



Dharmsinh Desai University, Nadiad

Faculty of Technology, Department of Computer

Engineering

B.Tech CE Semester – VI

Subject: Service Oriented Computing

Project Title:

“BSMS”

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CERTIFICATE

This is to certify **Service Oriented Computing** project entitled “**BSMS**” is the bonofied report of work carried out by **Krupal Shah (18CEUOD005)(CE123)** and **Akash Suvagiya (18CEUOD006)(CE131)** of Computer Engineering, Semester VI, academic year 2019-2020, under our supervision and guidance.

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1. Abstract

Abstract

BSMS is Client-Server Desktop Application build for managing And handling the Bill and Stock Which are in any store, shopping mall, whole sellers and retailers which have many branches and wide business. BSMS is develop in Wcf and Windows Form App , Wcf used for server side to provide services and client are made by using windows form.

BSMS has functionality like Manage employees and Branch. BSMS can also manage Sales and Stock. BSMS can also generate Bills and maintain brief record of all transaction. BSMS provide accurate fact and figure related to stock and sales and bills which is made by using BSMS.

BSMS has Client side App develop in Window Form one is for Main Admin, second for Branch Level Admin and third for Biller who can able to generate bill. So that BSMS has wider Scope it used in big shops and Malls and etc.

2. Introduction of Project

2.1 Brief Introduction

Project Name:	BSMS
Project Definition/Aim:	The main aim of project is to provide better maintainability of bills and stock and sales record of big malls and super stores.
Develop For :	Bill Malls ,Whole Sellers
Front End :	Windows From Application(with C#)
Back End :	Wcf(Windows Communication Foundation)
Other Technologies :	➤ Microsoft Sql Server
Documentation tools:	MS Word
Submitted To:	Any Mall, super Stores, any store who have multiple Branches
IDE:	Microsoft Visual Studio(2015-community)

2.2 Tools and Technology Used

Windows Form App:

Windows Forms (WinForms) is a free and open-source graphical (GUI) class library included as a part of Microsoft .NET Framework providing a platform to write rich client applications for desktop, laptop, and tablet PCs. While it is seen as a replacement for the earlier and more complex C++ based Microsoft Foundation Class Library, it does not offer a comparable paradigm and only acts as a platform for the user interface tier in a multi-tier solution

Windows Communication Foundation:

Windows Communication Foundation (WCF) is a framework for building service-oriented applications. Using WCF, you can send data as asynchronous messages from one service endpoint to another. A service endpoint can be part of a continuously available service hosted by IIS, or it can be a service hosted in an application. An endpoint can be a client of a service that requests data from a service endpoint. The messages can be as simple as a single character or word sent as XML, or as complex as a stream of binary data. A few sample scenarios include:

- A secure service to process business transactions.
- A service that supplies current data to others, such as a traffic report or other monitoring service.
- A chat service that allows two people to communicate or exchange data in real time.
- A dashboard application that polls one or more services for data and presents it in a logical presentation.
- Exposing a workflow implemented using Windows Workflow Foundation as a WCF service.
- A Silverlight application to poll a service for the latest data feeds.

While creating such applications was possible prior to the existence of WCF, WCF makes the development of endpoints easier than ever. In summary, WCF is designed to offer a manageable approach to creating Web services and Web service clients.

Features of WCF

Service Orientation

Interoperability

Multiple Message Patterns

Data Contracts

Security

Reliable and Queued Messages

Durable Messages

AJAX and REST Support

3. Software Requirement Specifications

3.1 Scope

The scope of this system is very large so it used in any mall, large scale shop which has many branches and also retailer, Whole sellers etc used this system.

3.2 System Functional Requirements

BILL AND STOCK MANAGEMENT SYSTEM

MAIN ADMIN

R1: LOGIN

The admin can give the credentials and login to the portal.

Input:-Enter credentials

Output:-Login Successfully

R2: MANAGE BRANCH ADMIN

The main admin is resides at the server side and can manage the multiple branches(crud operations) and their admins.

R2.1 Add Branch Admin

Input:-Enter Branch Admin Detail

Output:-Branch admin added

R2.2 Remove Branch Admin

Input:-Enter Branch Admin Detail

Output:-Branch admin Removed

R2.3 Update Branch Admin

Input:-Enter Branch Admin Detail

Output:-Branch admin Updated

R2.4 View All Admins

Output:-List of Branch Admins.

R3: MANAGE STOCKS

The main admin can manage the stocks at different branches like available stocks, sold out stocks etc.

R3.1 Add Stock on Particular Branch

Input:-Enter Stock Details

Output:-Stocks Added Successfully

R3.2 Remove Stock On Particular Branch

Input:- Enter Stock Details

Output:-Stock Removed Successfully

R3.3 Update Stock on Particular Branch

Input:-Enter Stock Details

Output:-Stock Updated Successfully

R3.4 View All Stocks

Output:-Statistical Information of Total Stock available at all branch

R4: MANAGE BILL

It can manage the bills which are being generated at all the branch and can do some statistical analysis.

R4.1 Remove Bills generated at Different Branch

Input:- Enter Bill No.

Output:-Bill Removed Successfully

R4.2 Update Bill

Input:- Enter Bill No and Details to update.

Output:-Bill Updated Successfully

R4.3 View All Bills

Output:-Information of all Bills of All Branches

R5: MANAGE BRANCH

The admin can manage branch like to add branch delete branch etc.(crud operations for branch).

R5.1 Add Branch

Input:-Enter Branch Detail

Output:-Branch added

R5.2 Remove Branch

Input:-Enter Branch Detail

Output:-Branch Removed

R5.3 Update Branch

Input:-Enter Branch Detail

Output:-Branch Updated

R2.4 View Branch Information

Input:-Enter Branch Id

Output:-Display Branch Information(To show selling, cost of selling etc.)

BRANCH ADMIN

R1: LOGIN

The branch admin can give the credentials and login to the portal

Input:-Enter credentials

Output:-Login Successfully

R2: MANAGE BILLER

The branch admin is resides within the particular branch and can manage the multiple billers(crud operations) .

R2.1 Add Biller

Input:-Enter Biller Detail

Output:-Biller Added Successfully

R2.2 Remove Biller

Input:-Enter Biller Detail

Output:-Biller Removed

R2.3 Update Biller

Input:-Enter Biller Detail

Output:-Biller Updated

R2.4 View All Billers

Output:-List of Billers.

R3: MANAGE STOCKS OF BRANCH

The branch admin can manage the stocks at their particular branches like available stocks, sold out stocks, which stock is required etc.

R3.1 Add Stock on Particular Branch

Input:-Enter Stock Details

Output:-Stocks Added Successfully

R3.2 Remove Stock On Particular Branch

Input:- Enter Stock Details

Output:-Stock Removed Successfully

R3.3 Update Stock on Particular Branch

Input:-Enter Stock Details

Output:-Stock Updated Successfully

R3.4 View All Stocks

Output:-Statistical Information of Total Stock available at all branch

R4: SELLING AT BRANCH

It can display the selling of the stocks at the branch e.g. how much selling is done last month, this month etc.

R4.1 Show Selling

Output:-Display the total selling of the Branch and Related Information

R4 MANAGE BILL

It can manage the bills which are being generated at the branch and can do some statistical analysis.

R4.1 Remove Bills generated at Branch

Input:- Enter Bill No.

Output:-Bill Removed Successfully

R4.2 Update Bill

Input:-Enter Bill No and Details to update.

Output:-Bill Updated Successfully

R4.3 View All Bills

Output:-Information of all Bills of All Branches

BILLER

R1: LOGIN

The biller can give the credentials and login to the portal to generate bills.

Input:-Enter credentials

Output:-Login Successfully

R2: GENERATE BILLS

After login the biller can enter the product id and can generate the bills for the different products for the customers.

Input:-Enter Product Information

Output:-Bill Generated

3.3 Other Non-Functional Requirements

Performance and scalability. How fast does the system return results. How much will this performance change with higher workloads.

Portability and compatibility. Which hardware, operating systems, browsers, and their versions does the software run on? Does it conflict with other applications and processes within these environments.

Reliability, availability, maintainability. How often does the system experience critical failures? and how much time is it available to users against downtimes.

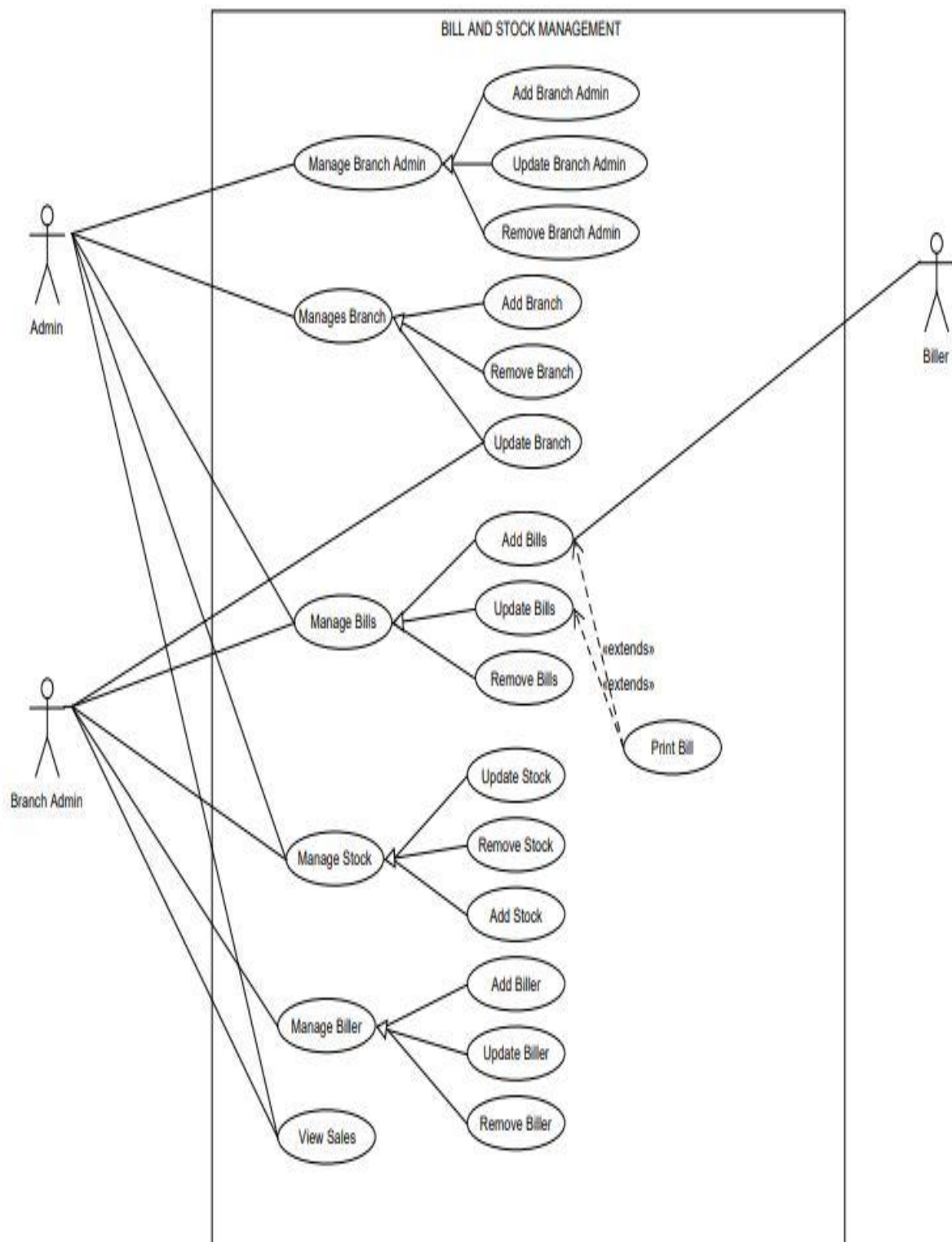
Security. How are the system and its data protected against attacks.

Localization. Does the system match local specifics.

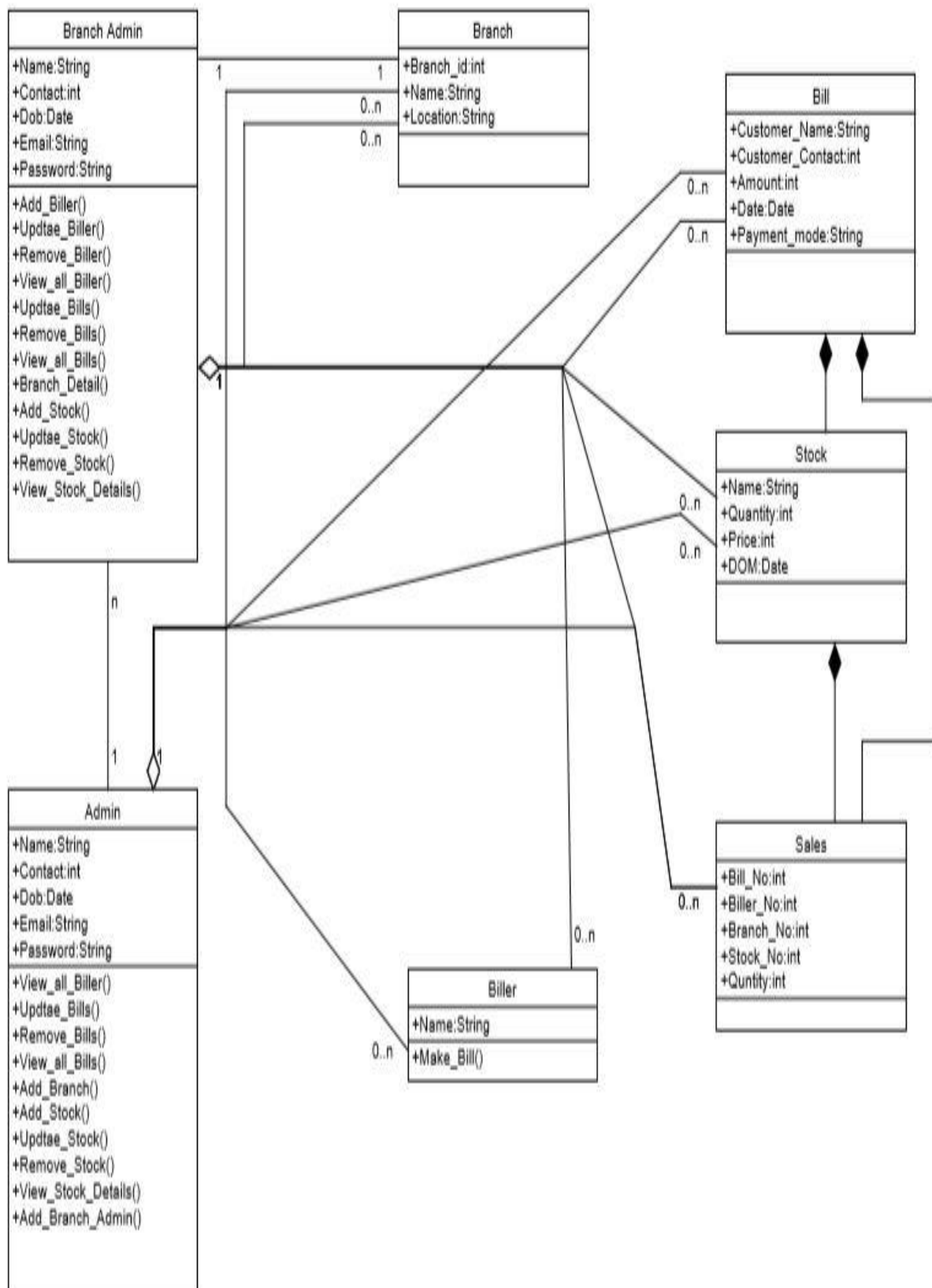
Usability. How easy is it for a customer to use the system.

4. Design

4.1 Use Case Diagram

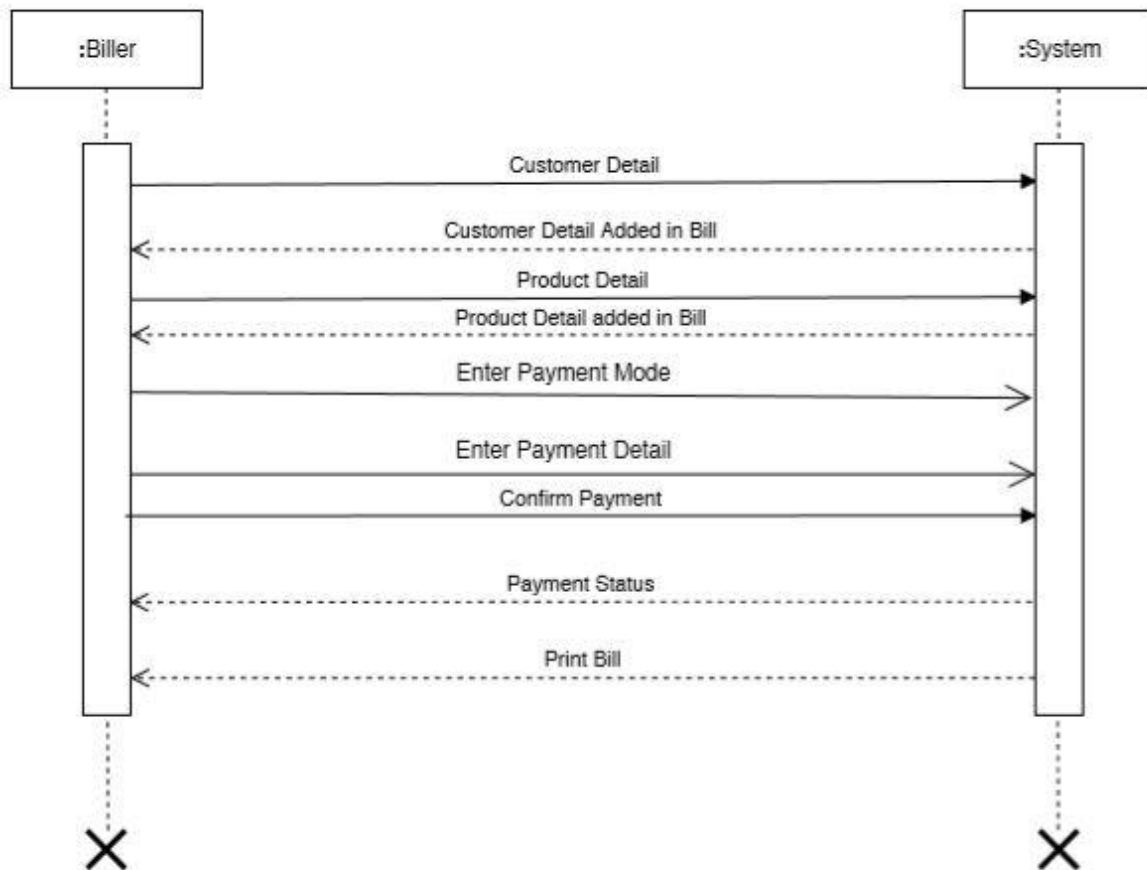


4.2 Class Diagram

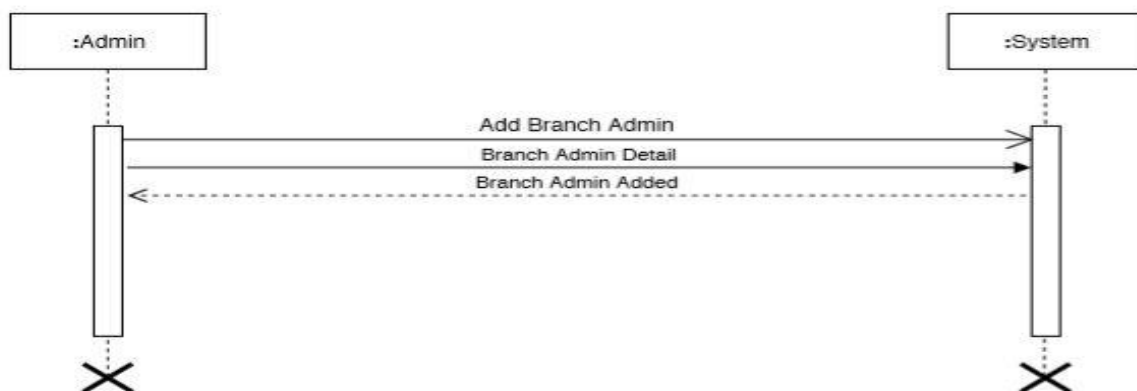


4.3 Sequence Diagram

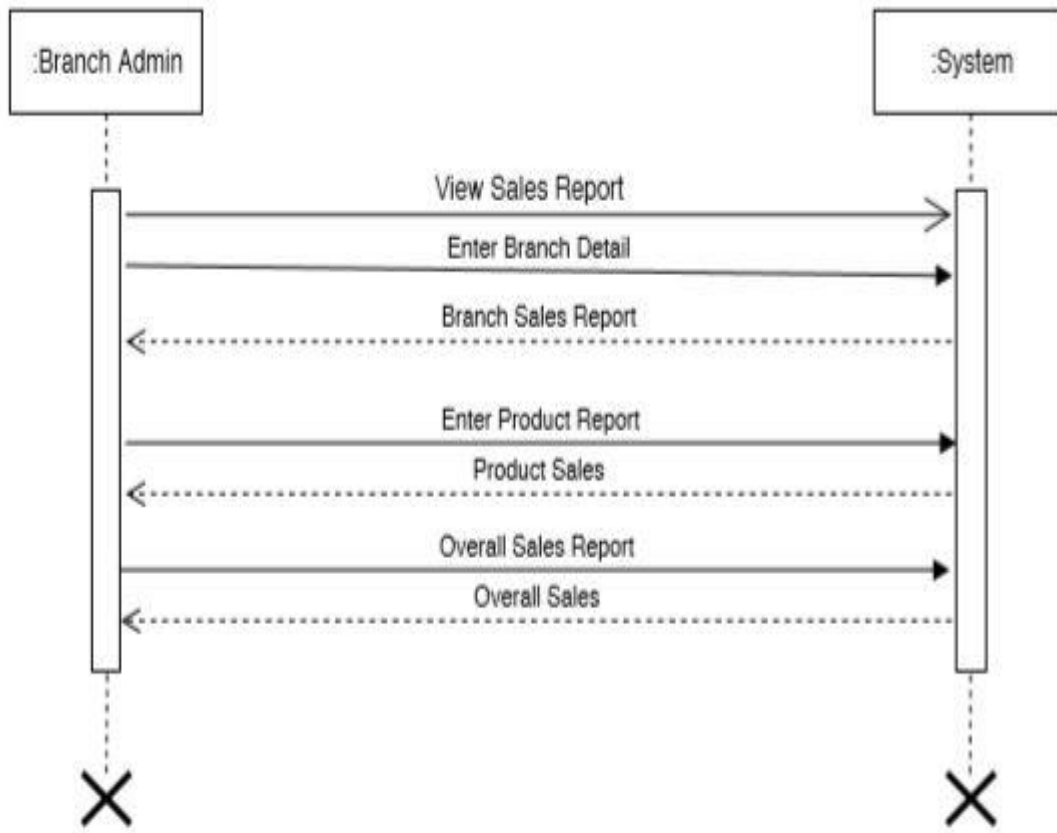
1. Generate Bill



2. Add Branch

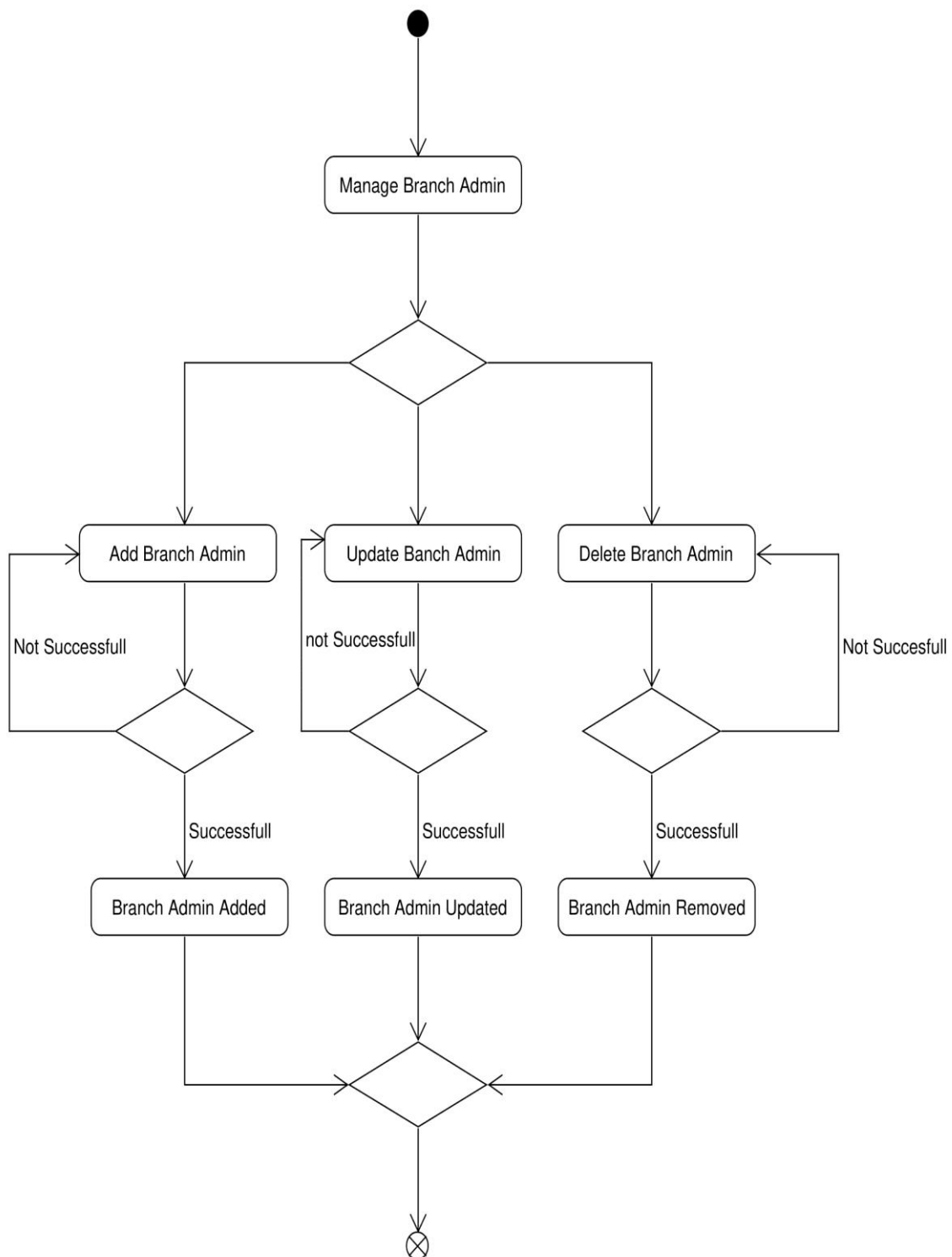


3. View Sales

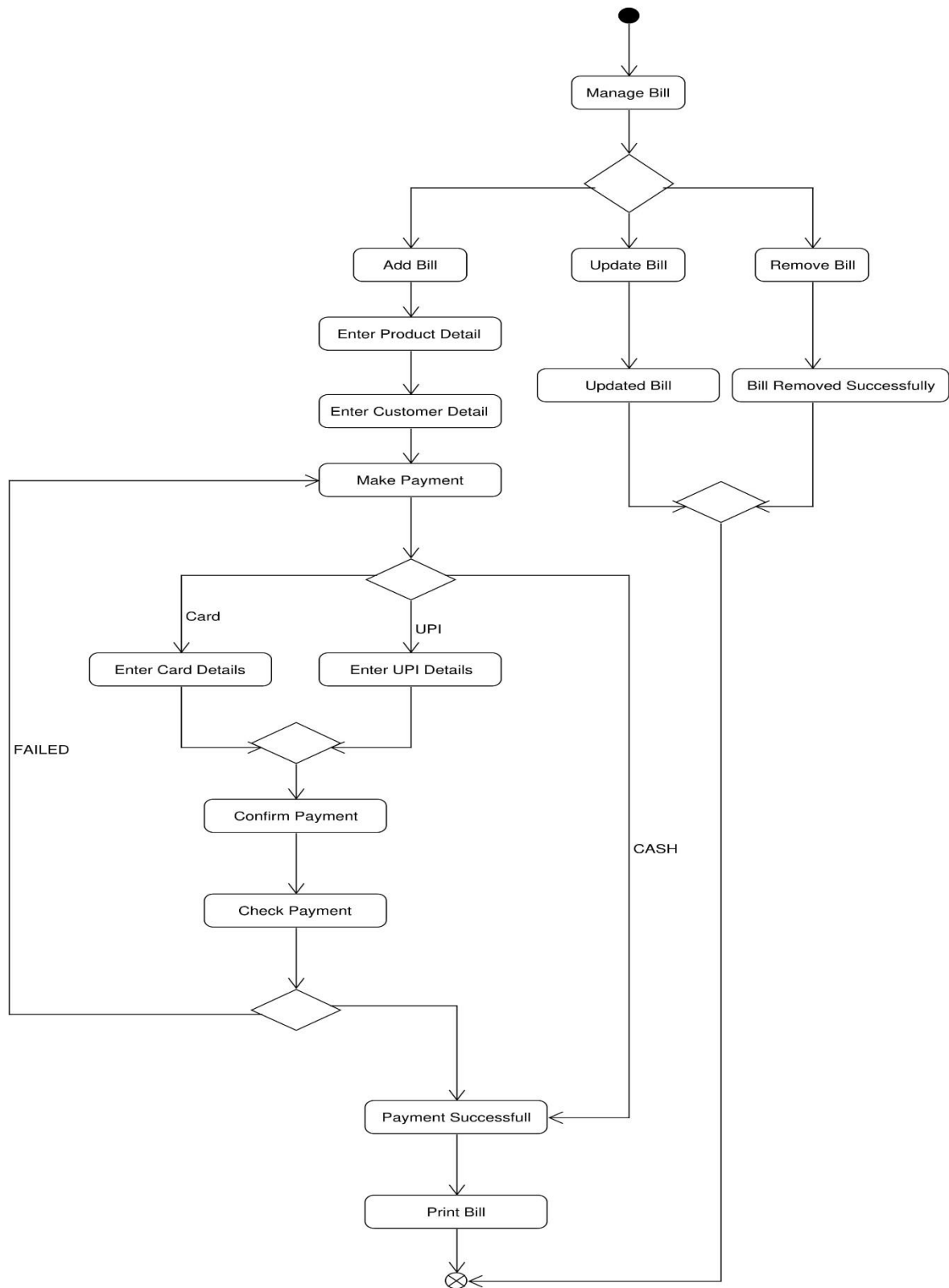


4.4 Activity Diagram

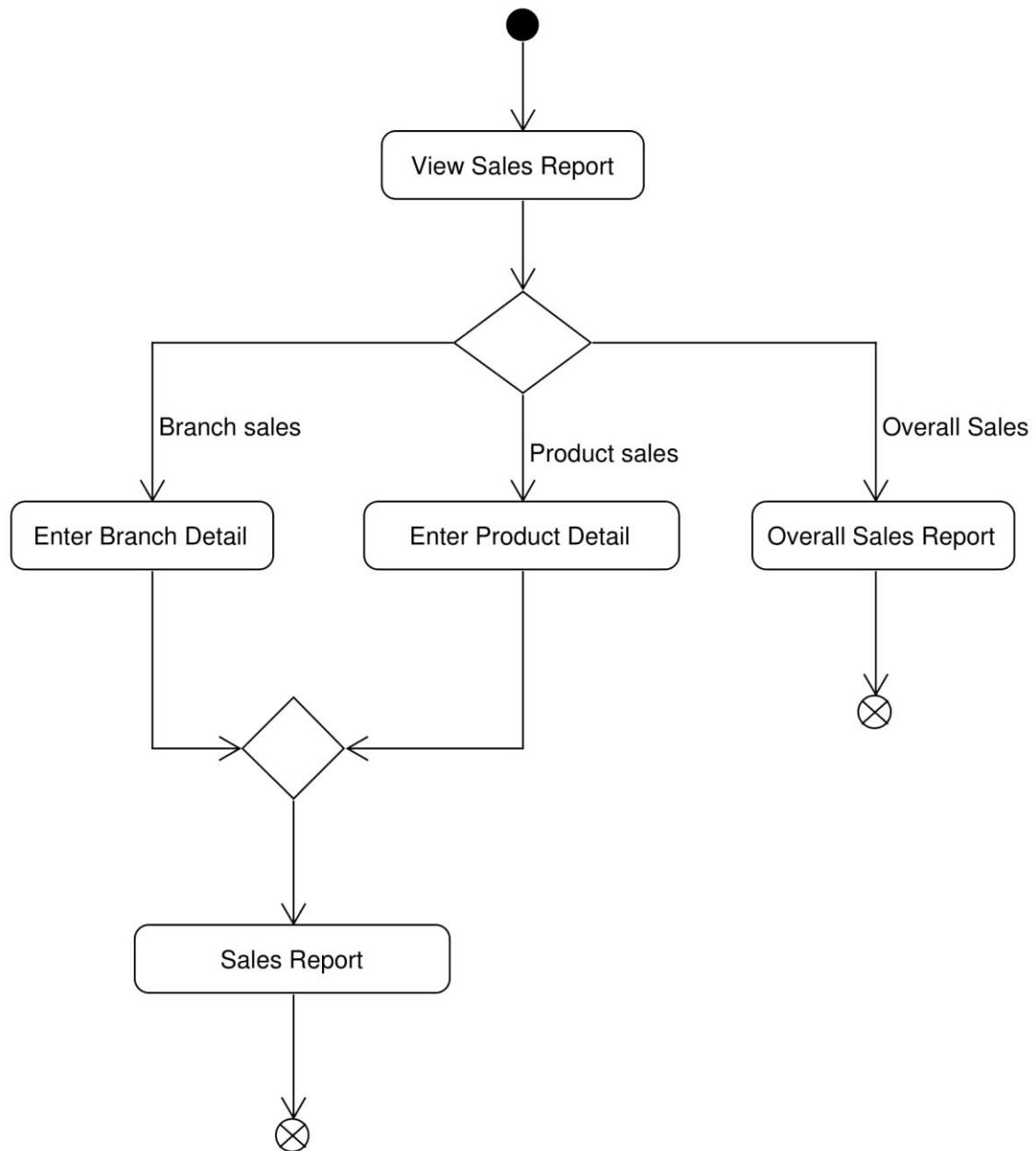
1. Crud Activity



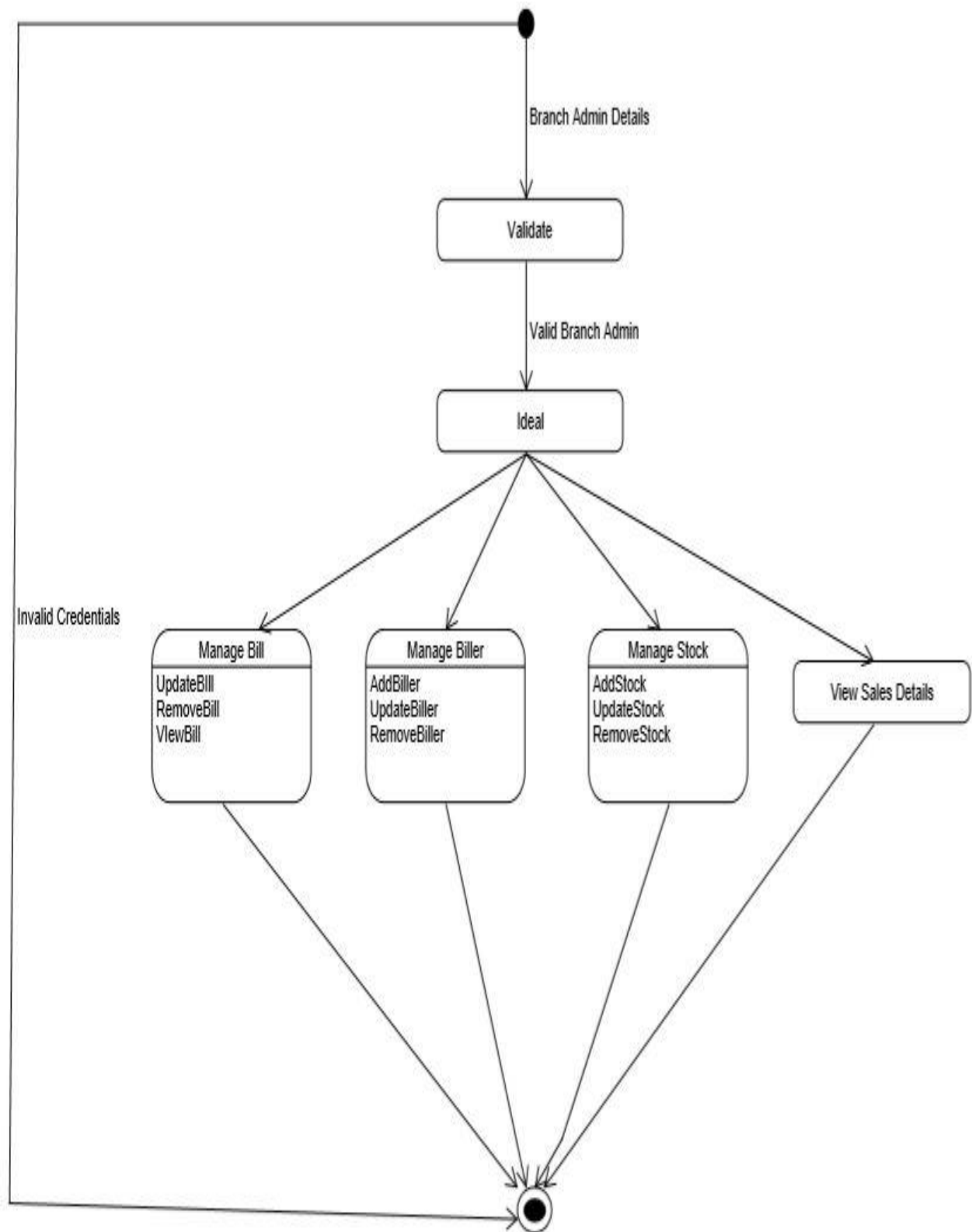
2. Bill Activity



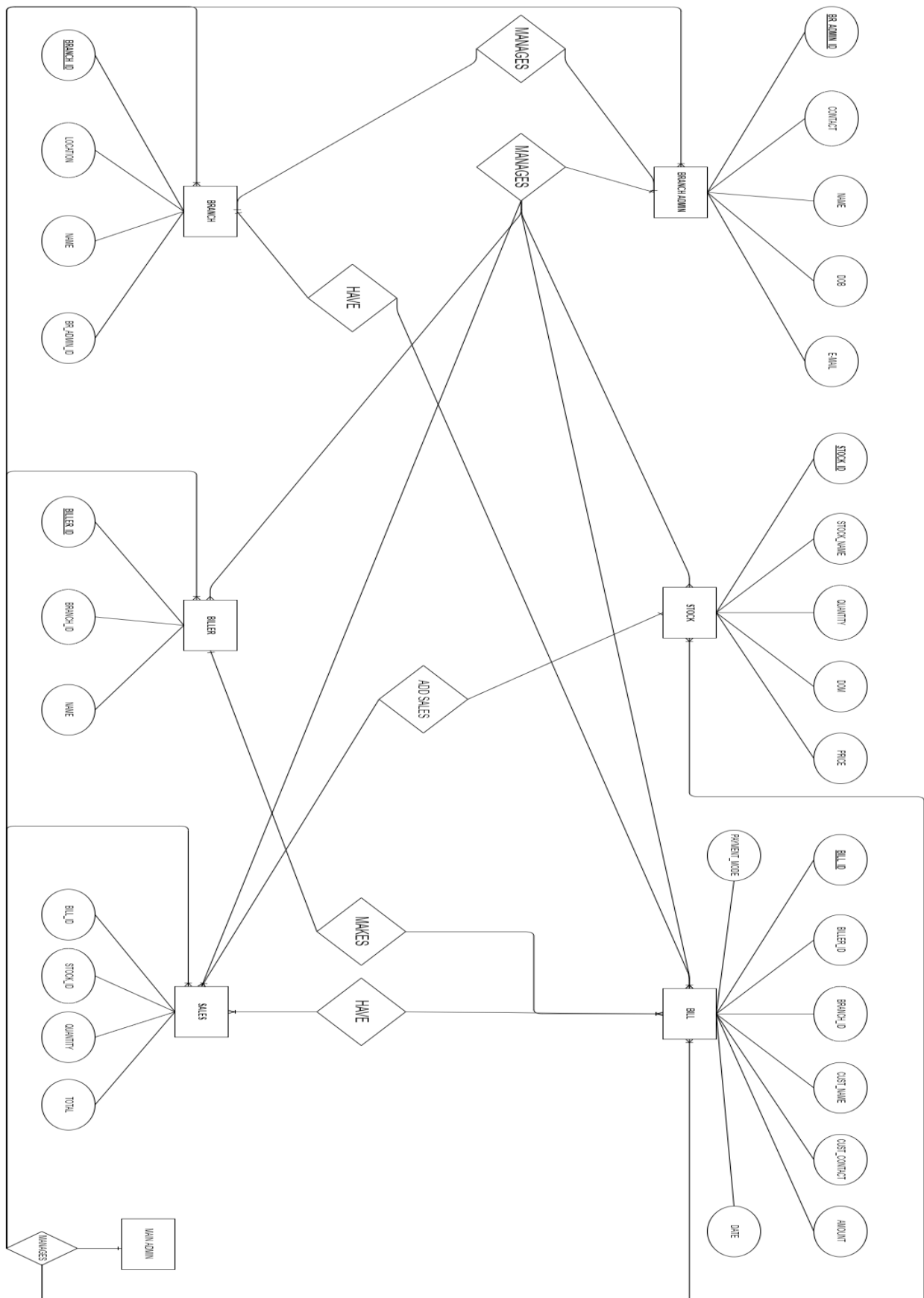
3. Sales Activity



4.5 State Diagram



4.6 E-R Diagram



4.7 Data Dictionary

1. BRANCH ADMIN

NAME	DATATYPE	SIZE	DESCRIPTION
Br_admin_id	Int	6	Primary key
Name	Varchar	30	
Contact	Int	10	
Dob	Date		
e-mail	Varchar	40	
Password	Varchar	8	

2. BRANCH

NAME	DATATYPE	SIZE	DESCRIPTION
Branch_id	Int	6	Primary key
Br_admin_id	Int	6	Ref(BRANCH ADMIN)
Location	Varchar	100	

3. BILL

NAME	DATATYPE	SIZE	DESCRIPTION
Bill_id	Int	6	Primary key
Biller_id	Int	6	Ref(BILLER)
Branch_id	Int	6	Ref(BRANCH)
Customer_name	Varchar	40	

Customer_Contact	Int	10	
Amount	Int	6	
Date	Date		
Payment_mode	Varchar	10	Values(card,cash,upi)

4. STOCK

NAME	DATATYPE	SIZE	DESCRIPTION
Stock_id	Int	6	Primary key
Name	Varchar	30	
Quantity	Int	6	
Price	Int	6	
Dom	Date		

5. SALES

NAME	DATATYPE	SIZE	DESCRIPTION
Bill_id	Int	6	Ref(BILL)
Stock_id	Int	6	Ref(Stock)
Quantity	Int	6	
Total	Int	6	

6. BILLER

NAME	DATATYPE	SIZE	DESCRIPTION
Biller_id	Int	6	Primary key
Branch_id	Int	6	Ref(BRANCH)

Contact	Int	10	
Dob	Date		
e-mail	Varchar	40	
Password	Varchar	8	

5. Implementation Details

5.1 Modules Description

1.Admin

In this module we are provide functionality like manage branches, manage branch admin. And other functions of this modules like manage stock, provide details of sales and bills and other etc.

2.Branch Admin

In this module we are provide functionality like Manage Biller , branch Admin can add ,update and delete branch Biller.also manage stock at branch, and view Bills and view sales in Branch.

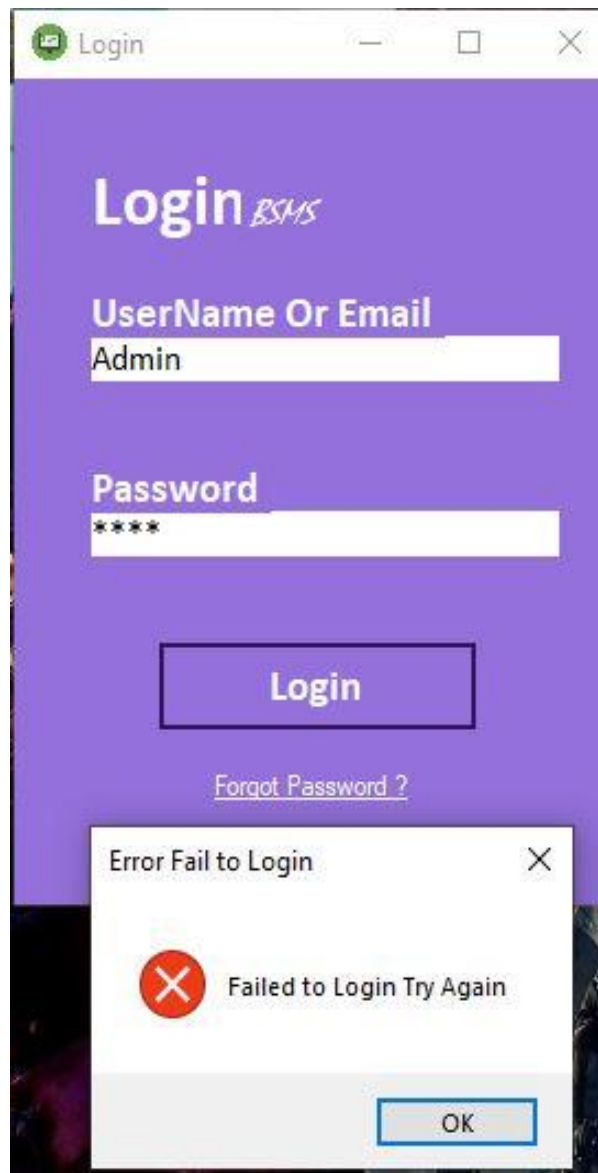
3.Biller

In this module Biller can login and generate bill and view biller's added bills.

6. Testing

1. Login Page

In Login page Whenever Biller, Admin and Branch Admin type wrong password than it would handle by system, system prompt Incorrect username and password



6.1 picture login

Any unauthorized user can prevent to access system.so that security of system is maintain.

2. Profile page

In this page system handle password and confirm password error

If the user want change profile than also password and confirm password is required.

The screenshot shows the BSMS Profile page. The left sidebar contains the BSMS logo and a list of menu items: Admin, Profile, Manage Branch, Branch Admin, Manage Stock, Manage Bills, and View Sales. The main content area is titled 'Your Details' and contains four input fields: User Name (Admin), Email (Admin), Password (masked with dots), and Confirm Password (masked with dots). Below these fields is an 'Edit Profile' button. An error dialog box is displayed over the password fields, with the message 'Confirm Password and Password not same' and an 'OK' button.

6.2 picture password & con-password error

User needs to enter password for update profile than only profile can edit.

3. All Page Required field error

Whenever any system user need to manipulate data like edit or add new data in system and user may forgot enter some data than system handle error and prompt for required fields.

ManageStock

BSMS

All Stock New Stock

Admin

Admin

Profile

Manage Branch

Branch Admin

Manage Stock

Manage Bills

View Sales

New Stock

Name maggi

Quantity 100

Price

DOM 17 April 2020

Branch surat

Add Stock

Required

Fill all Fields

OK

6.3 picture required field error page

7. Screenshots

1. Profile page

Profile

BSMS

logout

Admin

Admin

Profile

Manage Branch

Branch Admin

Manage Stock

Manage Bills

View Sales

Your Details

User Name

Admin

Email

Admin

Password

...

Confirm Password

Edit Profile

7.1 picture Profile page

All system used can edit it's own profile.

2. Search

ManageBranch

BSMS

All Branch New Branch

Admin

Admin

Profile

Manage Branch

Branch Admin

Search s

Branches

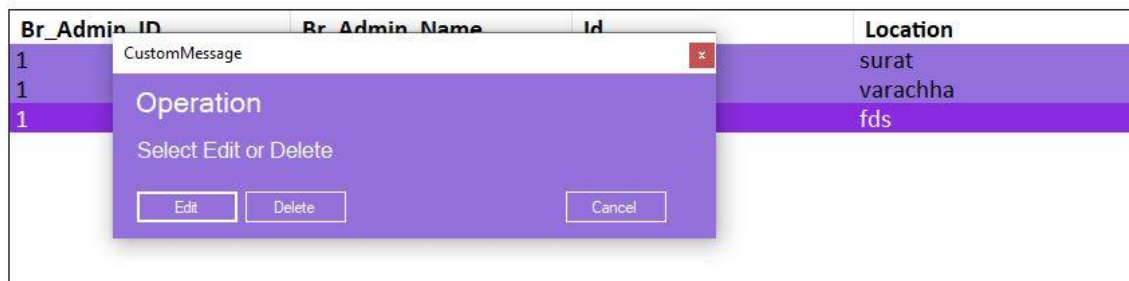
Br_Admin_ID	Br_Admin_Name	Id	Location
1	akash suvagiya	2	surat
1	akash suvagiya	19	varachha

7.2 Picture live Search functionality for all like branch, bill, stock etc.

3. Prompt

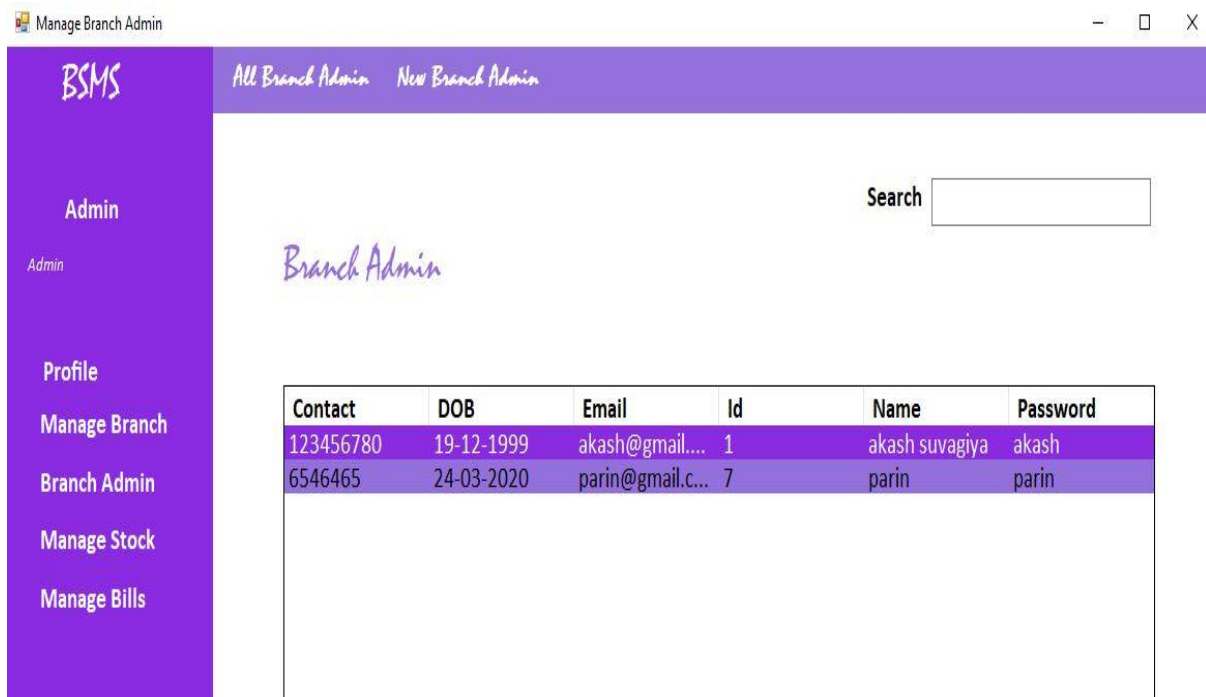
Custom Message Box Design by our staff for custom dialog like edit and delete.

Branches



7.3 Picture Custom Message Box

4. Branch Admin page



7.4 Picture Branch Admin Manage

5. Edit Branch Admin

Add new Branch Admin and edit page .

Manage Branch Admin

BSMS

All Branch Admin New Branch Admin

Admin

Admin

Profile

Manage Branch

Branch Admin

Manage Stock

Manage Bills

Edit Branch Admin

Name parin

Contact 6546465

Email parin@gmail.com

DOB 24 March 2020

Password parin

Edit Branch Admin

7.5 Picture Branch Admin Add & Edit

6. Biller Add & Update and Delete

The snapshot contain add Bill, Update Biller ,View Biller and Delete Biller.

Branch Biller

surat Search

Branch_ID	Contact	DOB	Email	Id	Location	Password
2	1234556	18-04-2020	Biller@gmai...	4	surat	123

CustomMessage

Operation

Select Edit or Delete

Edit Delete Cancel

7.6.1 Picture Show bill and delete

Edit Branch Biller

Branch	<input type="text" value="surat"/>
Contact	<input type="text" value="1234556"/>
Email	<input type="text" value="Biller@gmail.com"/>
DOB	<input type="text" value="18 April 2020"/>
Password	<input type="text" value="123"/>

Edit Branch Biller

7.6.2 Picture Edit Biller page

New Branch Biller

Branch	<input type="text"/>
Contact	<input type="text"/>
Email	<input type="text"/>
DOB	<input type="text" value="17 April 2020"/>
Password	<input type="text"/>

New Admin

7.6.3 Picture Add Biller page

7. Stock Management

Add Stock, Modify Stock and View and Delete stock function snapshot.

New Stock

Name	<input type="text"/>
Quantity	<input type="text"/>
Price	<input type="text"/>
DOM	<input type="text" value="17 April 2020"/>
Branch	<input type="text" value=""/>

Add Stock

7.7.1 Picture Add Stock

Edit Stock

Name	<input type="text" value="chigs"/>
Quantity	<input type="text" value="100"/>
Available	<input type="text" value="90"/>
Price	<input type="text" value="100"/>
DOM	<input type="text" value="01 April 2020"/>
Branch	<input type="text" value="surat"/>

Edit Stock

7.7.2 Picture Update Stock

Stocks

Search

Available	Branch_Id	Branch_Loc	DOM	Id	Name	Price	Quantity
490	2	surat	01-01-2020	1	Lays chips	10	500
90	2	surat	01-04-2020	7	chigs	100	100

CustomMessage

Operation

Select Edit or Delete

Edit

Delete

Cancel

7.7.3 Picture List & Delete Stock

8. Conclusion

Conclusion

The Functionality implemented in the system was done after understanding all the system modules according to the requirements.

Functionalities that are successfully implemented are:-

Login

Generate Bill

Manage Branch

Manage Bill

Manage Stock

Manage Biller

View Sales

Edit Profile of Biller, Admin, Branch Admin

After the implementation and coding of system, Comprehensive testing was performed on the system to determine the loopholes and possible flaws in the system.

9. Limitations and Future Extension

Limitations and Future Extension

Limitations:-

Internet Connectivity is required

Admin is required to handle the app

Admin should have basic knowledge of handling app

Application is only for management of Bill and Stock

It is desktop base Application Hardware dependent.

Future Extensions:-

Payment Gateway Can be added

Communicate through SMS and Email

Chat facility added for communication of employee

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