGRAM:

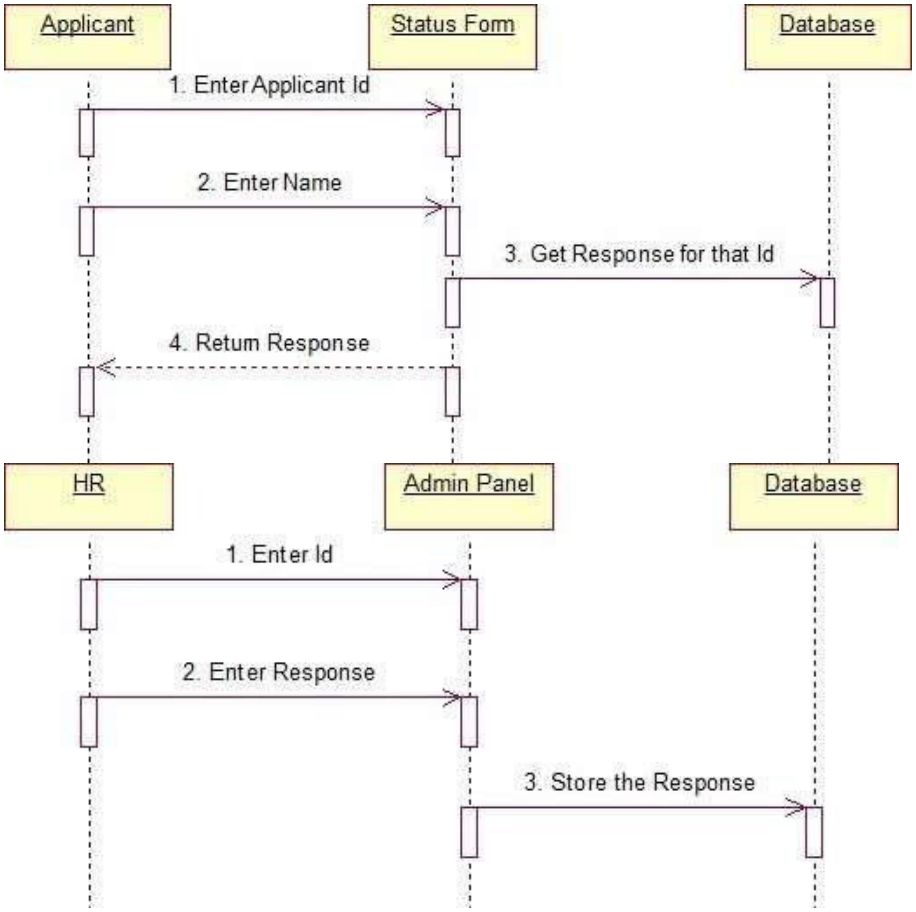


(V) UML CLASS DIAGRAM:

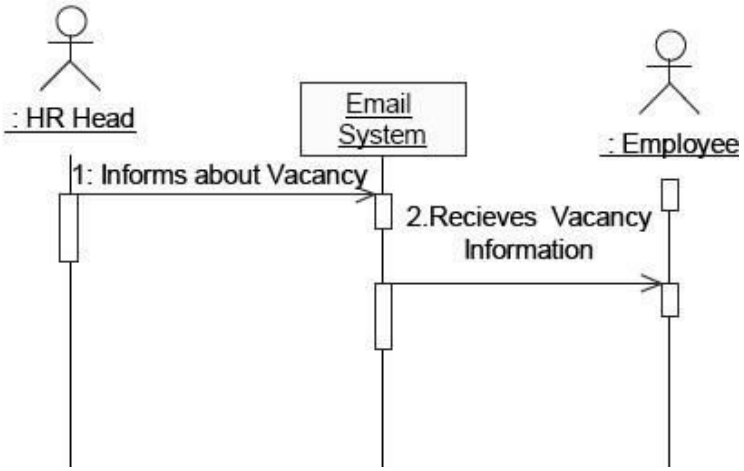


(VI) UML SEQUENCE DIAGRAM:

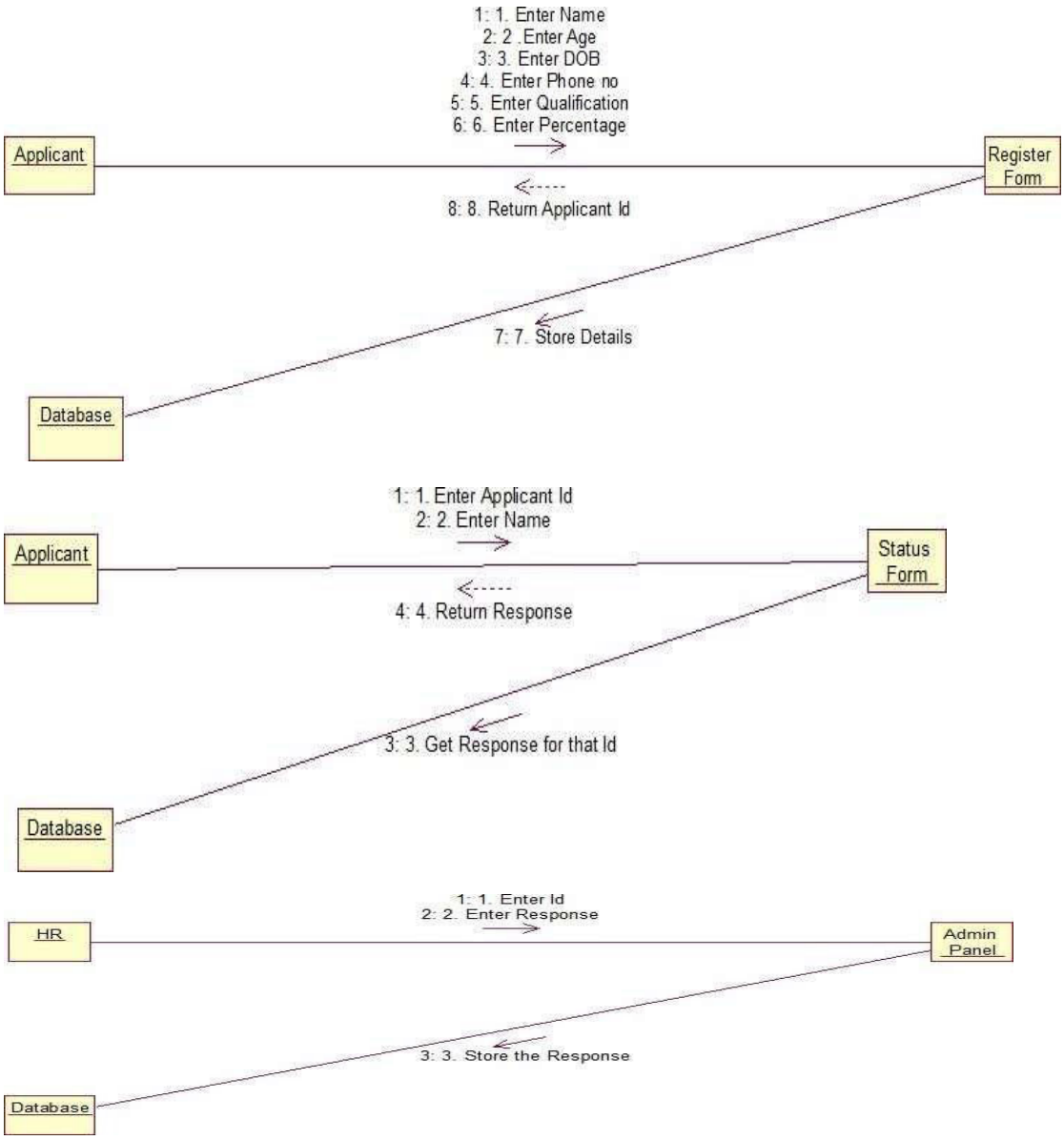




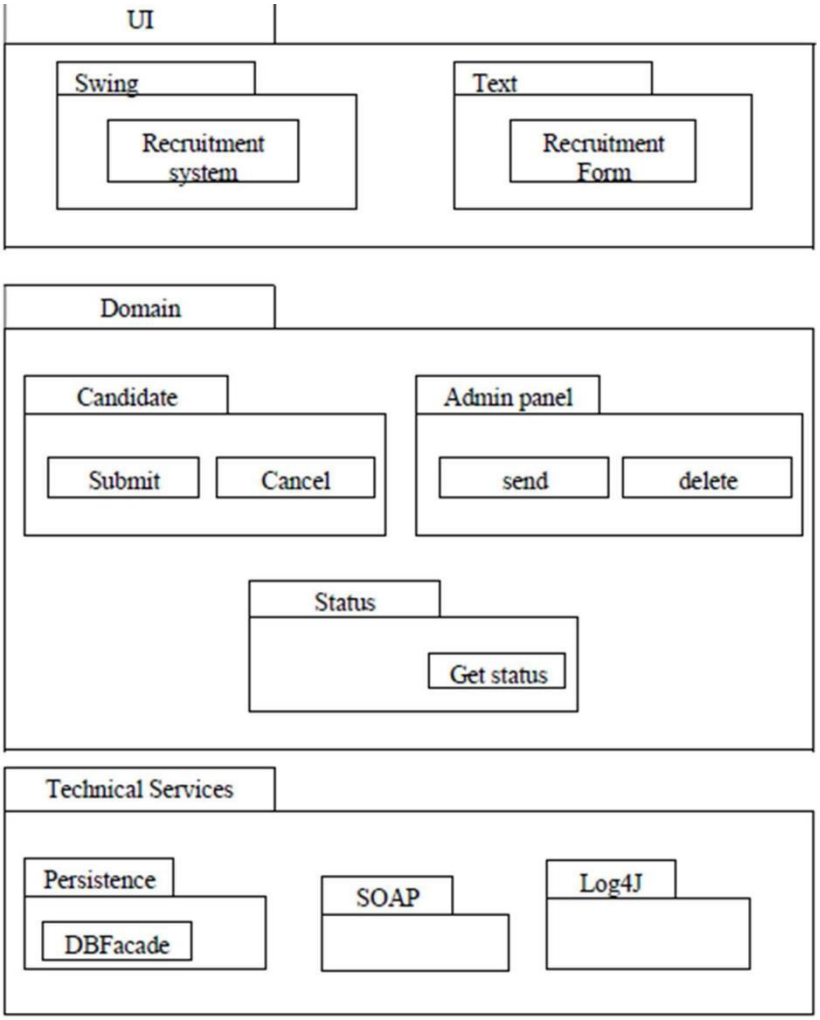
Notify Vacancy:



(VII) UML COLLABRATION DIAGRAM:

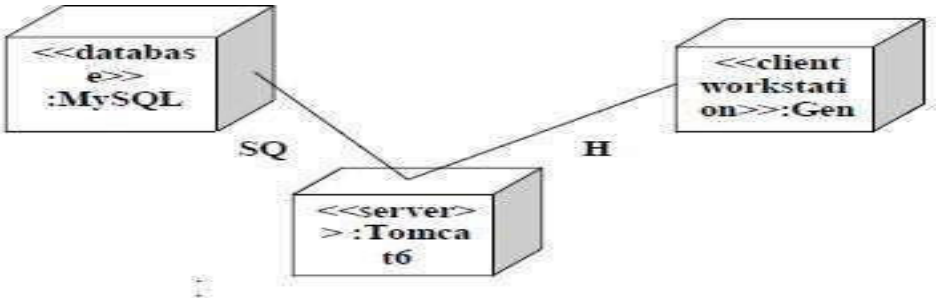


(VIII) PARTIAL LAYER LOGICAL ARCHITECTURE DIAGRAM:

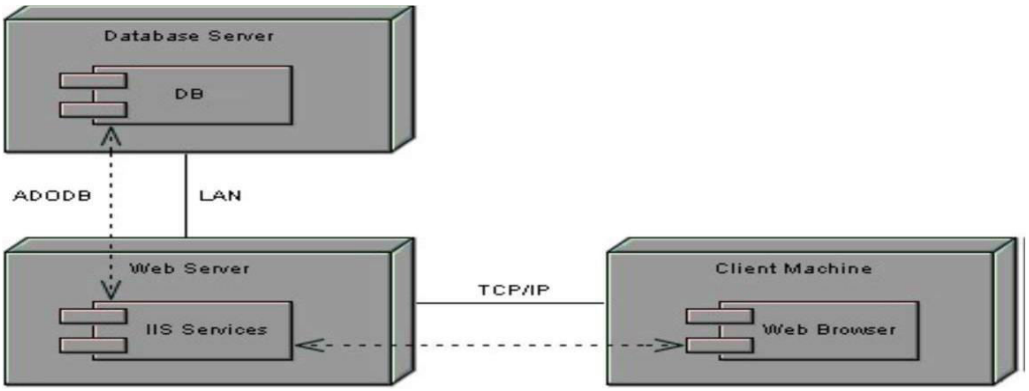


(IX) DEPLOYMENT DIAGRAM AND COMPONENT DIAGRAM

DEPLOYMENT DIAGRAMS



COMPONENT DIAGRAM



RESULT: Thus the mini project for recruitment system has been successfully executed and codes are generated.

EX.NO.12: FOREIGN TRADING SYSTEM

AIM: to design a project foreign trading system using rational rose software and to implement the software in visual basic.

(I) PROBLEM STATEMENT

The forex system begins its process by getting the username and password from the trader. After the authorization permitted by the administrator, the trader is allowed to perform the sourcing to know about the commodity details.after the required commodities are chosen, the trader places the order.the administrator checks for the availability for the requiredcommodities and updates it in the database. After the commodities are ready for the trade, the trader pays the amount to the administrator.the administrator in turn provides the bill byreceiving the amount and updates it in the database.the trader logouts after the confirmation message has been received.

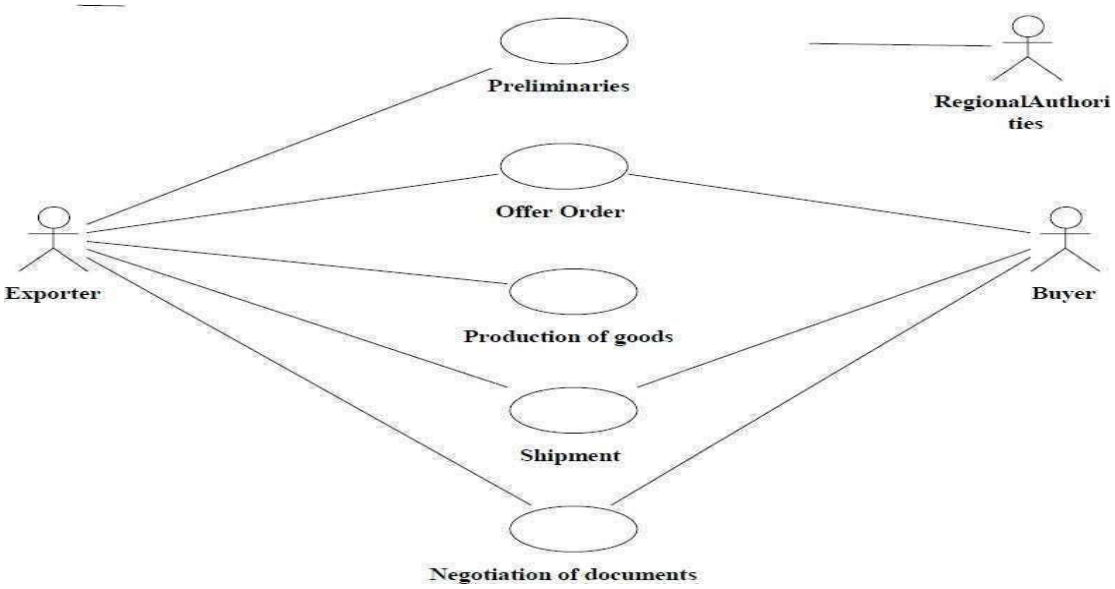
(II) SOFTWARE REQUIREMENT SPECIFICATION

Administrator	One who coordinates the entire trading process.
Database	All the transaction details are stored here.
Reader	Person who is viewing the website.
User	The traders and the viewers are the users.
Software requirement specification	This software specification documents fullset of features and function for foreign trading system.

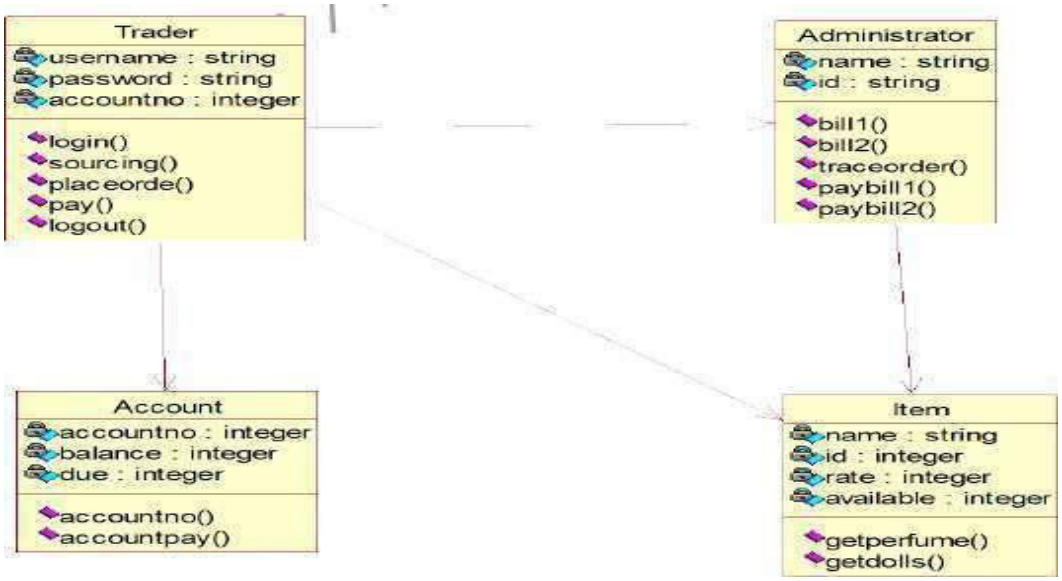
Functionality: transfer purchasing power between countries. Obtain credit for international trade transactions. Minimize exposure to the risks of exchange rate changes.

Functionality requirements: functional requirements refers to the functionality of the system. The services that are provided to the trader who trades.

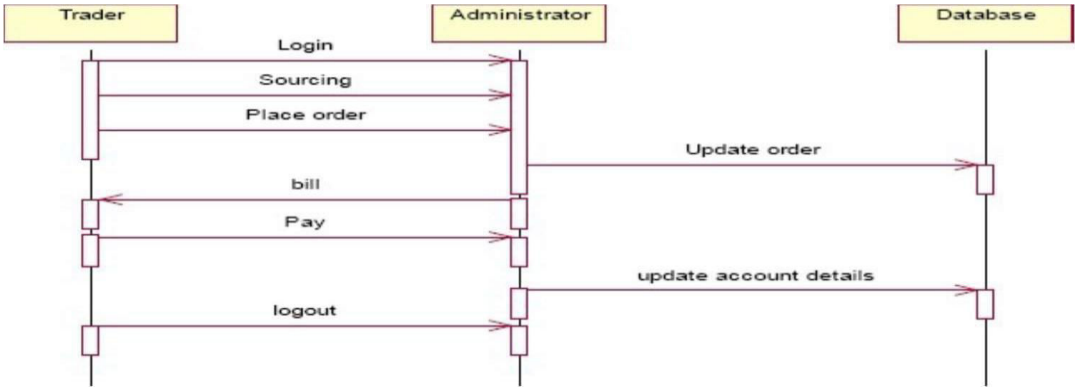
UML DIAGRAMS



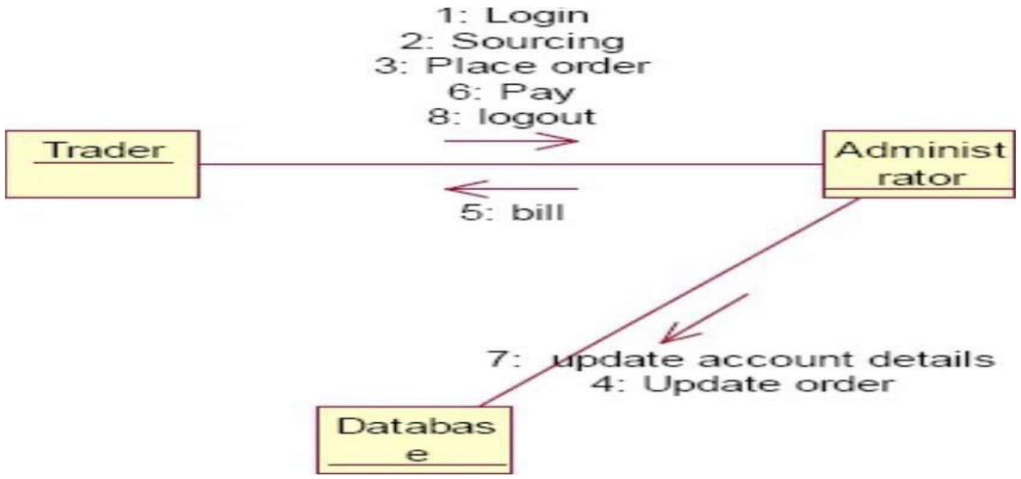
(III) USE CASE DIAGRAM CLASS DIAGRAM



SEQUENCE DIAGRAM



COLLABORATION DIAGRAM



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.

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.

COMPONENT DIAGRAM

DEPLOYMENT DIAGRAM

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).

RESULT: Thus the mini project for foreign trading system has been successfully executed and codes are generated.

EX.NO.13: CONFERENCE MANAGEMENT SYSTEM

AIM: to develop a project on conference management system using rational rose software.

(I) PROBLEM STATEMENT

The process of the candidates is to login the conference system and submit the paper through online. Then the reviewer reviews the paper and sends the acknowledgement to the candidate either paper selected or rejected. This process of on conference management system are described sequentially through following steps,

- the candidate login to the conference management system.
- the paper title is submitted.
- the paper is been reviewed by the reviewer.
- the reviewer sends acknowledgement to the candidate.
- based on the selection, the best candidate is selected.
- finally the candidate registers all details.

(II) SOFTWARE REQUIREMENT SPECIFICATION

Candidate	The candidate can login and submit the paper to the reviewer. After getting acknowledgement the candidate will submit the revised and camera ready paper then registration process will be carried out.
Reviewer	Reviewer will reviews the paper and sending acknowledgement to the candidate
Database	Database is used to verify login and store the details of selected candidates.
Software requirement specification	This software specification documents fullset of features and function for conference management system.

Purpose: the purpose of the conference management system is that the system can easily review the process. The main process in this document is the submission of paper by the candidate, reviewing process by the reviewer and sending of acknowledgement to the candidates whose paper is selected.

Scope: the scope of this conference management process is to select the best candidate from the list of candidates based on their performance in the process.

Functionality: the main functionality of conference system is to select the candidate for the presentation in conference.

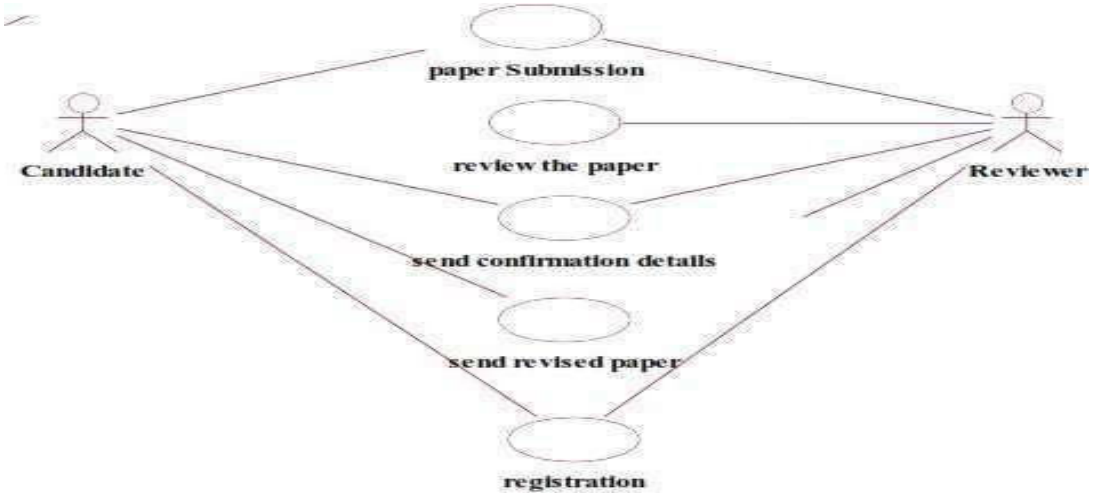
Usability: the user interface to make the process should be effective that is the system will help the candidates to register easily. The system should be user friendly.

Performance: it describes the capability of the system to perform the conference process of the candidate without any error and performing it efficiently.

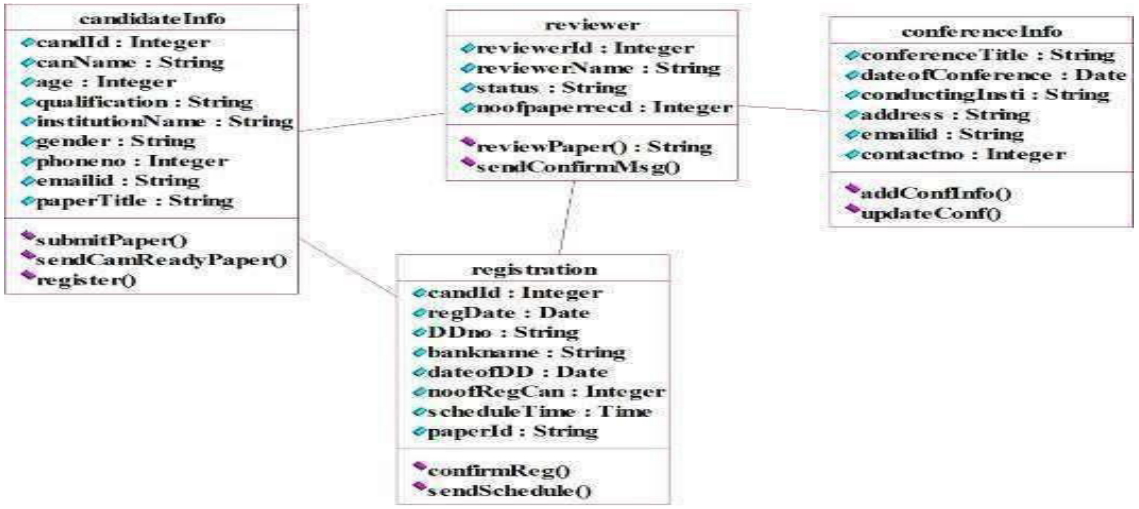
Reliability: the conference system should be able to serve the applicant with correctinformation and day-to-day update of information.

Functional requirements: functional requirements are those that refer to the functionality of thesystem that is the services that are provided to the candidate who register for the conference.

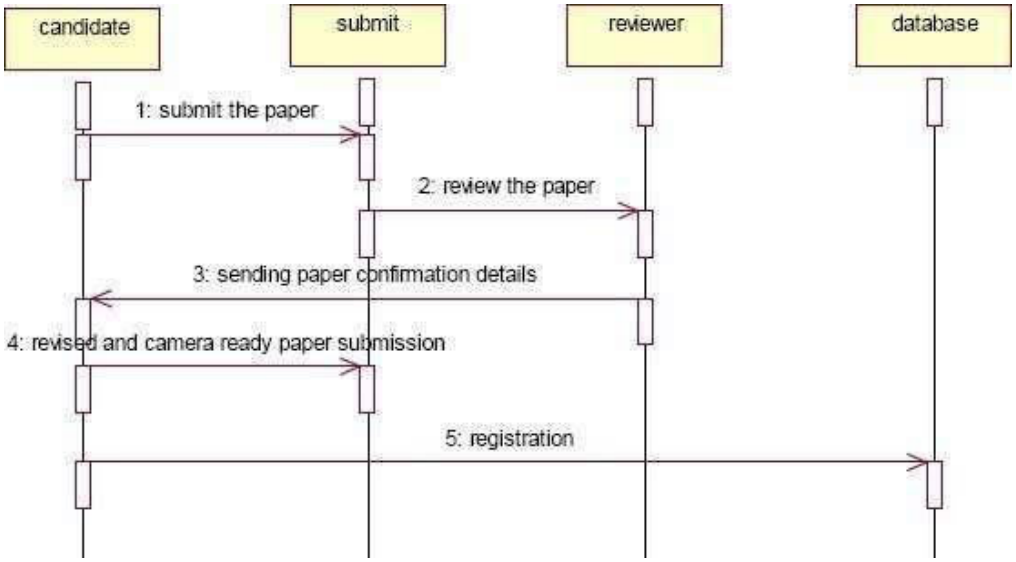
UML DIAGRAMS



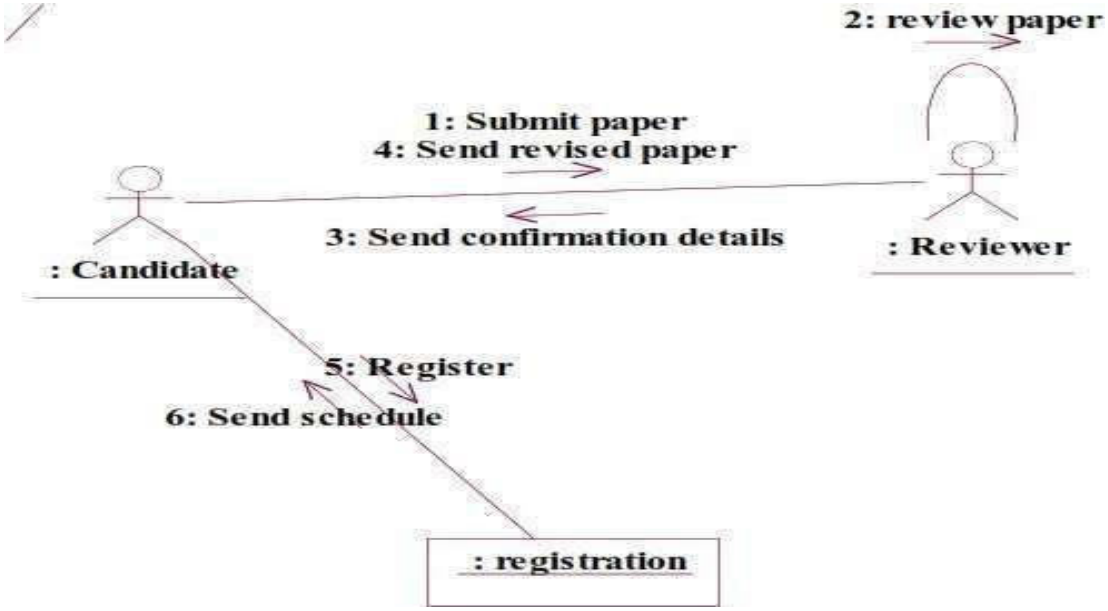
CLASS DIAGRAM:



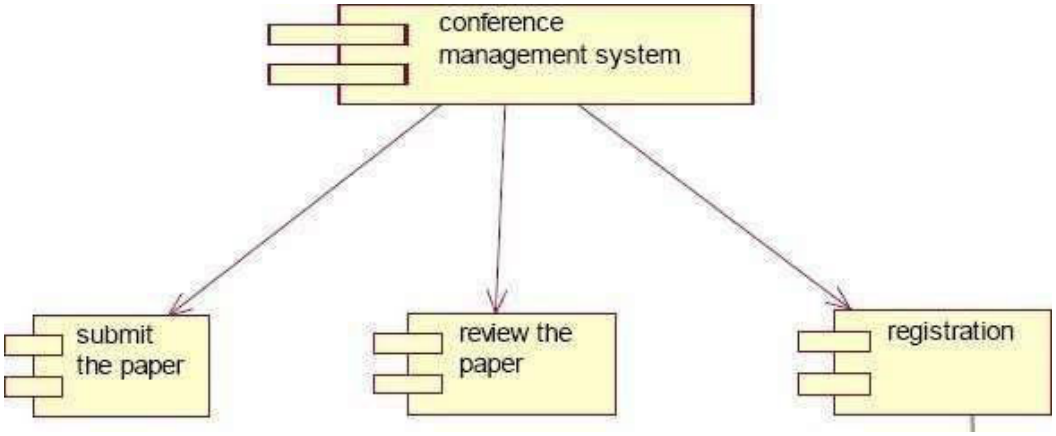
SEQUENCE DIAGRAM:



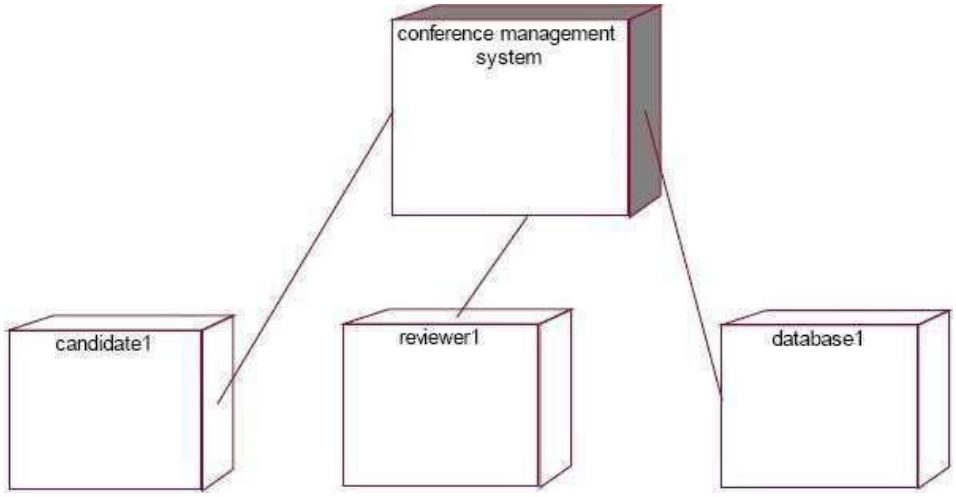
COLLABRATION DIAGRAM



COMPONENT DIAGRAM:



DEPLOYMENT DIAGRAM:



RESULT: Thus the mini project for conference management system has been successfully executed and codes are generated.

EX.NO.14: BPO MANAGEMENT SYSTEM

Aim: to implement a software for bpo management system

(I) PROBLEM STATEMENT:

With the reduction in communication costs and improved bandwidths and associated infrastructure, bpo as a segment is witnessing a massive growth. One of the key challenges that bpo companies that provide data entry/data validation services is an efficient and effective way of getting the Source documents from different customers and accurately route the same to different operators for processing.

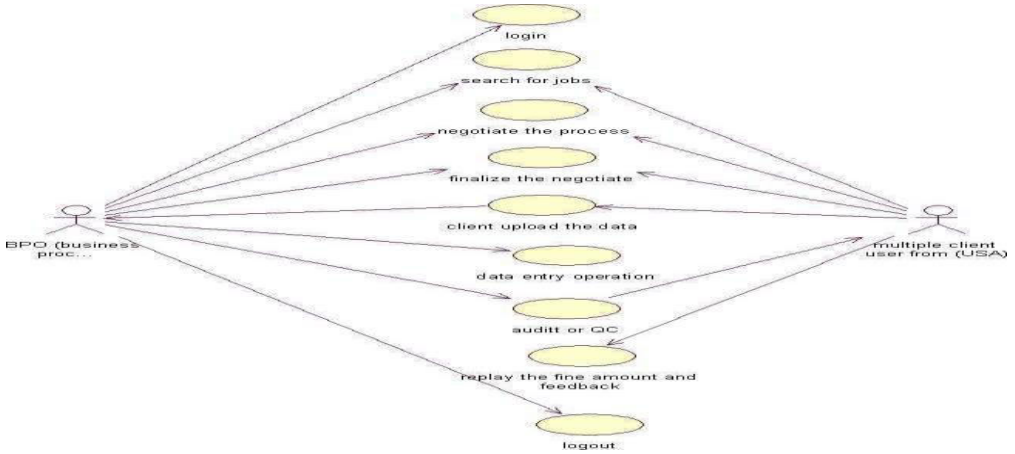
(II) SOFTWARE REQUIREMENT SPECIFICATION:

- Product perspective

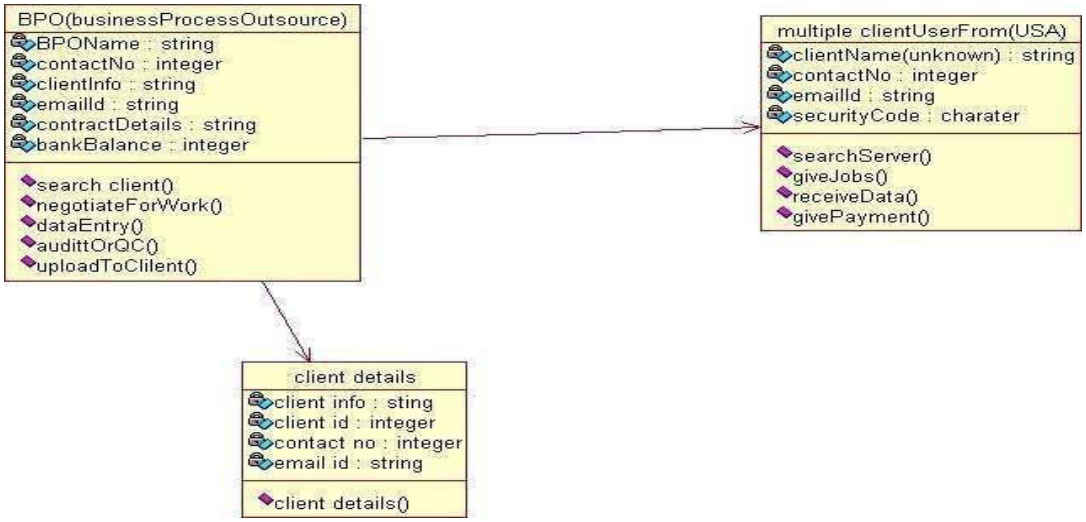
  The bpos acts as an interface between the 'client' and the 'administrator'. This system tries to make the interface as simple as possible and at the same time not risking the security of data stored in. This minimizes the time duration in which the user receives the documents.
- Software interface
  - Front end client - the applicant and administrator online interface is built using jsp and html. The administrators's local interface is built using java.
  - Web server - glassfish application server (sql corporation).
  - Back end - sql database.
- Hardware interface

  The bpo system’s server is directly connected to the client systems via ftp. Theclient systems have access to the database in the server.

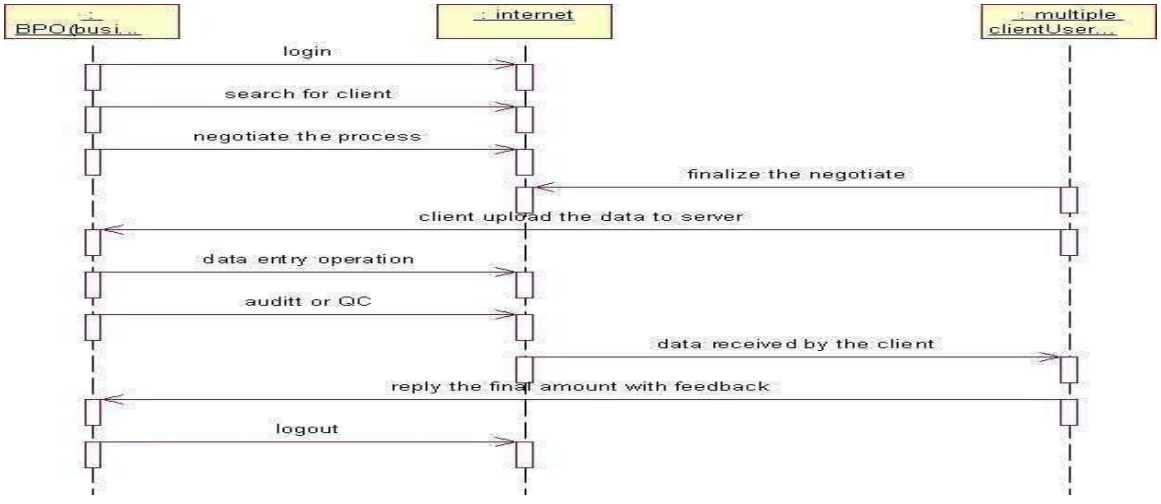
(III) USECASE DIAGRAM:



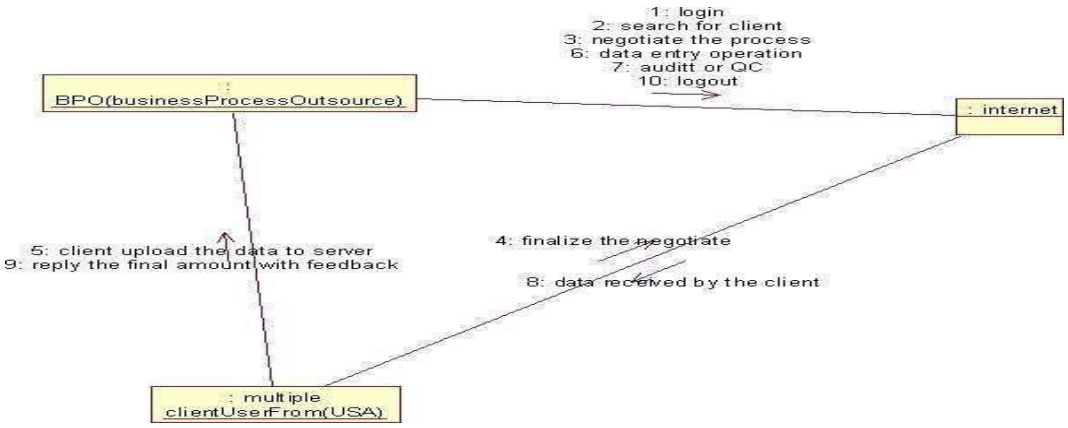
(IV) UML CLASS DIAGRAM:



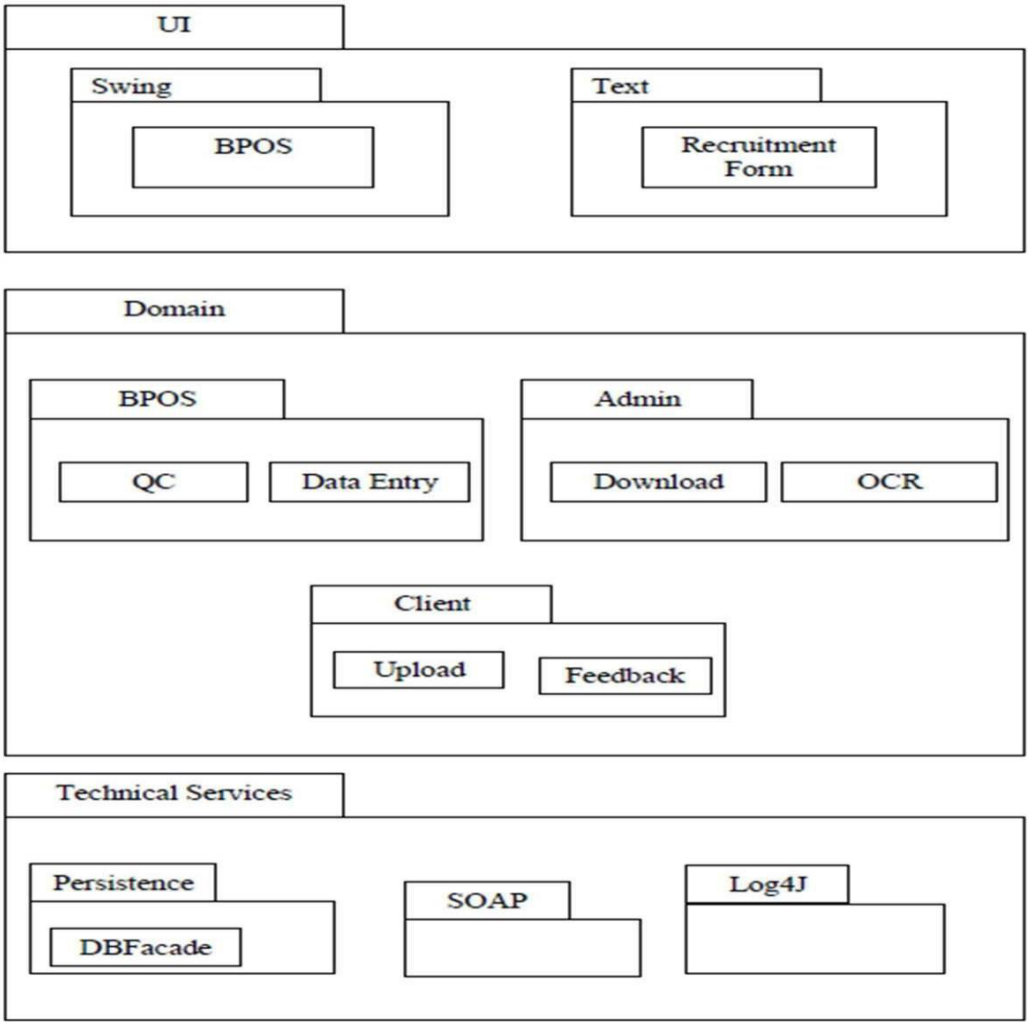
(V) UML SEQUENCE DIAGRAM:



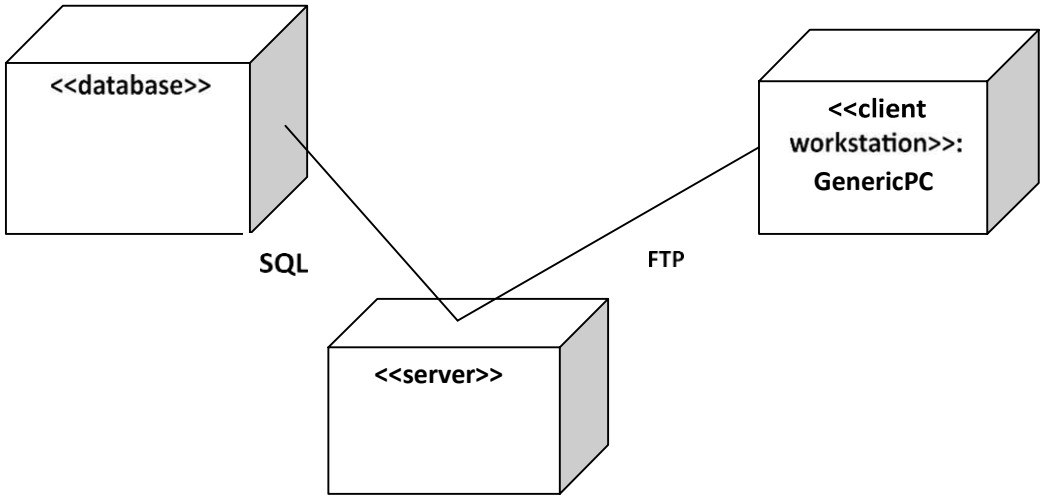
(VI) COMMUNICATION DIAGRAM:



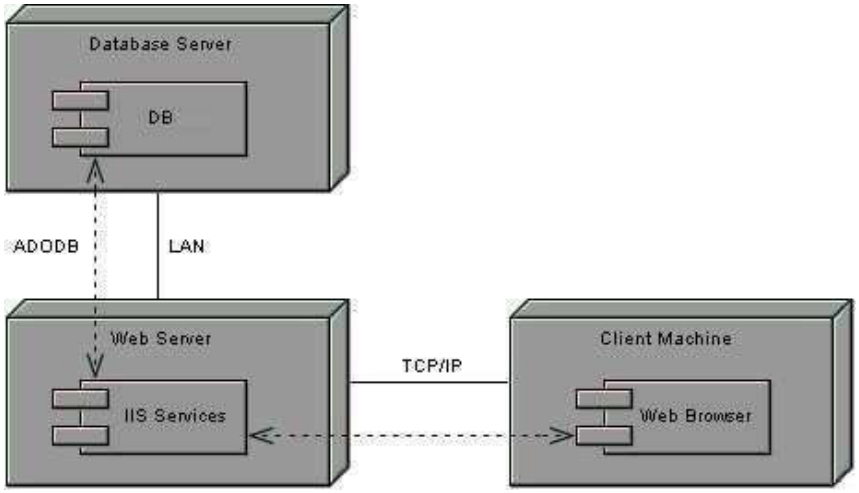
(VII) PARTIAL LAYERD LOGICAL ARCHITECTURE DIAGRAM



(VIII) DEPLOYMENT DIAGRAM AND COMPONENT DIAGRAM:



(IX) COMPONENT DIAGRAM:



RESULT: Thus the mini project for bpo management system has been successfullyexecuted and codes are generated.

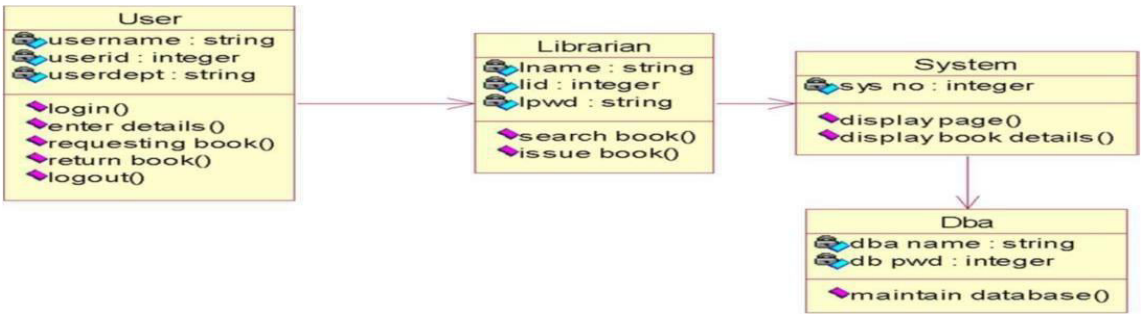
EX.NO.15: LIBRARY MANAGEMENT SYSTEM

AIM: to design an object oriented model for library management system using rational rose software and to implement it using java.

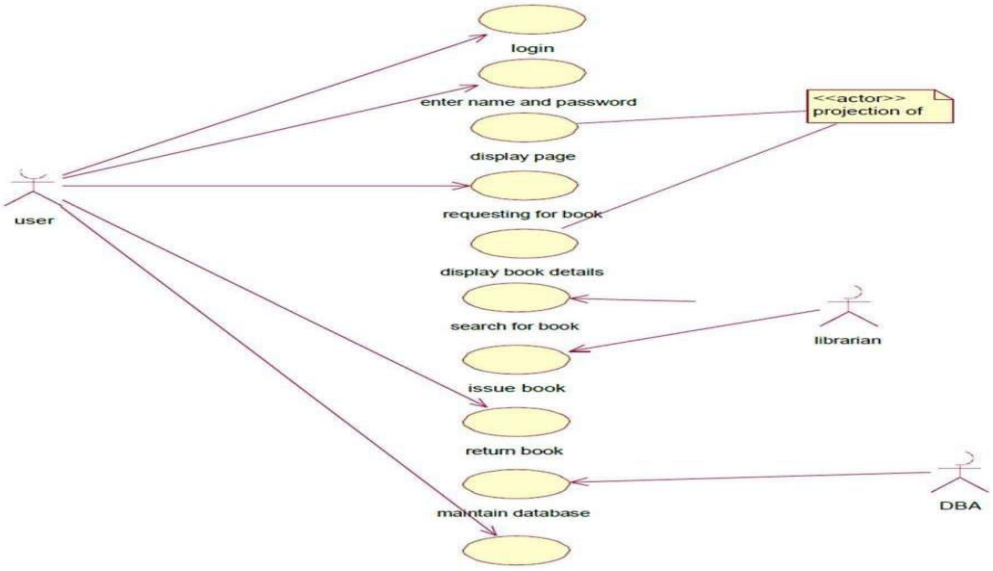
PROBLEM STATEMENT

The library management system is a software system that issues books and magazines to registered students only. The student has to login after getting registered to the system. The borrower of the book can perform various functions such as searching for desired book, get the issued book and return the book.

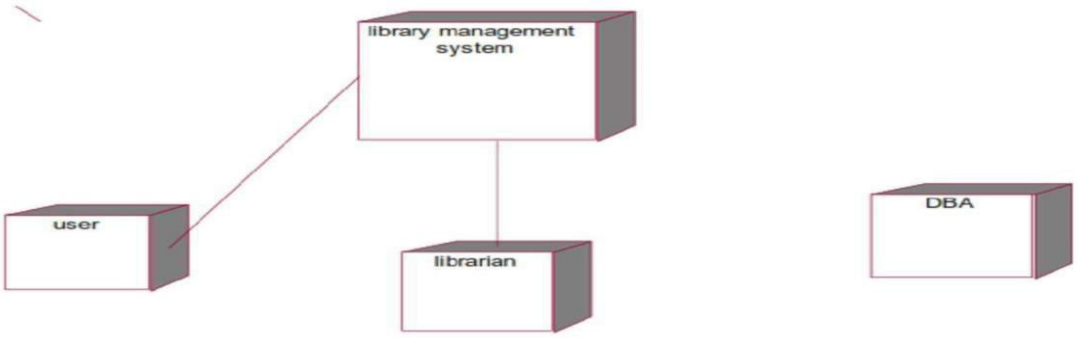
CLASS DIAGRAM



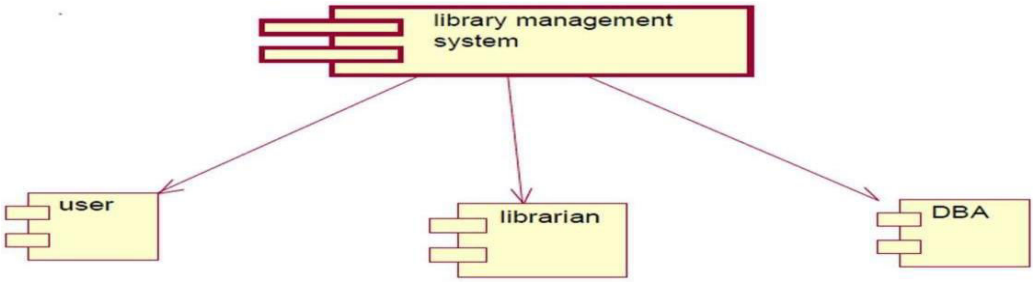
USE CASE DIAGRAM



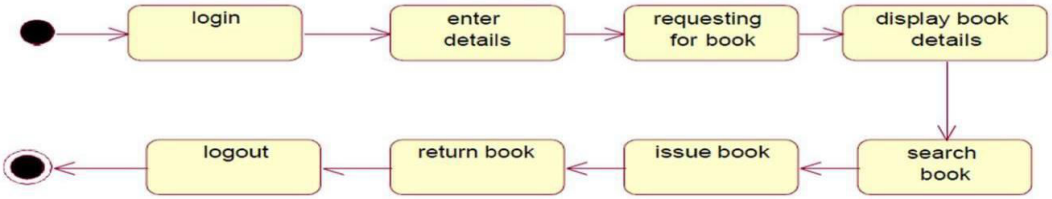
DEPLOYMENT DIAGRAM



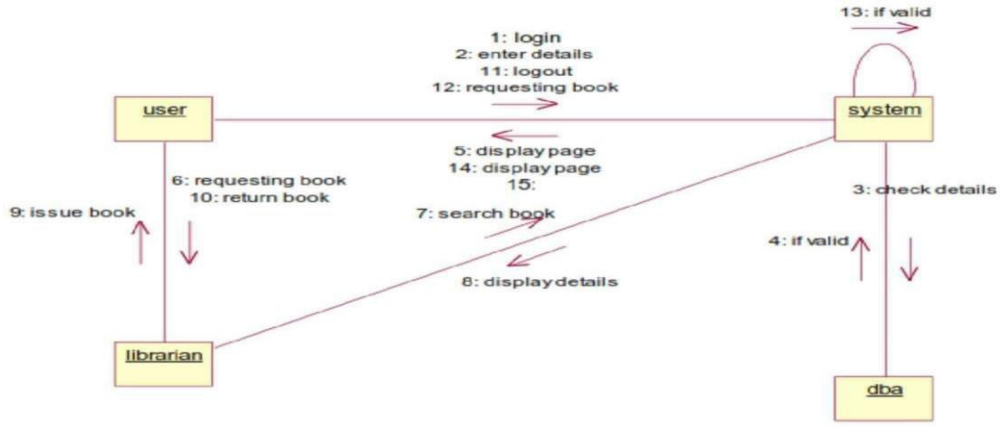
COMPONENT DIAGRAM



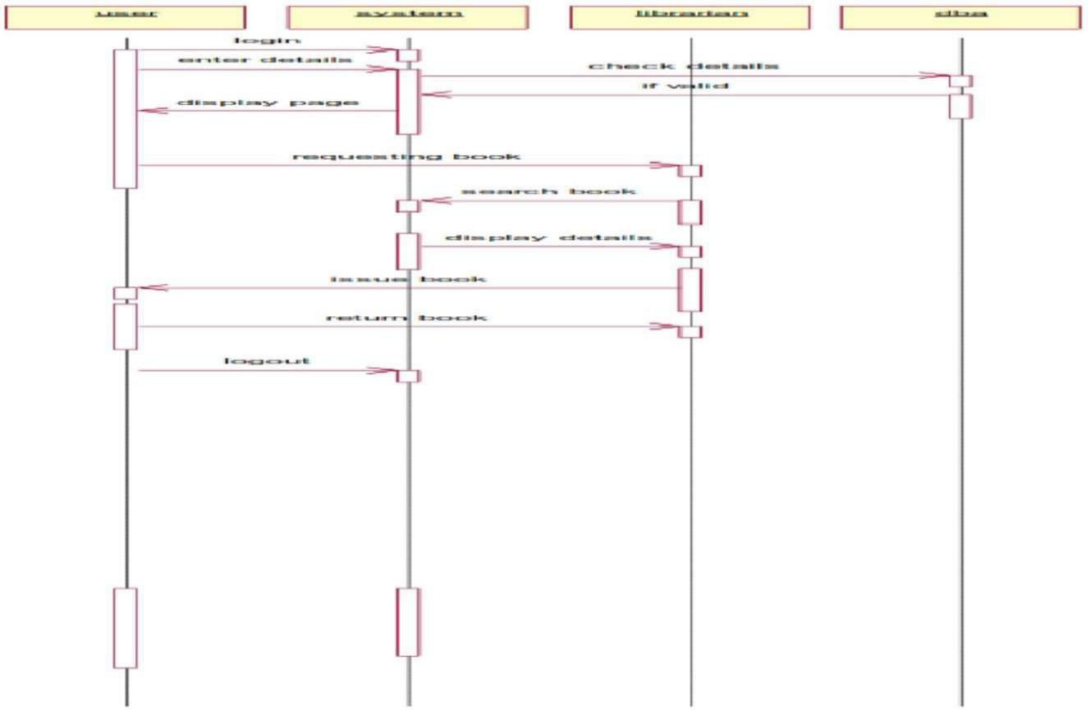
STATE CHART DIAGRAM



COLLABORATION DIAGRAM



SEQUENCE DIAGRAM



RESULT: Thus the various uml diagrams for library management system was drawn and the code was generated successfully.

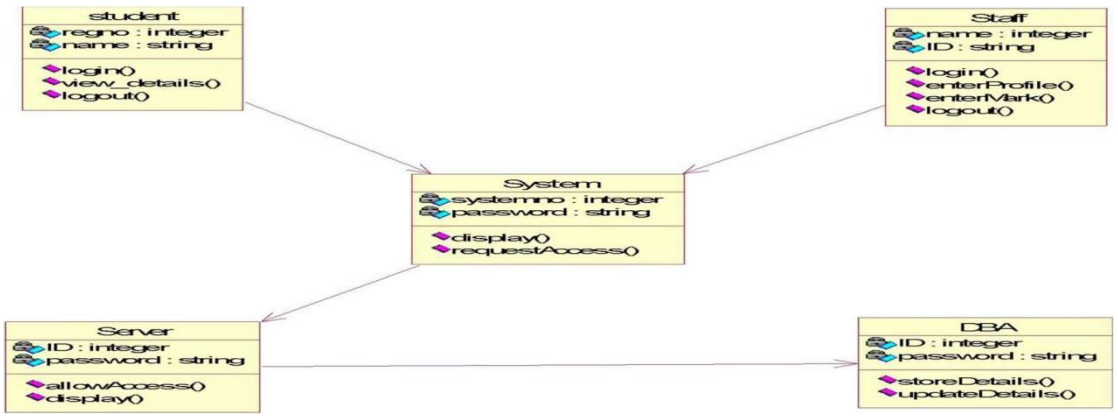
EX.NO.16: STUDENT INFORMATION SYSTEM

AIM: to design an object oriented model for student information system using rational rose software.

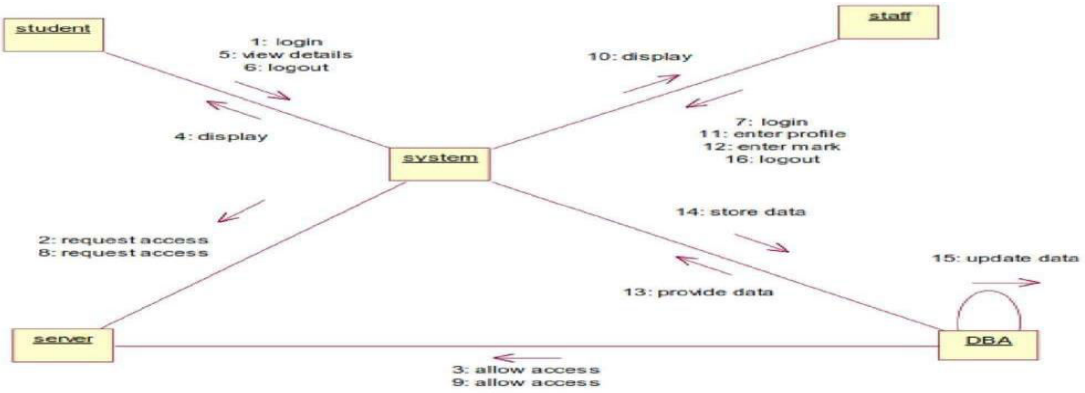
PROBLEM STATEMENT

The student must register by entering the name and password to login the form. The admin select the particular student to view the details about that student and maintaining the student details. This process of student information system is described sequentially through following steps. The student registers the system. The admin login to the student information system. He/she search for the list of students. Then select the particular student. Then view the details of that student. After displaying the student details then logout.

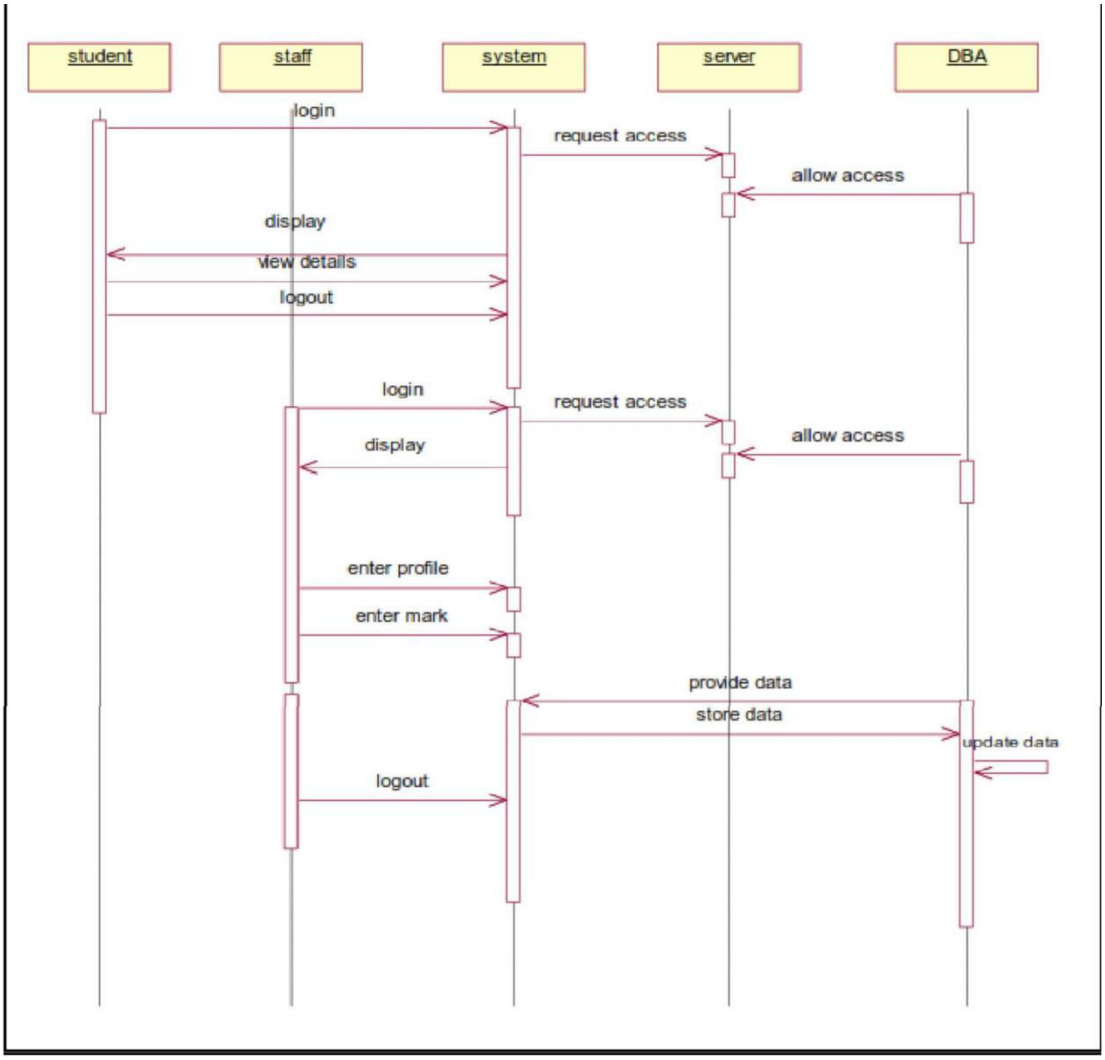
CLASS DIAGRAM



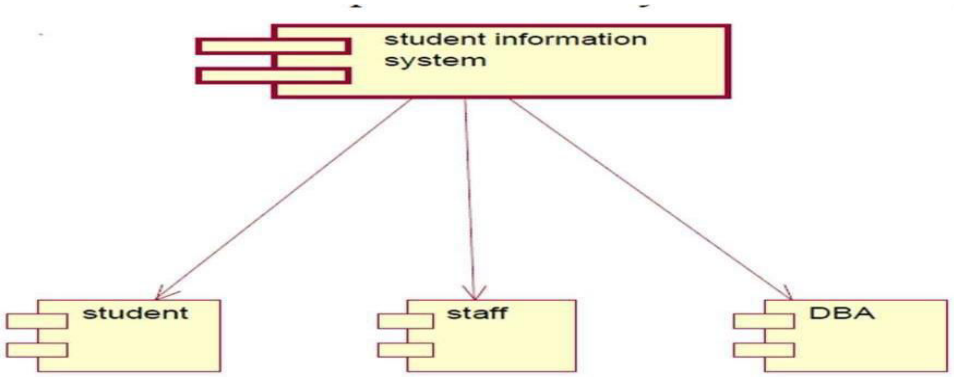
COLLABORATION DIAGRAM



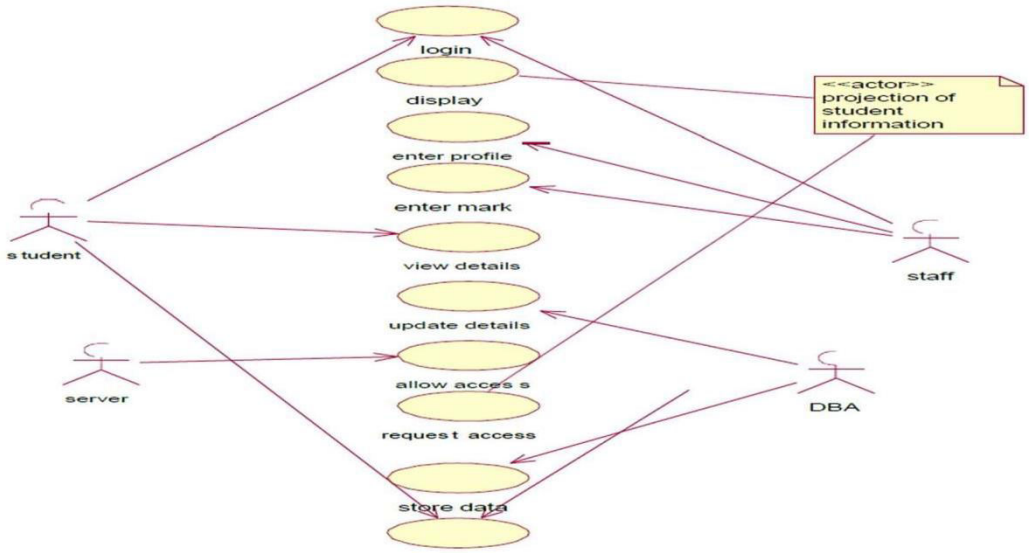
SEQUENCE DIAGRAM



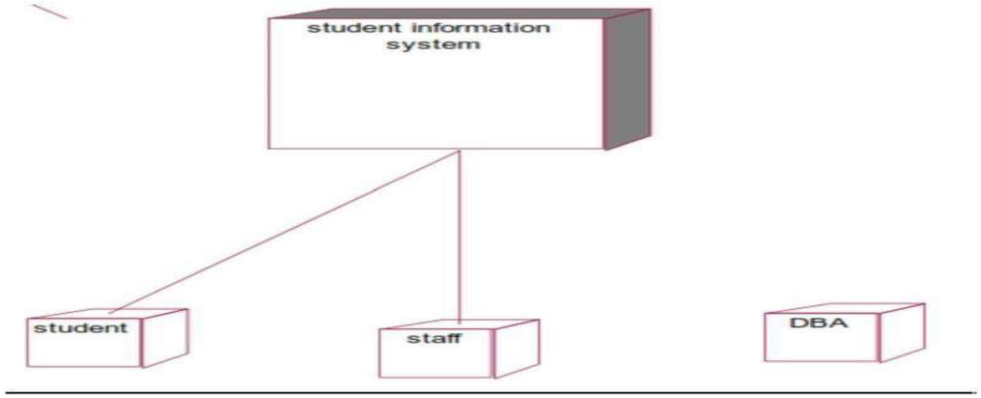
COMPONENT DIAGRAM



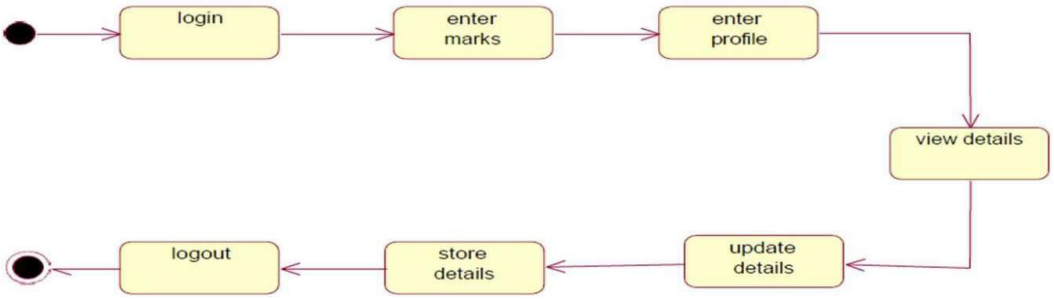
USE CASE DIAGRAM



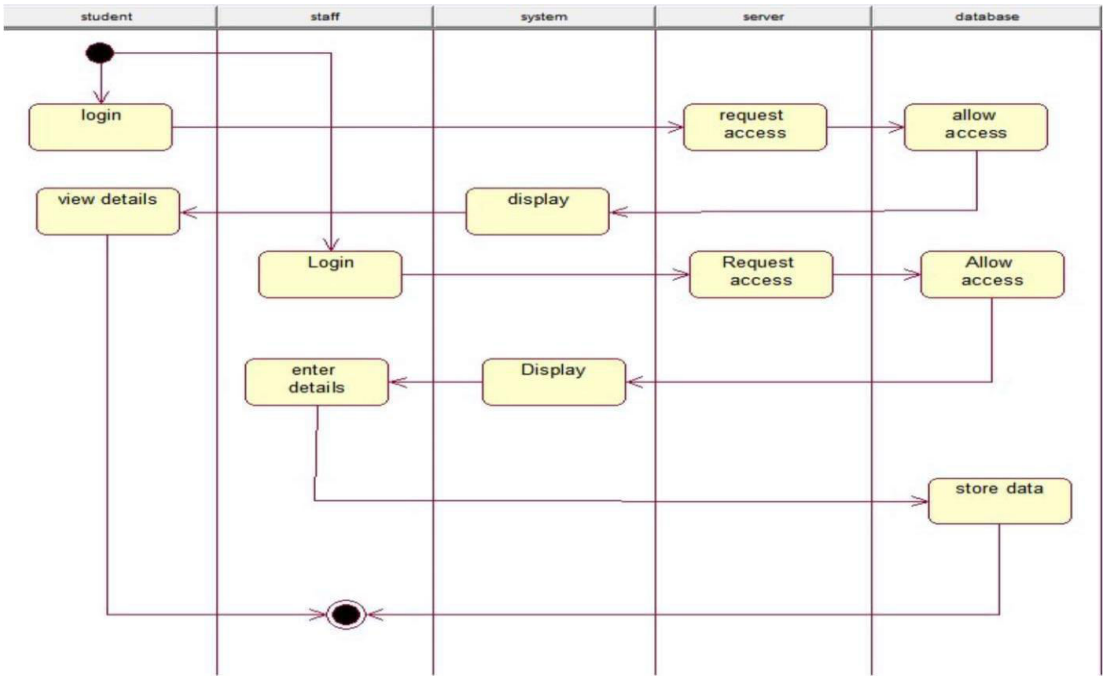
DEPLOYMENT DIAGRAM



STATE CHART DIAGRAM



ACTIVITY DIAGRAM



RESULT: Thus the various uml diagrams for student information system were drawn and code was generated successfully.