CS2357 – OBJECT ORIENTED ANALYSIS AND DESIGN LAB MANUAL

NAME: ___________________________ REG. NO.: ___________________________

CLASS: ___________________________ SEMESTER: ___________________________

[VI SEMESTER B.TECH - INFORMATION TECHNOLOGY]

REGULATION – 2008 (AU-CHENNAI)
OBJECTIVE:

To develop a mini-project following the 13 exercises listed below.

1. To develop a problem statement.
2. Develop an IEEE standard SRS document. Also develop risk management and project plan (Gantt chart).
3. Identify Use Cases and develop the Use Case model.
4. Identify the business activities and develop an UML Activity diagram.
5. Identify the conceptual classes and develop a domain model with UML Class diagram.
6. Using the identified scenarios find the interaction between objects and represent them using UML Interaction diagrams.
7. Draw the State Chart diagram.
8. Identify the User Interface, Domain objects, and Technical services. Draw the partial layered, logical architecture diagram with UML package diagram notation.
9. Implement the Technical services layer.
10. Implement the Domain objects layer.
11. Implement the User Interface layer.
12. Draw Component and Deployment diagrams.

**Suggested domains for Mini-project.**

1. Passport automation system.
2. Book bank
3. 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
11. Foreign trading system
12. Conference Management System
13. BPO Management System
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AIM

To develop the Passport Automation System using rational rose tools, Java and MS access

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

a. 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.

b. 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.

c. 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.

d. The application is then processed manually based on the report given by the system, and any forfeiting identified can make the applicant liable to penalty as per the law.
e. The system forwards the necessary details to the police for its separate verification whose report is then presented to the administrator. After all the necessary criteria have been met, the original information is added to the database and the passport is sent to the applicant.

SOFTWARE REQUIREMENTS SPECIFICATION

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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.
1.1 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.

1.2 SCOPE

a. The System provides an online interface to the user where they can fill in their personal details
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.

1.3 DEFINITIONS, ACRONYMS AND THE ABBREVIATIONS •

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. • Applicant - One who wishes to obtain the Passport. • PAS - Refers to this Passport Automation System.

1.4 REFERENCES IEEE Software Requirement Specification format.

1.5 TECHNOLOGIES TO BE USED • Microsoft Visual Basic 6.0

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

1.7 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.
2.0 OVERALL DESCRIPTION

2.1 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.

2.2 SOFTWARE INTERFACE
   a. Front End Client - The applicant and Administrator online interface is built using Java

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

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

2.5 USER CHARACTERISTICS
   a. Applicant - They are the people who desires to obtain the passport and submit the information to the database.
   b. 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.
   c. 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.
2.6 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.

2.7 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**

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</table>
USE CASE DIAGRAM
CLASS DIAGRAM
SEQUENCE DIAGRAM

COLLABORATION DIAGRAM
STATE CHART DIAGRAM

ACTIVITY DIAGRAM
PACKAGE DIAGRAM
IMPLEMENTATION

SOURCE CODE
AIM

To develop a project of Book bank management system using Rational Rose Software and to implement the software in Visual Basic.

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.
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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

<table>
<thead>
<tr>
<th>TERMS</th>
<th>DESCRIPTION</th>
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<tr>
<td>MEMBER</td>
<td>The one who registers himself and purchase books from the bank.</td>
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<tr>
<td>DATABASE</td>
<td>Database is used to store the details of members and books.</td>
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<tr>
<td>ADMINISTRATOR</td>
<td>The one who verifies the availability of book and issue them</td>
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<tr>
<td>USER</td>
<td>Member</td>
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<td>SOFTWARE REQUIREMENT</td>
<td>This software specification documents full set of features and function for online recruitment system that is performed in company website.</td>
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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 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 member who borrows book.

12. EXTERNAL INTERFACE REQUIREMENTS

SOFTWARE REQUIREMENTS

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

HARDWARE REQUIREMENTS

2. RAM: 256 mb
3. Operating system: Microsoft windows xp.
4. Free disk space: 1gb

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
CLASS DIAGRAM
SEQUENCE DIAGRAM

COLLABORATION DIAGRAM
STATE CHART DIAGRAM

ACTIVITY DIAGRAM
COMPONENT DIAGRAM

DEPLOYMENT DIAGRAM
IMPLEMENTATION

SOURCE CODE
FORMS
RESULT:
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.
SOFTWARE REQUIREMENT SYSTEM

1. INTRODUCTION

2. OBJECTIVE

3. OVERVIEW

4. GLOSSARY

5. PURPOSE

6. SCOPE

7. FUNCTIONALITY

8. USABILITY

9. PERFORMANCE
10. RELIABILITY

11. FUNCTIONAL REQUIREMENTS

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

<table>
<thead>
<tr>
<th>TERMS</th>
<th>DESCRIPTION</th>
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<tbody>
<tr>
<td>APPLICANT OR STUDENT</td>
<td>Applicant can register himself by filling out the registration form and finally paying the payment for attending the exam.</td>
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<tr>
<td>DATABASE</td>
<td>Database is used to maintain and store the details of registered applicants.</td>
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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 REQUIREMENTS

SOFTWARE REQUIREMENTS

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

HARDWARE REQUIREMENTS

2. RAM: 256 mb
3. Operating system: Microsoft windows xp.
4. Free disk space: 1gb

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
STATE CHART DIAGRAM

ACTIVITY DIAGRAM
COMPONENT DIAGRAM

DEPLOYMENT DIAGRAM
PACKAGE DIAGRAM
IMPLEMENTATION

SOURCE CODE
FORMS
RESULT:
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.

SOFTWARE REQUIREMENT SPECIFICATION

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</table>
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
CLASS DIAGRAM
COMPONENT DIAGRAM

DEPLOYMENT DIAGRAM
PACKAGE DIAGRAM
IMPLEMENTATION

SOURCE CODE
FORMS
RESULT:
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 REQUIREMENT 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
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

USE CASE DIAGRAM
SEQUENCE DIAGRAM

COLLABORATION DIAGRAM
STATE CHART DIAGRAM

ACTIVITY DIAGRAM
COMPONENT DIAGRAM

DEPLOYMENT DIAGRAM
PACKAGE DIAGRAM
IMPLEMENTATION

SOURCE CODE
RESULT:
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

1.1 Purpose

1.2 Scope

1.3 References

1.4 Technology To Be Used

1.5 Tools Be Used

1.6 Overview

2 OVERALL DESCRIPTION

2.1 Functionality

2.2 Usability

2.3 Performance

2.4 Reliability

1.1 Purpose

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.

1.3 References IEEE Software Requirement Specification format.

1.4 Technology To Be Used

Microsoft Visual Basic 6.0

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

1.6 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
2.1 Functionality
The database should be act as an main role of the e-ticketing system it can be booking the ticket in easy way.

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

2.3 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.

2.4 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
COMPONENT DIAGRAM

DEPLOYMENT DIAGRAM
PACKAGE DIAGRAM
IMPLEMENTATION

SOURCE CODE
RESULT:
AIM
To develop a project employee management system using the Rational Rose Software from the UML diagram and to implement the software in Visual Basic.

PROJECT ANALYSIS AND PROJECT PLANNING
The employee 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

1.1 Purpose

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

1.2 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.
1.3 References IEEE Software Requirements Specification format

1.4 Technology to Be Used
Microsoft Visual Basic 6.0

1.5 Tools to Be Used Rational Rose tool (for developing UML Patterns)

1.6 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

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

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

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

2.4 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.

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

2.6 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
CLASS DIAGRAM

SEQUENCE DIAGRAM
COLLABORATION DIAGRAM

STATE CHART DIAGRAM
ACTIVITY DIAGRAM

COMPONENT DIAGRAM
DEPLOYMENT DIAGRAM

PACKAGE DIAGRAM
IMPLEMENTATION
SOURCE CODE
RESULT:
AIM
To develop a project credit card system using the Rational Rose Software 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.
SOFTWARE REQUIREMENT SPECIFICATION

INTRODUCTION
1.13 Purpose
1.14 Scope
1.15 References
1.16 Technology To Be Used
1.17 Tools Be Used
1.18 Overview

OVERALL DESCRIPTION
2.1 Product Perspective
2.2 Functionality
2.3 Usability
2.4 Performance
2.5 Reliability
2.6 Assumption and Dependencies

1.3 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.

1.3 REFERENCES IEEE Software Requirement Specification format.

1.4 TECHNOLOGY TO BE USED
Microsoft Visual Basic 6.0

1.5 TOOLS TO BE USED Rational Rose tool (for developing UML Patterns)
1.6 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

2.1 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.

2.2 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.

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

2.4 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.

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

2.6 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
COLLABORATION DIAGRAM

STATE CHART DIAGRAM
RESULT:
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.

SOFTWARE REQUIREMENT SPECIFICATION
1 INTRODUCTION
2 OBJECTIVE
3 OVERVIEW
4 GLOSSARY
5 PURPOSE
6 SCOPE
7 FUNCTIONALITY
8 USABILITY

9 PERFORMANCE
10 RELIABILITY
1. INTRODUCTION
Ebook management 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

<table>
<thead>
<tr>
<th>TERMS</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>CUSTOMER</td>
<td>Customer will purchase the books from the Website.</td>
</tr>
<tr>
<td>DATABASE</td>
<td>Database is used to store the books and details of books.</td>
</tr>
<tr>
<td>ADMIN</td>
<td>Handles all the support features and the technical works in the application.</td>
</tr>
</tbody>
</table>
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 remaining 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 website 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
CLASS DIAGRAM

SEQUENCE DIAGRAM
COLLABORATION DIAGRAM

STATE CHART DIAGRAM
DEPLOYMENT DIAGRAM

PACKAGE DIAGRAM
IMPLEMENTATION
SOURCE CODE
RESULT:
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.
4. GLOSSARY

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

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.

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 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
CLASS DIAGRAM
SEQUENCE DIAGRAM

COLLABORATION DIAGRAM
STATE CHART DIAGRAM

ACTIVITY DIAGRAM
COMPONENT DIAGRAM

DEPLOYMENT DIAGRAM
PACKAGE DIAGRAM
IMPLEMENTATION

SOURCE CODE
FORMS
RESULT:
AIM
To design a project Foreign Trading System using Rational Rose Software and to implement the software in Visual Basic

PROJECT ANALYSIS AND PROJECT PLANNING
The initial requirements to develop the project about the mechanism of the Foreign Trading System is bought from the trader. The requirements are analyzed and refined which enables the analyst (administrator) to efficiently use the Foreign Trading System. The complete project analysis is developed after the whole project analysis explaining about the scope and the project statement is prepared.

PROBLEM STATEMENT
The steps involved in Foreign Trading System are:

- 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 required commodities 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 by receiving the amount and updates it in the database.
- The trader logs out after the confirmation message has been received.
SOFTWARE REQUIREMENT SPECIFICATION
SNO SPECIFICATION
1 INTRODUCTION
2 OBJECTIVE
3 OVERVIEW
4 GLOSSARY
5 PURPOSE
6 SCOPE
7 FUNCTIONALITY
8 USABILITY
9 PERFORMANCE
10 RELIABILITY
11 FUNCTIONAL REQUIREMENTS

1. INTRODUCTION
International trade is exchange of capital, goods, and services across international borders or territories. In most countries, it represents a significant share of gross domestic product (GDP). While international trade has been present throughout much of history (see Silk Road, Amber Road), its economic, social, and political importance has been on the rise in recent centuries. Industrialization, advanced transportation, globalization, multinational corporations, and outsourcing are all having a major impact on the international trade system. Increasing international trade is crucial to the continuance of globalization. Without international trade, nations would be limited to the goods and services produced within their own borders.

2. OBJECTIVE
The main objective of Foreign Trading System is to make the traders to do trading process easily through online as the forex is open 24 hours a day.

3. OVERVIEW
The overview of the project is to design an online tool for the foreign trading process and it oversees the implementation, administration and operations covered in foreign trade.
4. GLOSSARY

<table>
<thead>
<tr>
<th>TERM</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>TRADER</td>
<td>Person who trades for the commodities.</td>
</tr>
<tr>
<td>ADMINISTRATOR</td>
<td>One who coordinates the entire trading process.</td>
</tr>
<tr>
<td>DATABASE</td>
<td>All the transaction details are stored here.</td>
</tr>
<tr>
<td>READER</td>
<td>Person who is viewing the website.</td>
</tr>
<tr>
<td>USER</td>
<td>The traders and the viewers are the users.</td>
</tr>
<tr>
<td>SOFTWARE REQUIREMENT SPECIFICATION</td>
<td>This software specification documents full set of features and function for foreign trading system.</td>
</tr>
</tbody>
</table>

5. PURPOSE

The primary purpose of the forex is to assist international trade and investment, by allowing businesses to convert one currency to another currency. That is, In a typical foreign exchange transaction, a trader purchases a quantity of one currency by paying the quantity of another currency.

6. SCOPE

There are a lot of advantages in Forex Trading as compared to many other financial trading, like futures or stock trading. The Forex market is open 24 hours a day. Being the market available 24 hours a day, this gives the trader to choose which time they would like to trade. It requires only minimum beginning capital to start the Forex trade. Forex Trading has outstanding liquidity as it never closes.

7. FUNCTIONALITY

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

8. USABILITY

The interface to make the trader access the system will be efficient.

9. PERFORMANCE

The capability that the system performs on the whole will be efficient and reliable without any error occurrence.
10. RELIABILITY
The system should be able to maintain its function throughout the transactions in the future.

11. FUNCTIONALITY REQUIREMENTS
Functional requirements refers to the functionality of the system. The services that are provided to the trader who trades.

UML DIAGRAMS
The following UML diagrams describe the process involved in the foreign trading system.

• Use case diagram
• Class diagram
• Sequence diagram
• Collaboration diagram
• State chart diagram
• Activity diagram
• Component diagram
• Deployment diagram
• Package diagram
USE CASE DIAGRAM
CLASS DIAGRAM
SEQUENCE DIAGRAM

COLLABORATION DIAGRAM
COMPONENT DIAGRAM

DEPLOYMENT DIAGRAM
IMPLEMENTATION

SOURCE CODE
RESULT:
CONFERENCE MANAGEMENT SYSTEM

AIM
To develop a project on Conference management system using Rational Rose Software and to implement the project in Visual Basic.

PROBLEM ANALYSIS AND PROJECT PLANNING
The Conference Management System is an online website in which candidate can submit the paper and register themselves and then attend the conference. The paper will be reviewed. The details of the conference, date and time will be made available to them through the website. After getting the confirmation details the candidate should submit the revised and camera ready paper. Then the registration process will be done.

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.
SOFTWARE REQUIREMENT SPECIFICATION

INTRODUCTION
This software specification document consist full set of features and function for online conference management system. In this we give specification about the system requirements that are apart from the functionality of the system to perform the candidate paper valuation. It tells the usability, reliability defined in use case specification.

OBJECTIVE
The main objective of Conference Management System is to accomplish paper submission online, update the presentation details and confirm registration. Conference management system provides online help to the users all over the world.

OVERVIEW
The overview of the project is to design a process which ease the work for the candidate as well as the reviewer. Candidate can easily submit the paper and go for registration.
**GLOSSARY**

<table>
<thead>
<tr>
<th>TERMS</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>CANDIDATE</td>
<td>The candidate can login and submit the paper to the reviewer. After getting</td>
</tr>
<tr>
<td></td>
<td>acknowledgement the candidate will submit the revised and camera ready paper</td>
</tr>
<tr>
<td></td>
<td>then registration process will be carried out.</td>
</tr>
<tr>
<td>REVIEWER</td>
<td>Reviewer will reviews the paper and sending acknowledgement to the candidate</td>
</tr>
<tr>
<td>DATABASE</td>
<td>Database is used to verify login and store the details of selected candidates.</td>
</tr>
<tr>
<td>SOFTWARE REQUIREMENT</td>
<td>This software specification documents full set of features</td>
</tr>
<tr>
<td>SPECIFICATION</td>
<td>and function for conference management system.</td>
</tr>
</tbody>
</table>

**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 correct information and day-to-day update of information.

FUNCTIONAL REQUIREMENTS
Functional requirements are those that refer to the functionality of the system that is the services that are provided to the candidate who register for the conference.

UML DIAGRAMS
The following UML diagrams describe the process involved in the conference management system.

- Use case diagram
- Class diagram
- Sequence diagram
- Collaboration diagram
- State chart diagram
- Activity diagram
- Component diagram
- Deployment diagram
- Package diagram
USE CASE DIAGRAM
STATE CHART DIAGRAM

ACTIVITY DIAGRAM
IMPLEMENTATION

SOURCE CODE
RESULT:
AIM
To develop a project Business process outsourcing (BPO) management system using Rational Rose software and to implement the software in Visual Basic.

PROBLEM ANALYSIS AND PROJECT PLANNING
Generally outsourcing can be defined as an organization entering into a contract with another organization to operate and managed one or more of its business processes. There are many problems faced by the BPO one among them is meeting their targets and leaving the concern very often and switch to another company. In this project we deal with the inbound system of the BPO. In inbound system the agent calls the customer from his database to sell his product.

PROBLEM STATEMENT
In this BPO inbound system, the process undergoing is that the agent tries to sell his product so that the agent gets the details of the customer from the database and pitches about his product and makes the sales successful. The communication is done through the telephone. Telephone is the major component used for this customer satisfaction service. The steps are as follows:

• The agent login to the website and enters the username and password. It checks for authorization.

• If the username and password is correct, it allows the agent to get the details of the customer from the database.

• Now the agent makes the call to the customer and pitches about the product.
  • If the customer is satisfied, agent sells the product else disconnects the call.
  • Agent proceeds with the another call.
1. INTRODUCTION
BPO is typically categorized into back office outsourcing—which includes internal business functions such as human resources or finance and accounting, and front office outsourcing—which includes customer related services such as contact center services. BPO that is contracted outside a company’s country is called offshore outsourcing. BPO that is contracted to a company’s neighbouring country is called nearshore outsourcing. Given the proximity of BPO to the information technology industry, it is categorized as an information technology enabled service or ITES. Knowledge process outsourcing (KPO) and legal process outsourcing (LPO) are some of the sub-segments of business process outsourcing industry. In the following SRS the front office outsourcing is explained in detail.

2. PURPOSE
The purpose of this system is to provide information about the customer need from inside and outside world. With the reduction in communication costs and improved bandwidths and associated infrastructure, BPO as a segment is witnessing massive growth. One of the key challenges that BPO companies is that to 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 of different operators for processing.
3. SCOPE
Developing a good BPO management system. BPO is a way in which it helps to increase company's flexibility. As part of BPO, documents need to be managed between the outsourcing company and the offshore company. Multiple clients need to be managed by the BPO company.

4. GLOSSARY
<table>
<thead>
<tr>
<th>TERM</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Customer</td>
<td>Person who is seeking information.</td>
</tr>
<tr>
<td>Agent</td>
<td>People who receives the query.</td>
</tr>
<tr>
<td>Database</td>
<td>Collection of all information monitored by the BPO system.</td>
</tr>
<tr>
<td>Reader</td>
<td>Anyone visiting the site to read about BPO management system.</td>
</tr>
<tr>
<td>Software requirement</td>
<td>A document that completely describes all the functions of a proposed system</td>
</tr>
<tr>
<td>specification</td>
<td>and the constrains under which it must operate.</td>
</tr>
<tr>
<td>User</td>
<td>Customer and reader</td>
</tr>
</tbody>
</table>

7. REFERENCES
Business process outsourcing the competitive advantage by Rick L. Click, Thomas N. Duening-2005. Srs document is referred from the standard IEEE format from fundamentals of software engineering by Rajib Mall (2004) page no: 356

8. FUNCTIONALITY
Many customers of the process to check for its occurrence and other works. We all have to carry over at the same time.

9. USABILITY
The user interface to make the BPO management to be efficient.

10. PERFORMANCE
It is the capability about which it can perform function for many users efficiently at the same time without any error occurrence.

11. SYSTEM ENVIRONMENT
The BPO system is embedded in a larger system involving several management systems. We describe this environment as communication system between customer
and agent through voice chat. The administrator of the system uses FTP for moving files from one place to another.

12. FUNCTIONAL REQUIREMENTS
Functional requirements are those refer to the functionality of the system. i.e. what services it will provide to the user. Non functional (supplementary) requirements pertain to other information needed to produce the system correctly and detailed separately.

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
STATE CHART DIAGRAM

ACTIVITY DIAGRAM
PACKAGE DIAGRAM
IMPLEMENTATION

SOURCE CODE
FORMS