

Ex no:

CREDIT CARD PROCESSING

Date:

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:

- Insecure – there is a possibility that a skilled hacker could break into the database and steal an entire list of credit card numbers, thereby damaging the merchant's reputation with current client.
- There is a higher risk of customer charge backs with no signature
- Higher risk of fraud for using stolen credit cards
- Many discerning online shoppers will not give their credit card to an “untrusted” online merchant (you may want to consider being part of the Better Business Bureau or similar organization to add credibility).

So there is a need of online and trusted credit card processing.

(II)SOFTWARE REQUIREMENT SPECIFICATION:

1.0 INTRODUCTION

A **credit card** is a small plastic card issued to users as a system of payment. It allows its holder to buy goods and services based on the holder's promise to pay for these goods and services. The issuer of the card creates a revolving account and grants a line of credit to the consumer (or the user) from which the user can borrow money for payment to a merchant or as a cash advance to the user.

When a purchase is made the merchant swipes the card. The information goes to a gateway processor, which either accepts or rejects the transaction. If it is accepted, the transaction is held until the end of the business day. The merchant then reenters the transaction via the gateway processor, the data is logged, and the debt is transferred to the account. The use of an ATM for cash advance is a similar process.

If you are selling to consumers, merchant services will allow you to expand your customer base and provide a more convenient method of payment than cash or checks. And if you are interested in selling over the Internet, accepting credit card processing is a must. Accepting credit cards allows funds to be transferred to your bank account in less than a week. This can be a welcome relief for businesses that experience a tight cash flow.

The two purchase options for Credit Card Processing facility are:

- Validation only
- Credit card processing (which secures deposits at the time of booking) With either option, credit card accounts entered during booking are validated to assure that the account is active and in good standing. The credit card processing option also allows properties to process credit card deposits.

1.1 PURPOSE

When customers complete their shopping cart, their credit card is preauthorized and the order is entered into Sales Order. Credit Card Processing dials out and obtains a credit card payment. Within five minutes the customer receives an e-mail receipt.

1.2 SCOPE

- Automatically connects to your financial network for credit card authorizations and settlements
- Integrates with Sales Order, Accounts Receivable, and e-Business Manager • Support for dial-up (modem) connections or secure Internet connections through TCP/IP and SSL

- Compliant with Visa and MasterCard Electronic Commerce Indicator (ECI) regulations

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- Multiple address verification options available

1.3 DEFINITIONS, ACRONYMS AND THE ABBREVIATIONS

• **Authorization service** - The issuer of the card creates a revolving account and grants a line of credit to the consumer (or the user) from which the user can borrow money for payment to a merchant or as a cash advance to the user.

• **User**- One who wishes to use the credit card.

• **CCP** - Refers to this Credit Card Processing.

• **HTML** - Markup Language used for creating web pages.

• **J2EE** – Java 2 Enterprise Edition is a programming platform java platform for developing and running distributed java applications.

• **HTTP** - Hyper Text Transfer Protocol.

• **TCP/IP** – Transmission Control Protocol/Internet Protocol is the communication protocol used to connect hosts on the Internet.

1.4 REFERENCES

IEEE Software Requirement Specification format.

1.5 TECHNOLOGIES TO BE USED

- HTML
- JSP
- Javascript
- Java

1.6 TOOLS TO BE USED

- Eclipse IDE (Integrated Development Environment)
- 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

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.

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2.2 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.

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

1. Accept credit card numbers on the web, store them in a database, then process them off line
2. Credit card processing with CCP
3. Credit card processing with a third-party credit card processing company

2.5 USER CHARACTERISTICS

- 1) **User/Customer** - They are the people who desires to purchase the goods using credit card.
- 2) **Authorization Service**
 - Validate the credit card payments to ensure that the card number is valid and the card has not expired
 - Deposit processing to apply the deposit payment to the card
 - Prepare Credit card transaction reports that show authorization codes, amounts, and error/success messages

2.6 CONSTRAINTS

- Trusted if using a well known third-party processor
- Must suite for higher-volume sites
- Cheaper transaction rates
- Getting money transferred may be very fast
- Must provide fraud prevention measures and fraud protection programs

2.7 ASSUMPTIONS AND DEPENDENCIES

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

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

(III)USECASE DIAGRAM:

The Passport Automation system use cases are:

Creating Account: Used to create a account.

Credit card request: Used to send the request to credit card.

Bank Enquiry: Used to get the bank enquiry like pin code to verify your user account.

Issuing card: Used to issuing the card to machine.

Purchase the item: Used to list out the purchase details in shop.

Prepare the bill: Used to issuing the bill for the purchased item.

paying bill: Used to transaction of money to paying the bill.

ACTORS INVOLVED

Customer/user: The person who order for the item.

Banker: The person to check the account details.

Retailer: The person to preparing the bills.

USE-CASE NAME: PURCHASE PRODUCT

Customer purchases items from ecommerce site then proceeds to the site's secure checkout area.

USE-CASE NAME: AUTHORIZATION REQUEST

Credit card processor collects billing information from the customer via a secure connection.

USE-CASE NAME: AUTHORIZATION RESPONSE

Billing information is verified and the transaction is completed by the credit card issuer.

USE-CASE NAME: PAYMENT APPROVAL

The transaction details are recorded by the credit card processor and results are securely relayed to the merchant. Merchant's site receives transaction result and does appropriate actions (e.g. saves the order & shows message).



Fig.3. USECASE DIAGRAM FOR PASSPORT AUTOMATION SYSTEM

(IV) CLASS DIAGRAM:

The class diagram, also referred to as object modeling is the main static analysis diagram. The main task of object modeling is to graphically show what each object will do in the problem domain. The problem domain describes the structure and the relationships among objects.

The Credit Card Processing system class diagram consists of three classes.

They are

1. Banker
2. Customer
3. Retailer

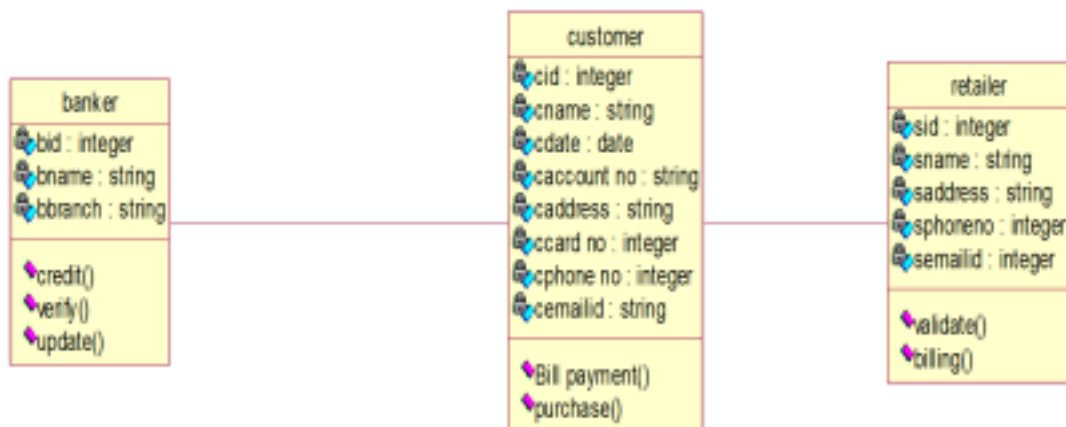


Fig.4.CLASS DIAGRAM

(V) INTERACTION DIAGRAM:

- A sequence diagram represents the sequence and interactions of a given USE-CASE or scenario. Sequence diagrams can capture most of the information about the system. ▪ Most object to object interactions and operations are considered events and events include signals, inputs, decisions, interrupts, transitions and actions to or from users or external devices.
- An event also is considered to be any action by an object that sends information. ▪ The event line represents a message sent from one object to another, in which the “from” object is requesting an operation be performed by the “to” object.
- The “to” object performs the operation using a method that the class contains. ▪ It is also represented by the order in which things occur and how the objects in the system send message to one another.
- The sequence diagram for each USE-CASE that exists when a user administrator, check status and new registration about passport automation system are given.

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C:Customer

4: Enquiry

5: Issuind Card

6: select shop

7: Purchase Item

8: producing item for billing

R:Retailer

10: Swipe the card
B:Banker

1: Select Bank

2: Creating Account

3: Requesting Card

9: preparing bills

11: validate card

12: Paying the bills

14: checking account details

13: returning amount

Fig.5.1.SEQUENCE DIAGRAM

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1: Select Bank
2: Creating Account
3: Requesting Card
13: returning amount
14: checking account details

C:Custo
mer

5: Issuind Card
6: select shop
7: Purchase Item
8: producing item for billing
10: Swipe the card

4: Enquiry

12: Paying the bills

B:Banke
r

Fig.5.2.COLLABORATIO N DIAGRAM

9: preparing bills

R:Retail
er

11: validate card

(VI)State chart Diagram:

- States of object are represented as rectangle with round corner, the transaction between the different states.

- A transition is a relationship between two state that indicates that when an event occur the object moves from the prior state to the subsequent.



Fig.6. STATE CHART DIAGRAM

(VII) DEPLOYMENT DIAGRAM AND COMPONENT DIAGRAM

Deployment diagrams are used to visualize the topology of the physical components of a system where the software components are deployed.

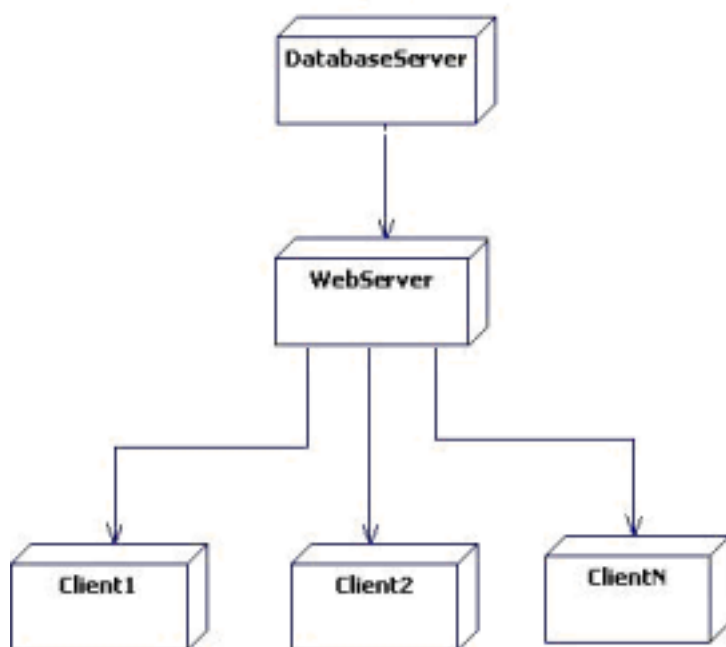


Fig.7.1.DEPLOYMENT DIAGRAM

COMPONENT DIAGRAM

Component diagrams are used to visualize the organization and relationships among components in a system.

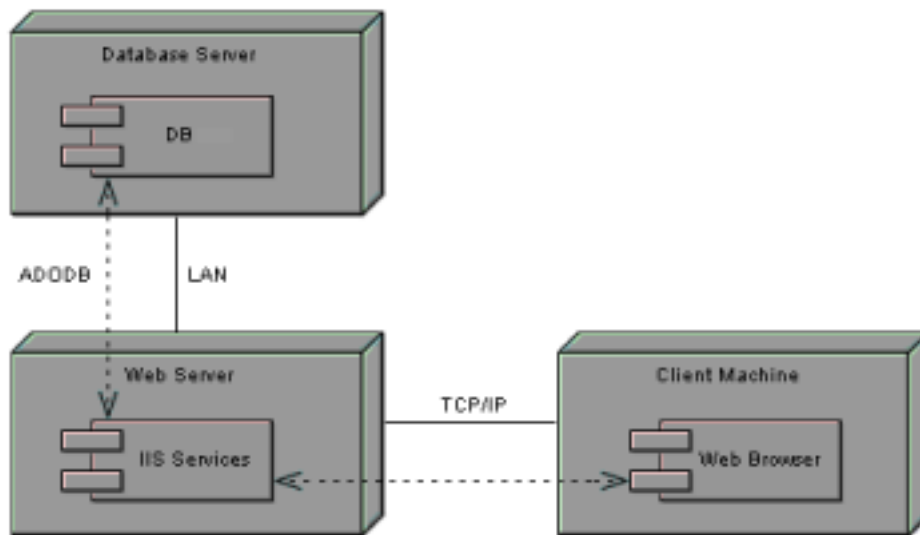


Fig.7.2.COMPONENT DIAGRAM

(VIII) IMPLEMENTATION OF DOMAIN OBJECTS LAYER AND TECHNICAL SERVICE LAYER

//Source file: E:\10764\banker.java

```
public class banker
{
    private integer BId;
    private string Bname;
    private string Branch;

    /**
    @roseuid 5167CE2902EE
    */
    public banker()
```

```
{
```

```
}
```

```
/**
```

```
@roseuid 512848F00127
```

```
*/
```

```
public void credit()
```

```
{
```

```
}
```

```
/**
```

```
@roseuid 512848FD031A
```

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```
*/
```

```
public void verify()
```

```
{
```

```
}
```

```
/**
```

```
@roseuid 512849060098
```

```
*/
```

```
public void update()
```

```
{
```

```
}
```

```
}
```

```
//Source file: E:\\10764\\customer.java
```

```
public class customer
```

```
{
```

```
private integer CId;
```

```
private string Cname;
```

```
private date Cdob;
```

```
private integer CaccountNo;
```

```
private string CAddress;
```

```
private integer CCardNo;
```

```
private integer CPhoneNo;
```

```
private string CEmailId;
```

```
/**
```

```
@roseuid 5167CE29036B
```

```
*/
```

```
public customer()
{

}

/**
 @roseuid 512849FA0212
 */
public void requestForward()
{

}

/**
 @roseuid 51284A15033B
```

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```
*/
public void purchaseThings()
{

}
}
//Source file: E:\10764\retailer.java
```

```
public class retailer
{
    private integer SId;
    private string Sname;
    private string Saddress;
    private integer Sphoneno;
    private integer SemailId;

    /**
 @roseuid 5167CE29031C
 */
    public retailer()
    {

    }

    /**
 @roseuid 51284A9A0366
 */
    public void Accept()
```



```

{

}

/**
 @roseuid 51284AA2002A
 */
public void validate()
{

}

/**
 @roseuid 51284AA602AA
 */
public void billing()
{

```

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```

}
}

```

(IX) IMPLEMENTATION OF USER INTERFACE LAYER

v Customer Information
(To expand or collapse, click triangle.)

First/Last Name

John

Doe

Company

Street Address 1

123 Main St.

Street Address 2

City/State/Postal Code

Chicago

IL

60601

Country

United States

Phone Number

Email Address

RESULT

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