A PROJECT REPORT

ON

“Micro Telecom POS System”

Submitted to

Savitribai Phule University of Pune

For Partial Fulfillment Of

T.Y.B.Sc.(Computer science)

Submitted By

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Under the guidance of

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2016-2017

"Education through self help is our motto"- Karmaveer

Rayat Shikshan Sanstha's

R.B. NarayanraoBorawake College,

Shrirampur-413709 ***Dist- A'Nagar***

This is to certify that

Mr. Yogesh Jadhav

of T.Y.B. Sc (Comp. Sci.) has completed the project entitled as

"Micro Telecom POS System" ***practical requirement of T.Y.B.sc (Comp. Science) Lab course II held by Savitribai Phule Pune University of Pune during the year 2016-2017.***

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Acknowledgement

It is distinct honor and proud privilege to acknowledge with our attitude, the keen interest taken by Pro. Chavan Sir & inspiring suggestion and possible of supervision and encouragement who had made it possible of pursue and complete this project of “Micro Telecom POS” effectively.

We would take this opportunity to express profound series in definers to all the number of staff of their constant help.

It has given us immense pleasure to associate ourselves with through provoking and absorbing. The concept of project we acknowledge with courtesy to Pro. B.S. Shinde (Head Of Department). We are grateful to those who have directly and indirectly co-operate to finish this project work.

We greatly appreciate our staff members Pro. Raut Sir and Prof. Bakare Sir. For their keen interest and

members of fruitful suggestions at various stages during the completion of this endeavor, which help to reach the depth of this work & supported friends.

1. Introduction

The name of project is “Micro Telecom POS System”.

Telecom POS System is a business application system for Store’s Executive, which can be used for maintaining and analyzing the sales of the product. Here all communications held through manual.

This system also maintain the details of stock ,customer, profit, number of worker & the company from which Executive has to buy stock like products are Vouchers, E Balance and SIM cards with two types (Postpaid & Prepaid). The main objective of the project is to analyze the sales of the products by a Executive through the details

supplied by the Customer. Also to make the system more easier & time saving i.e. easy to handle for the Executive.

This system mainly manages amount of product Sold, and details about customer who bought the product with date.

Existing system

- The Existing system works manually not computerized i.e. lot of paper work is done.
- As system works manually whole process is very complicated.

- Whenever Executive needs product, he can place an order & purchase it from company & also he maintains the record of products. Hence, products are imported by Executive and Sale it proper maintaining details.
- The process is time consuming.
- Stock is not maintained.
- Previous transactions held by customer are not stored.
- The system is very user-friendly with Executive.

Scope of the system

Scope of our project is, it can handle all type of transactions which includes sales/purchase strategy and maintains as per its requirements.

This system will reduce the manual operation required to maintain all the records and also generates the various reports for analysis.

Main concept of the project is to enter transactions reports and to maintain wholesalers and retailers record. Hence this software can be used by any mobile distributor to maintain the record easily.

It also manages profit calculation per month. Time needed to retrieve the related information will be decrease and make the searching for related information becomes more efficient. Pricing of variety of product will become easier than before. The system will calculate the profitable price for certain product in a minute of time. Overall system improves business performance hence the scope of the system is very vast in Business activity.

Following points prove the scope and need of the project:

Time saving system.

Less man power required.

Speed of processing is fast.

System is easy to use.

The project is very helpful for decision-making.

Need of computerization

Before development of computerized system, first we study the manual system in detail, take the guidance and suggestion from Executive on` time to time and try to understand the complete process of accomplishing different activities related to record keeping. Whatever information we collected is discussed here.

The POS generates a perfect book keeping system by which the operations of searching and undergoing previously was not simple and it was time-consuming too. The transactions, registration activities have became faster and easier than the previous functionality which also provides the customers lots of advantages and comfort. The system also generates works like book-keeping by which various records are generated systematically. The transactions of various companies are quicker than the previous and is also time saving in the world of POS. The registration of new SIM Cards, or any type of Complaints etc. also have been easier and time saving.

Feasibility study

When we are developing the system(s/w), we must know the proposed system is feasible or not i.e. practically implemented or not.

It may possible that the proposed system may not implemented due to many reasons like it may take long time in development than specified time limit, cost may increase than proposed one etc.

Therefore, we must analyze the feasibility of the system.

Feasibility is the analysis of risks, costs and benefits related to economics technology and user operations. There are several types of feasibility depending on the aspect they covers.

It is mainly useful to evaluate the cost benefits of the system required.

Also Feasibility depends on requirements.

NEED OF FEASIBILITY:

- It finds or defines all problems of existing system.
- We can call it as proposed system.
- It determines the potential of existing system.
- It determines all goals of the system.
- It finds all possible solutions of the problems of the existing system.
- It finds technology required to solve these problems.

- It determines really which solution is easy for operational form the point view of customer and employees.
- It determines what software and hardware is required to obtain solution of each problem or proposed system.
- It avoids costly repairs, crash implementation of new system.

1. Technical Feasibility:

The technical feasibility basically centers on alternatives for h/w, s/w, personnel and design approach to determine functional aspects of the system.

A study of resource availability that may affect the ability to achieve system.

This evaluation determines whether the technology needed for the proposed system is available or not.

Can the work for the project be done with the current equipment, existing software technology and available personal information?

Can the system be upgraded if developed?

If new technology is needed then what can be developed?

This is concerned with specifying equipment and software that will successfully satisfy user requirement. the technical needs of the system may include frontend and backend selection.

An important issue for the development of a project is the selection of suitable front end and backend.

It also includes evaluating or estimating the need for more h/w, s/w and possibility of installing such facility.

2. Economical Feasibility:

It considers cost analysis of proposed system.

Economical Feasibility is helpful to find the system development cost and checks whether these costs are acceptable or not. For that it checks investigation cost, hardware cost, software cost, training cost, salary, maintenance cost.

This feasibility checks benefits are exceeds the cost then system can be considered to be economically feasible.

If user has difficulty with new system, it will not produce expected benefits.

As we have seen this system, no special training is required but as the manpower increases special training is to be done.

Proposed system maintains positive relationship with wholesaler, retailer through timely management of their requirement. Also provide accurately usefully formatted information.

If new software is created, the system can run at any platform and have no extra hardware and software requirement.

Proposed system will be computerized and minimize the Distributor work and easily update when require.

3. Operational Feasibility:

It considers acceptability of the system.

It is used to find out whether developed and implemented system will be useful or not.

It is a manner of how well the proposed system solves the problem.

It is also used for finding out

-Are the users of the system able to handle the system?

Whether the proposed system causes any trouble?

The design of the system is very user friendly i.e. the user can accept it.

System is easy to use both for customers and the staff. Customer can easily manage their order.

Fact-finding techniques:

While designing any system, preliminary investigation is very important & essential. Preliminary investigation is the base of system which contains information about the system.

Following methods have been adopted while making the fact gathering techniques:-

1) Interview
2) Questionnaire
3) Record Review
4) Observation

1. Interview:

- Interview is the best source of collecting information like subjective descriptions, opinions and policies related to their organization.
- Information could be gathered from individuals or by the analysts. Respondents could be different people such as manager, employees etc.
- In this systematic approach data gathering is easy.
- Much information is gathering through this process. Within this method, we take appointments of the Distributor ,wholesaler, retailer and related person; ask them various points & clear doubts

- We also cleared understanding about their requirements and brief discussion done with distributor ,who told me much information about the current system.
  Result of this is we become more friendly with our system.

2. Questinnaire:

- Questionnaire is another technique used for gather the data or fact finding.
- It is a paper that has set of questions & place left to write answers.
- It is a good option for collecting data from large no. of people when system is big.
- To achieve the information about manual process, we visited to their shop and they have given the answers of our questions; which gives satisfaction to us.
- We asked various questions to Distributor, wholesaler, retailer, workers and related persons about how the system works..? and we got the proper response.

3. Record review:

- In this method, analyst checkout recorded information about the system & users. Analysts may perform record inspection when study of system starts.
- To get valuable information about organization, analyst can make use of different types of records & reports that exist in an organization.
- Record may include some documents such as written policy manuals, rules & regulation, standard operating procedures, certain agreements etc.
- Much of the information is gathered by reviewing the past and original documents, which gives clear

format, style and recording. So, we got clear picture about the output documents and report formats. Within this method, we have seen their relevant responds, some of the bill receipts such as sales bill, purchase bill and their transactions, etc.

4. Observation:

- Observation is method of finding that allows analysts to get the information that cannot be obtained from any other source of information of the other fact finding technique.
- Observation enables analyst to get data about how activities are carried out in an organization.
- Only due to observation significant information is gathered.
- When we went to shop we observed each and every process which is going on there.
- We got very important info as well as we understood the current system very well.
- We also observed proper flow of the system very well.
- Within this method, some info we got only through viewing actual work, we also used this technique while observing some operations such as how documents are handled..?Check whether pre-defined steps are followed.

4.1 Hardware and software requirements:

- **H/W Requirements**:-

Processor- Intel p IV

Hard disk- 80GB

RAM- 1GB

15.6” monitor, Mouse, keyboard, printer etc.

- **S/W Requirements**:-

Operating system: Windows 8/8.1/10 onwards

➢ Software Packages:

- ✓ mysql-connector- java-5.1.8 bin.jar
- ✓ Front End:-Java
- ✓ Back End:-Mysql (Server)
- ✓ MS-office- open source (free of cost).

ER-DIAGRAM:

The entity relation diagram is logical model, not physical . The ER data model uses a few basic concepts in producing an ER diagram .

The concepts are:-

a) Entity .
b) Relationship .
c) Attributes .

a) Entity:- An entity is person, place or thing in enterprises .

E.g. a customer, an employee, a project, an order etc.

Similar object or things are grouped into entities sets.

b) Relationship:- A relationship is a meaningful association or linkage or connection between entities . The relation between entities may be one to one ,one to many ,many to many, many to one .

c) Attributes:- An attributes is any aspects, quality characteristics or descriptor of either an entity or a relationship e.g.: An entity car is a particular make & year ,has speed ,comforts ,contains the tires ,engines etc. does carry people ,race are attributes .

The E-R contains the following symbols.

Rectangle:- This represented an entity .

Diamond:- It uses to represented relationship .

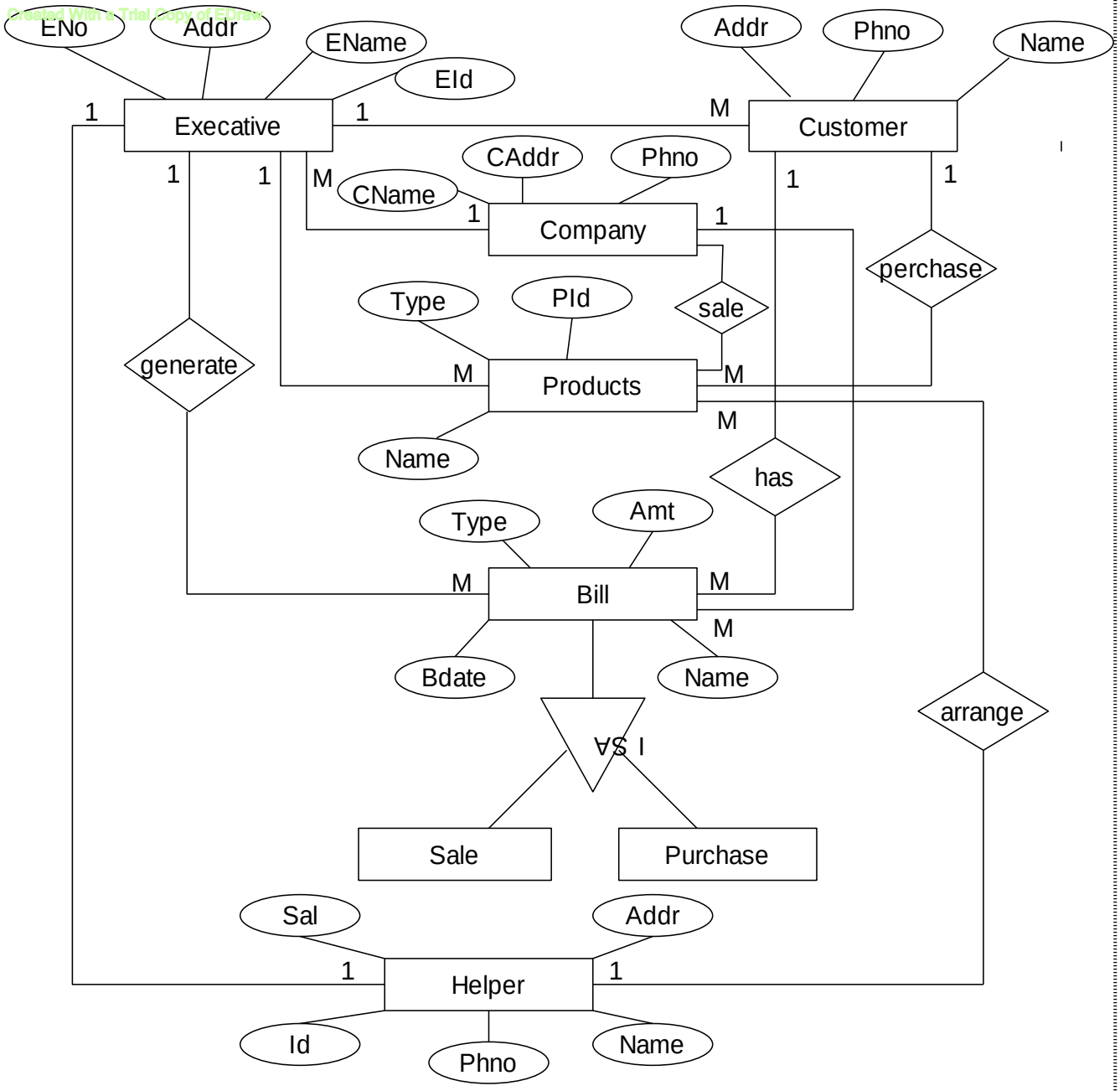
Line: - This used to represented connection

Between entities and attributes and entries and

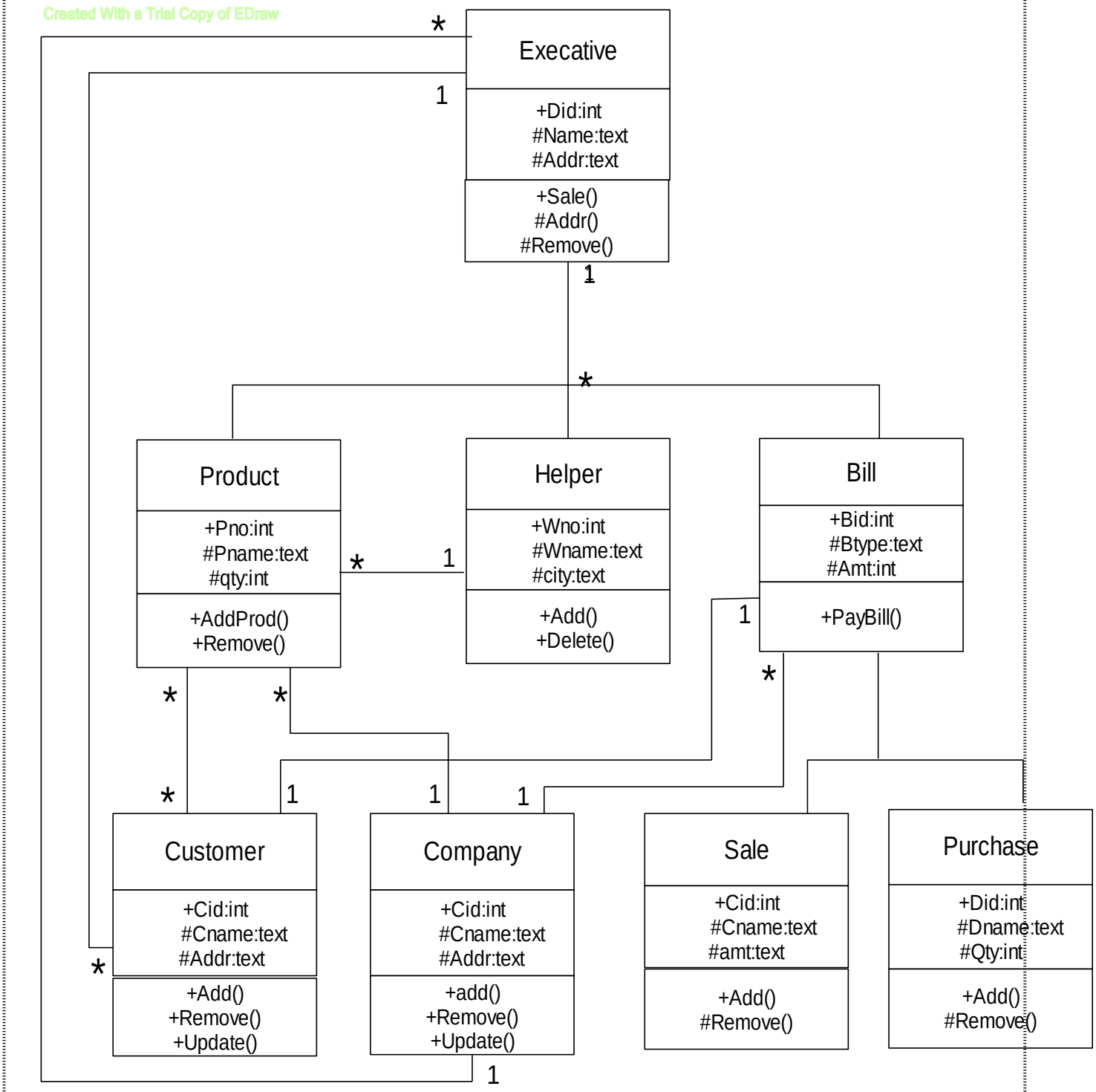
Relationship set.

Ellipse:-It used to show attributes.

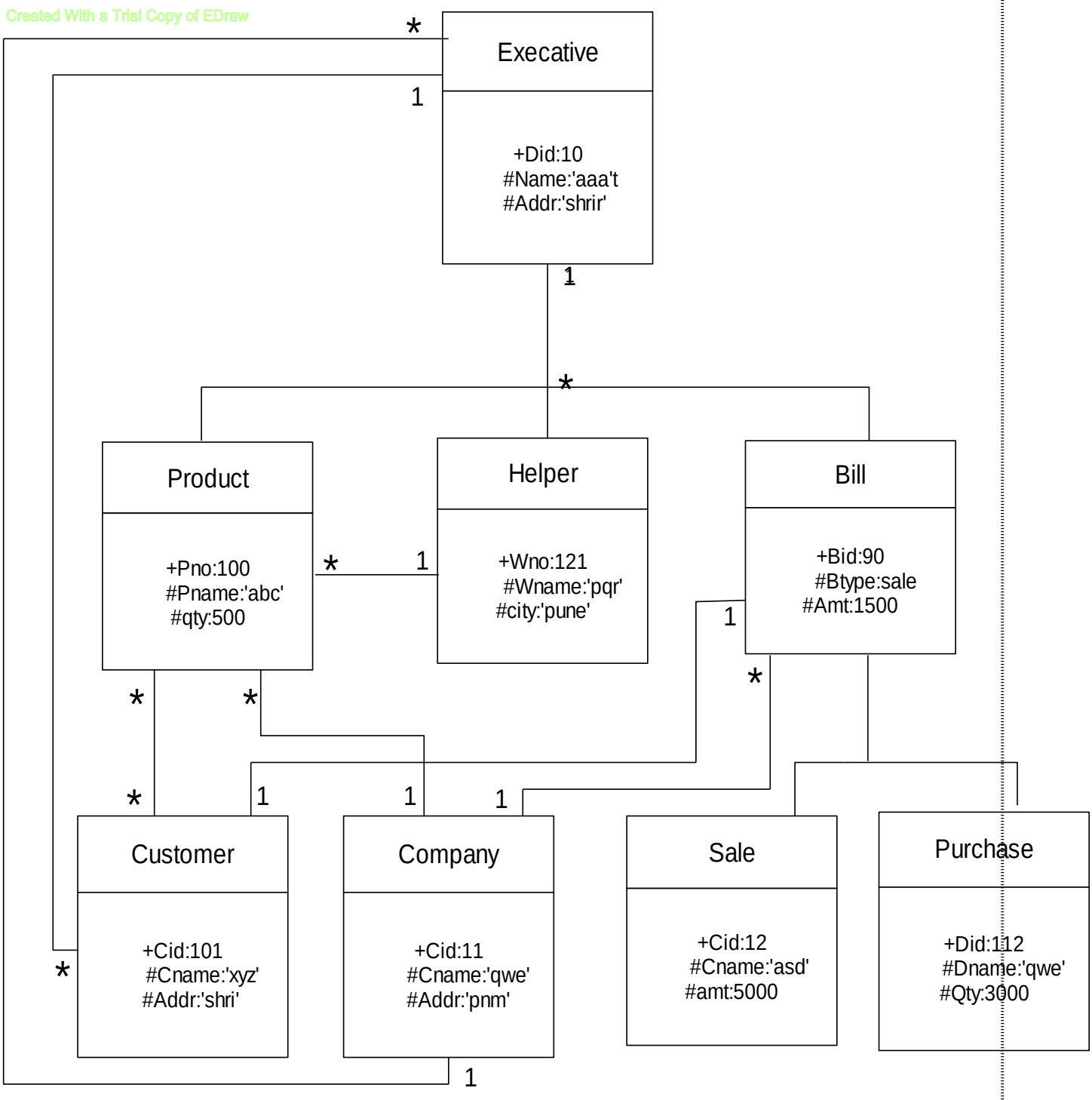
ER DIAGRAM



CLASS DIAGRAM

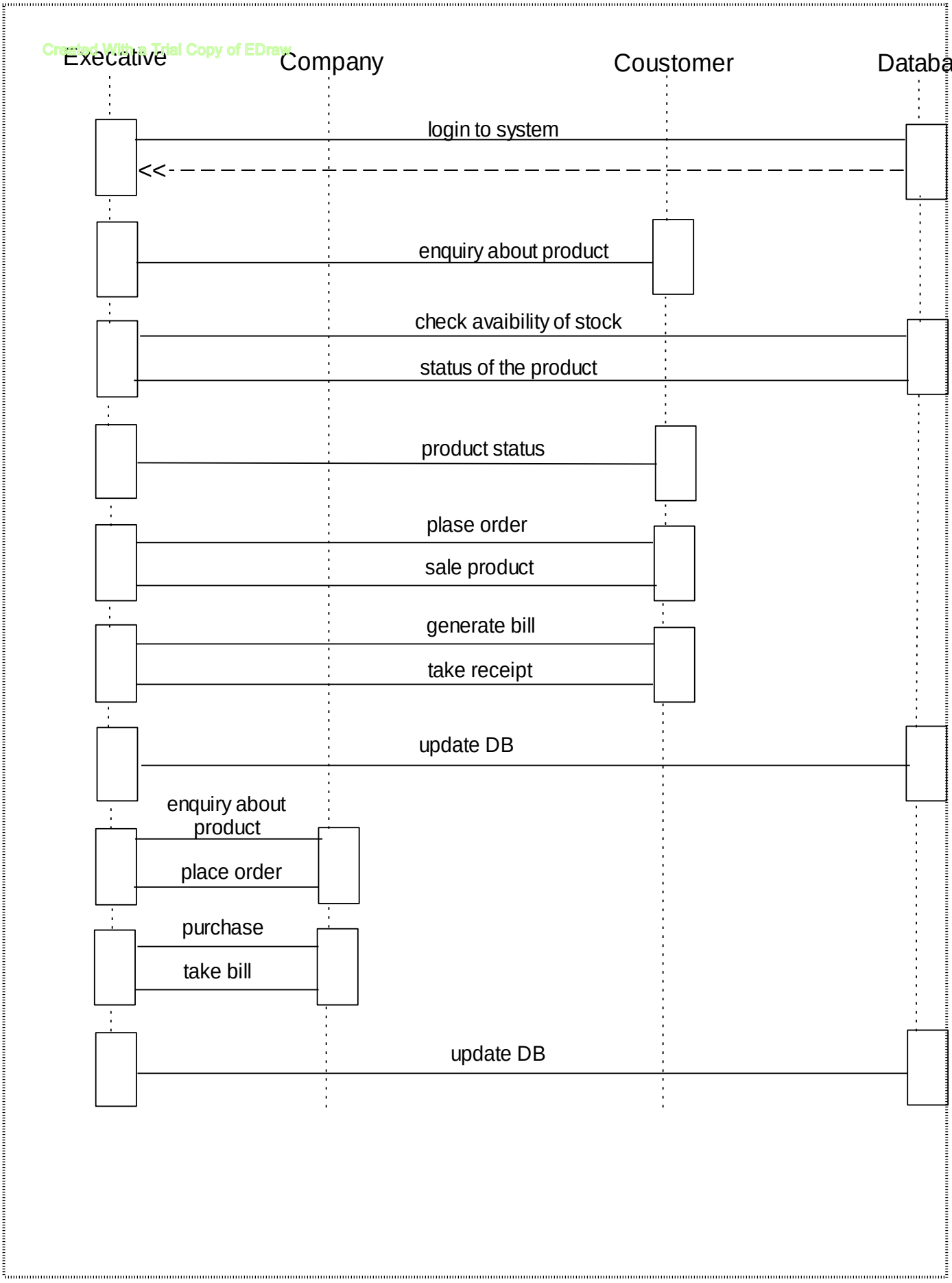


OBJECT DIAGRAM

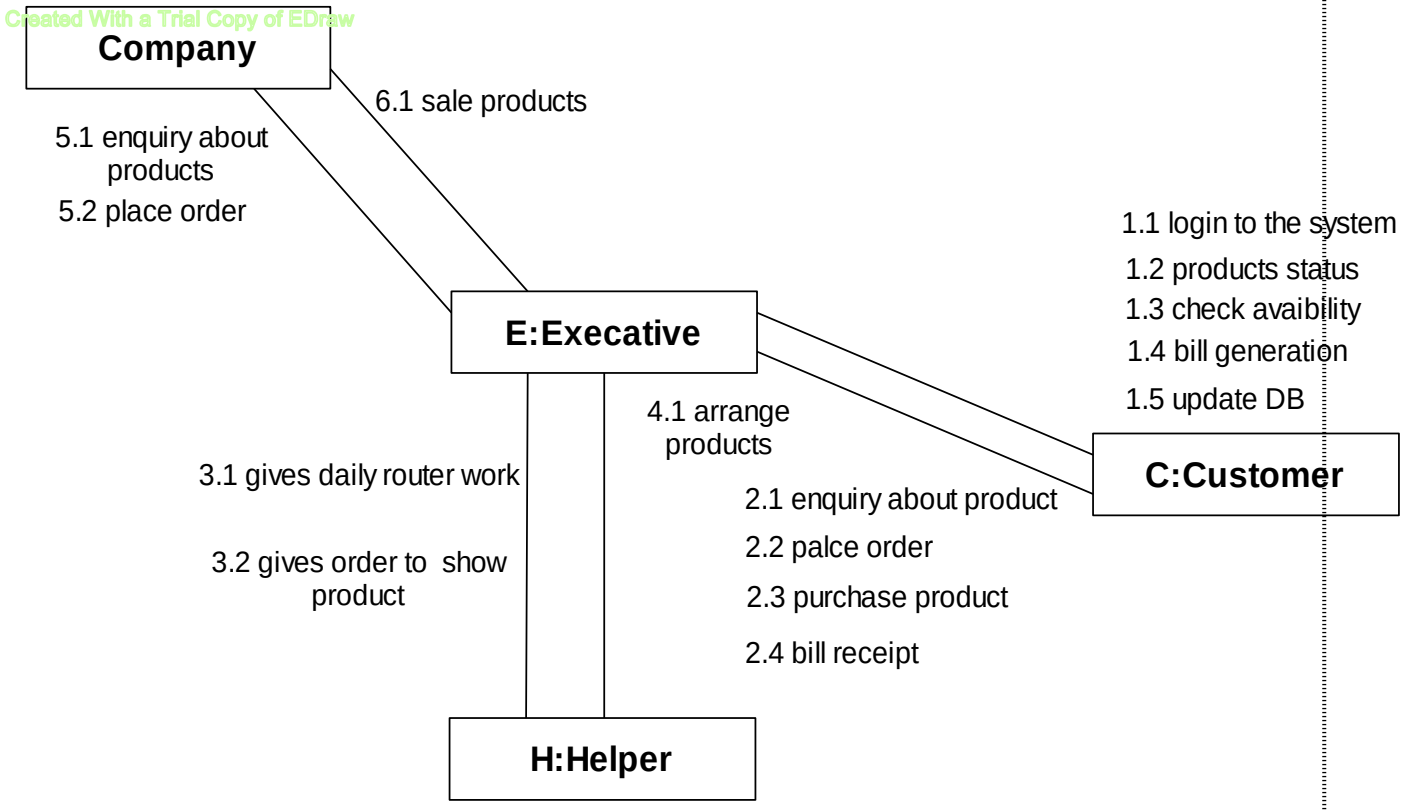


USE-CASE DIAGRAM

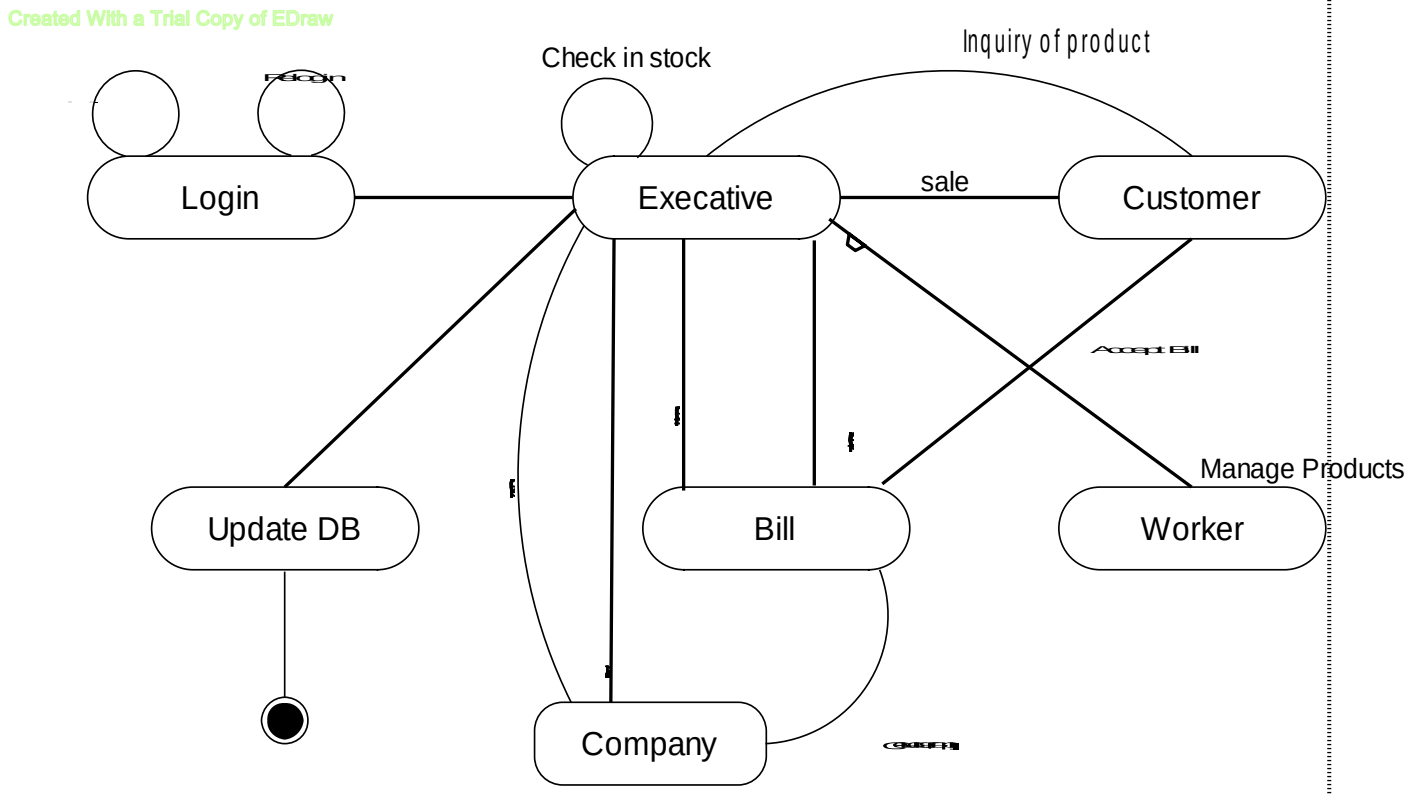
SEQUENCE DIAGRAM



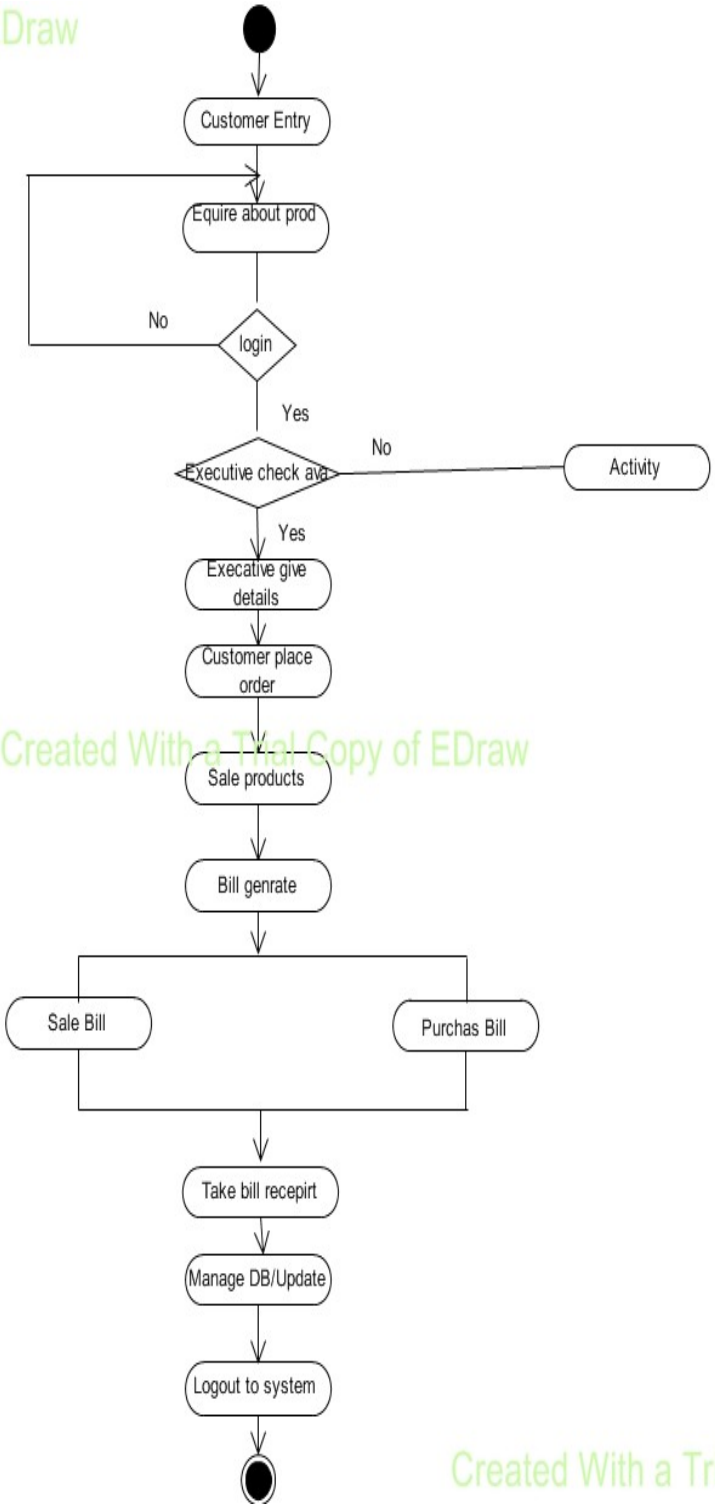
COLLABORATION DIAGRAM



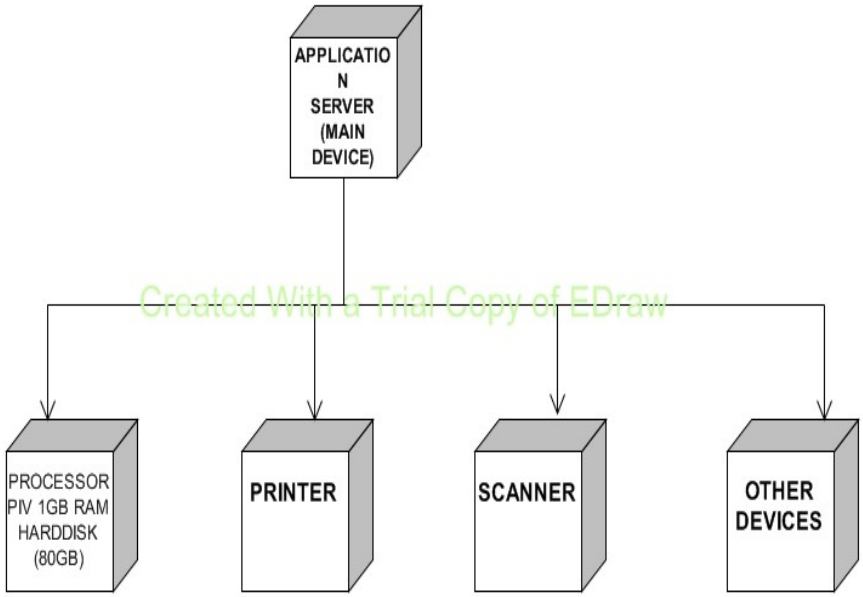
state- chartdiagram



ACTIVITY diagram



DEPLOYMENT DIAGRAM



Data dictionary:

Data dictionary is the data about the data i.e. Data dictionary contains the information about the data of the system.

There is an entry to every elements of DFD in the data dictionary .A data dictionary is organized into five sections:-

a. Data elements.
b. Data flows.
c. Data store.
d. Processes.
e. External entities.

a. Data elements:-The smallest unit of data that cannot be meaningfully decomposed further is called as data elements.
b. Data flows:-Data flows are the data structure in motion .
c. Data stores:-Data stores are the data structure in the rest .
d. Processes:- Here flow of data is transformed .Every process has some input and provides some output .
e. External entities:-A source of destination of data , which is external to the system . It may be a person , place , thing or documents .

1. Login

Field No.	Field name	Field type	Size	Constraint
1	Username	Text	20	Not null
2	**Password**	Text	20	Not null

2. activation

Field No	Field Name	Field type	Size	Constraint
1	Cname	Text	20	Not null
2	Cno	Text	20	Not null
3	Cgender	Text	20	Not null
4	Caddress	Text	20	Not null
5	Newno	Text	20	Not null
6	Poi	Text	20	Not null
7	Poino	Text	20	Not null
8	Frc	Number	20	Not null
9	Pa	Text	20	Not null
10	Date	Text	20	Not null

3. mnp

Field No	Field name	Field type	Size	Constraint
1	Cname	Text	20	Not null
2	Cno	Text	20	Not null
3	Cgender	Text	20	Not null
4	Caddress	Text	20	Not null
5	Newno	Text	20	Not null
6	Poi	Text	20	Not null
7	Poino	Text	20	Not null
8	Upc	Text	20	Not null
9	Pa	Text	20	Not null
10	Date	Date	20	Not null

4. Etopup

Field No	Field name	Field type	Size	Constraint
1	Mno	Text	20	Not null

2	Rtype	Text	20	Not null
3	Amount	Text	20	Not null
4	Ptype	Text	20	Not null
5	Bname	Text	20	Not null
6	Cno	Text	20	Not null
7	Date	Date	20	Not null

5. Stock

Field No	Field name	Field type	Size	Constraint
1	Simp	Number	20	Not null
2	simPost	Number	20	Not null
3	Voucher	Number	20	Not null
4	E-bal	Number	20	Not null
5	Date	Date	20	Not null

6. voucherIn

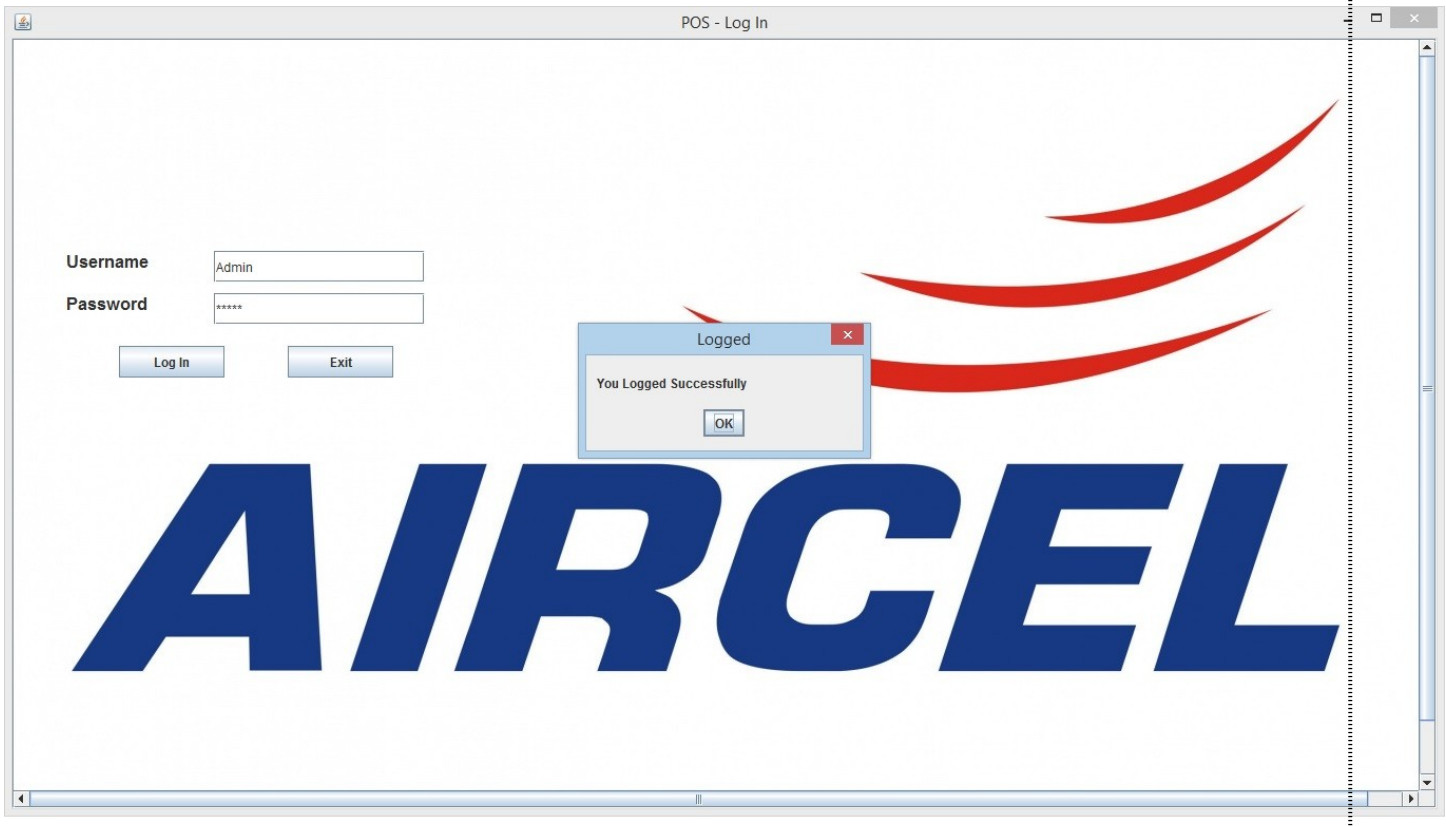
Field No	Field name	Field type	Size	constraint
1	Mno	Text	20	Not null
2	Vtype	Text	20	Not null
3	Prise	Text	20	Not null

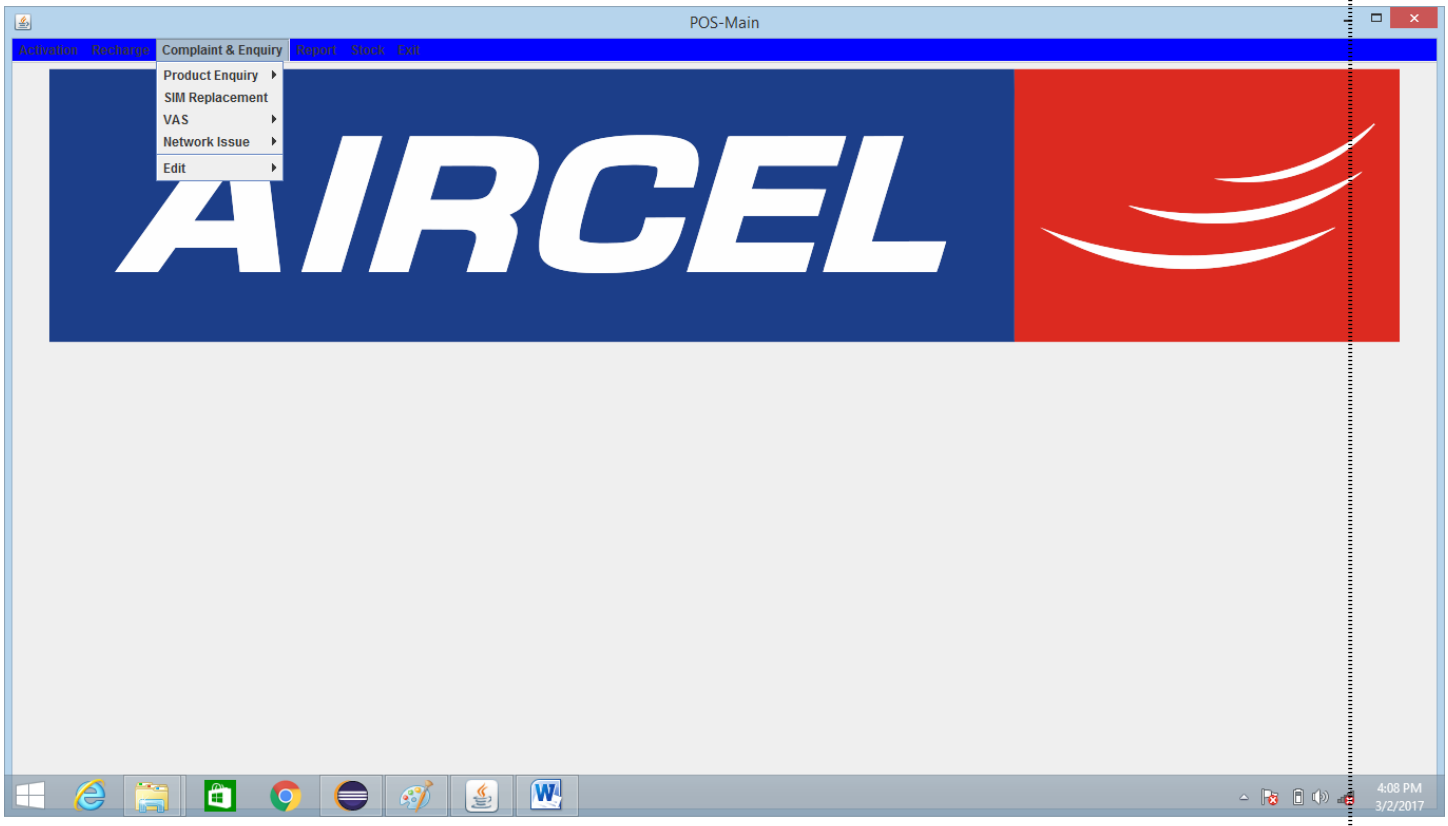
4	Qua	Text	20	Not null
5	Tamt	Text	20	Not null
6	Ptype	Text	20	Not null
7	Bname	Text	20	Not null
8	Cno	Text	20	Not null
9	Date	Date	20	Not null

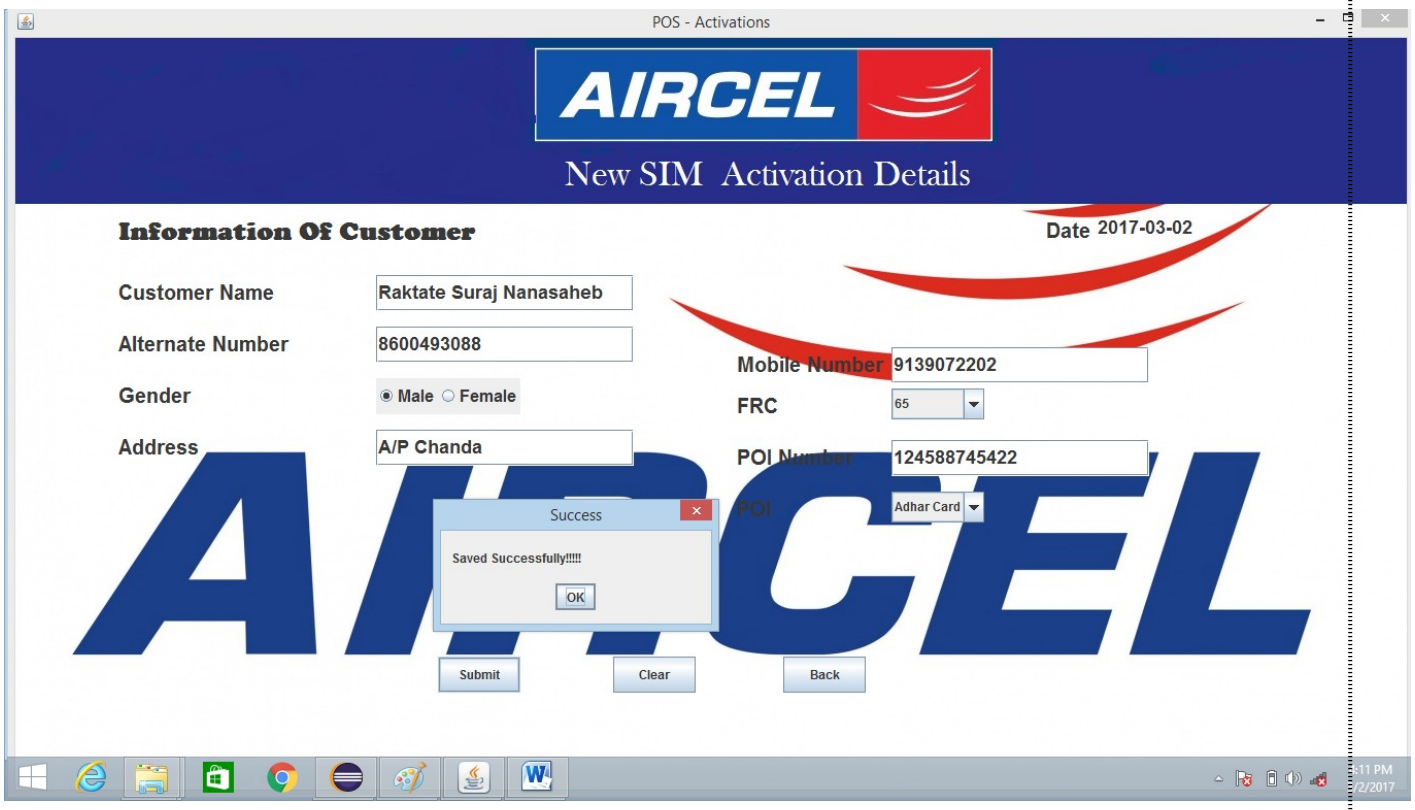
7. VoucherS

Field No	Field name	Field type	Size	Constraint
1	Date	number	20	Not null
2	SMS	Number	20	Not null
3	Voice	Number	20	Not null
4	Top	Number	20	Not null

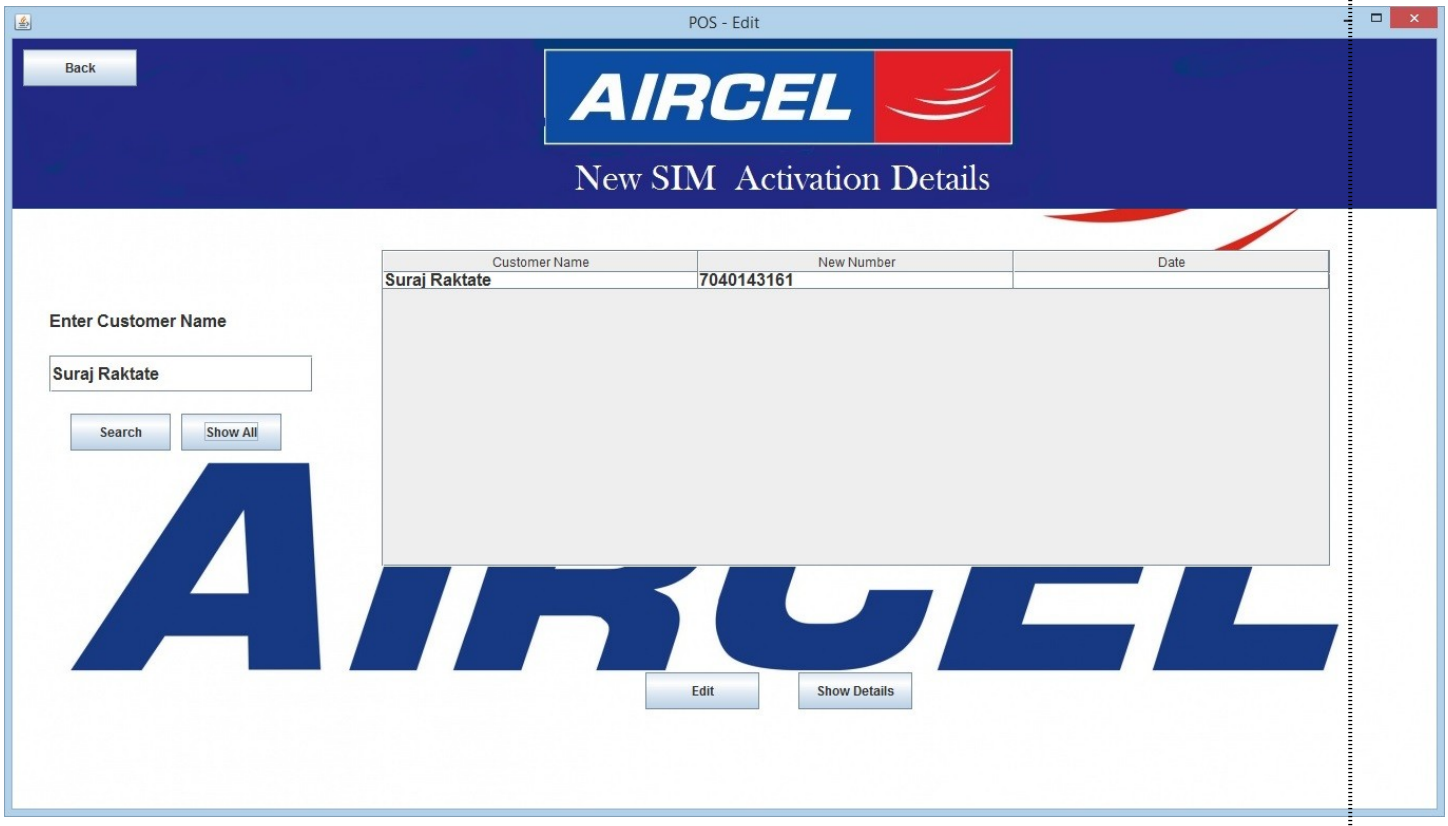
Input and output screens:

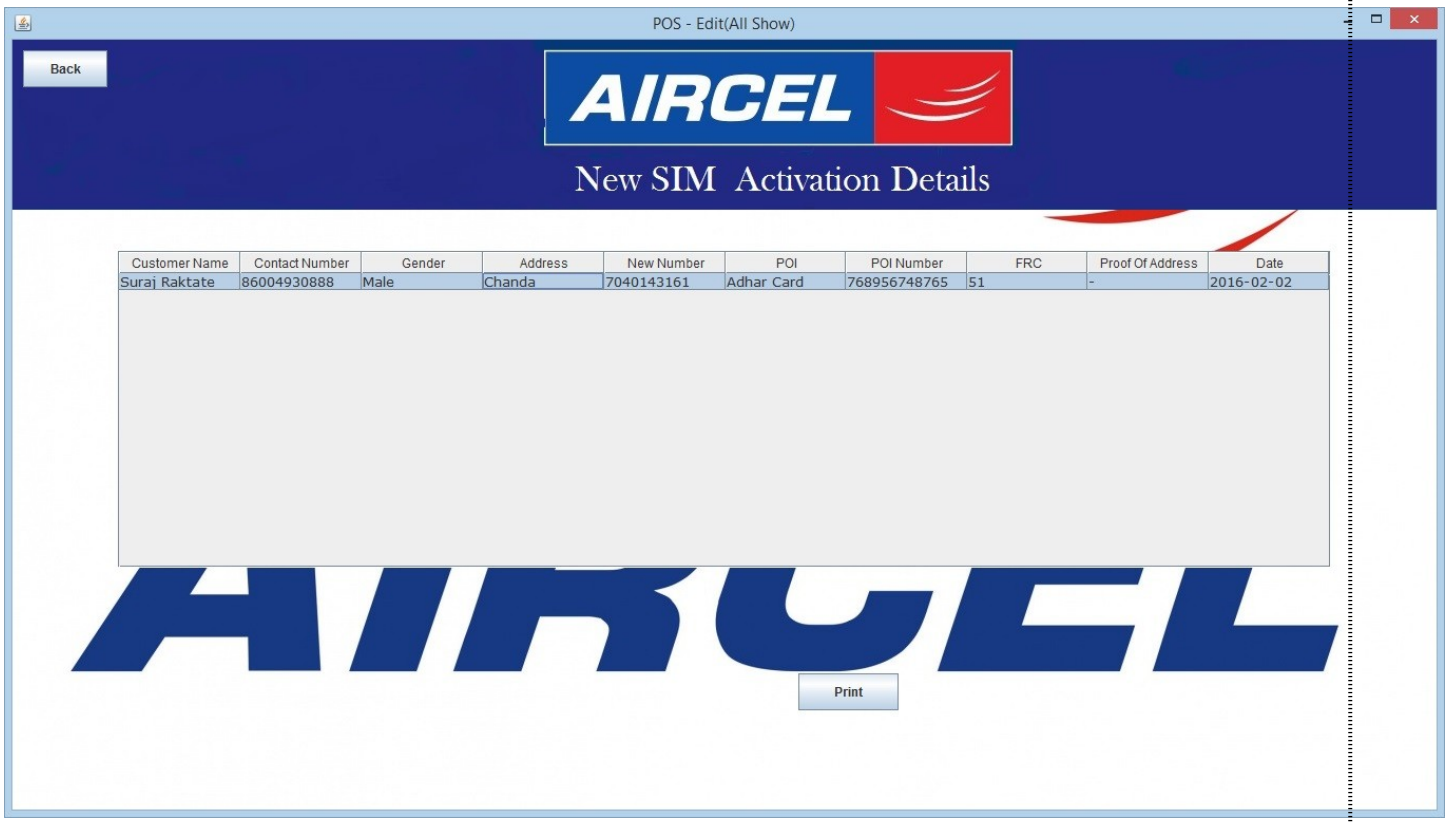

POS - Log In
Username
Admin
Password
*****
Log In
Exit
Logged
You Logged Successfully
OK
AIRCEL


POS-Main
Activation
Recharge
Complaint & Enquiry
Report
Stock
Exit
Product Enquiry
SIM Replacement
VAS
Network Issue
Edit
AIRCEL
4:08 PM
3/2/2017

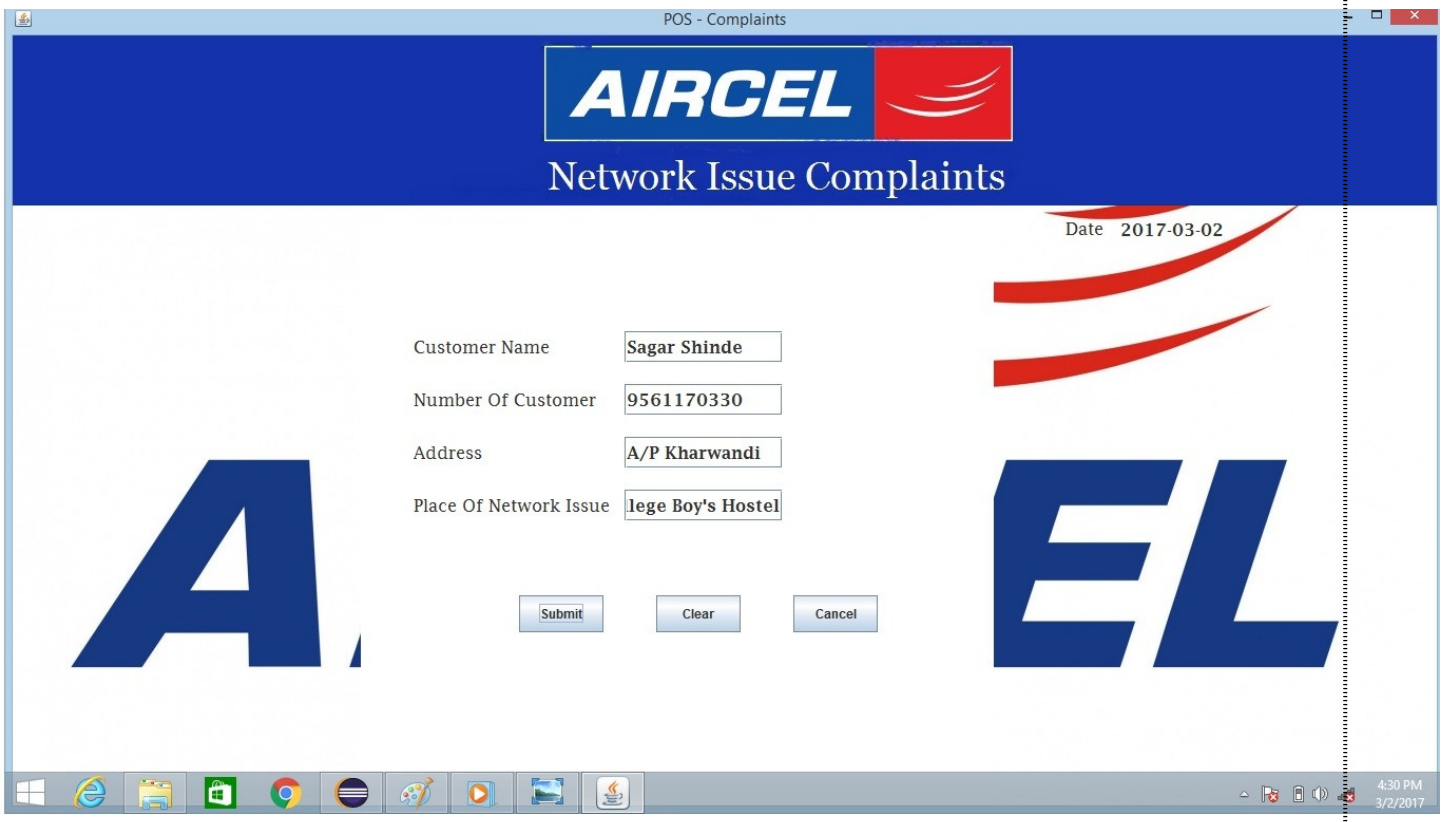

POS - Activations
AIRCEL
New SIM Activation Details
Information Of Customer
Date 2017-03-02
Customer Name
Raktate Suraj Nanasaheb
Alternate Number
8600493088
Gender
Male
Female
Address
A/P Chanda
Mobile Number
9139072202
FRC
65
POI Number
124588745422
POI
Adhar Card
Success
Saved Successfully!!!!!
OK
Submit
Clear
Back
AIRCEL


POS-Main
Activation
Recharge
Complaint & Enquiry
Report
Stock
Exit
Product Enquiry
SIM Replacement
VAS
Network Issue
Edit
SIM Replacement
VAS
PUK Enquiry
Network Issue
AIRCEL


POS - Edit
Back
AIRCEL
New SIM Activation Details
Customer Name
New Number
Date
Suraj Raktate
7040143161
Enter Customer Name
Suraj Raktate
Search
Show All
Edit
Show Details


POS - Edit(All Show)
Back
AIRCEL
New SIM Activation Details
Customer Name
Contact Number
Gender
Address
New Number
POI
POI Number
FRC
Proof Of Address
Date
Suraj Raktate
86004930888
Male
Chanda
7040143161
Adhar Card
768956748765
51
-
2016-02-02
Print


POS - Recharge
AIRCEL
Recharge Details
ETOP-UP
Date 2017-03-02
Mobile Number
8600493088
Recharge Type
Special Rechar...
Amount
2000
Payment Mode
Cheque
Bank Name
SBI
Cheque Number
Success
Saved Successfully!!!!!
OK
Submit
Clear
Back

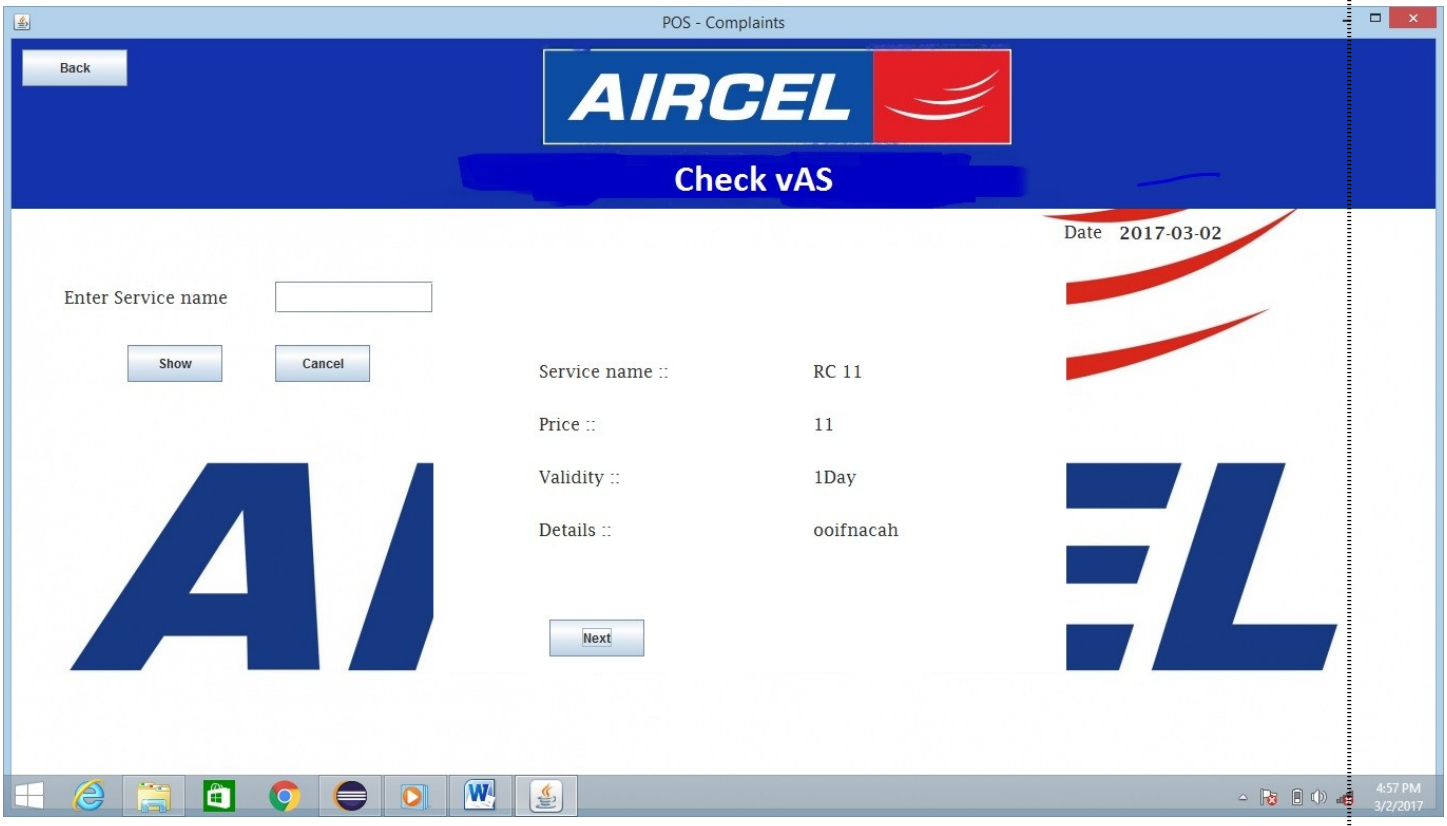

POS - Complaints
AIRCEL
Network Issue Complaints
Date 2017-03-02
Customer Name
Sagar Shinde
Number Of Customer
9561170330
Address
A/P Kharwandi
Place Of Network Issue
lege Boy's Hostel
Submit
Clear
Cancel
4:30 PM
3/2/2017

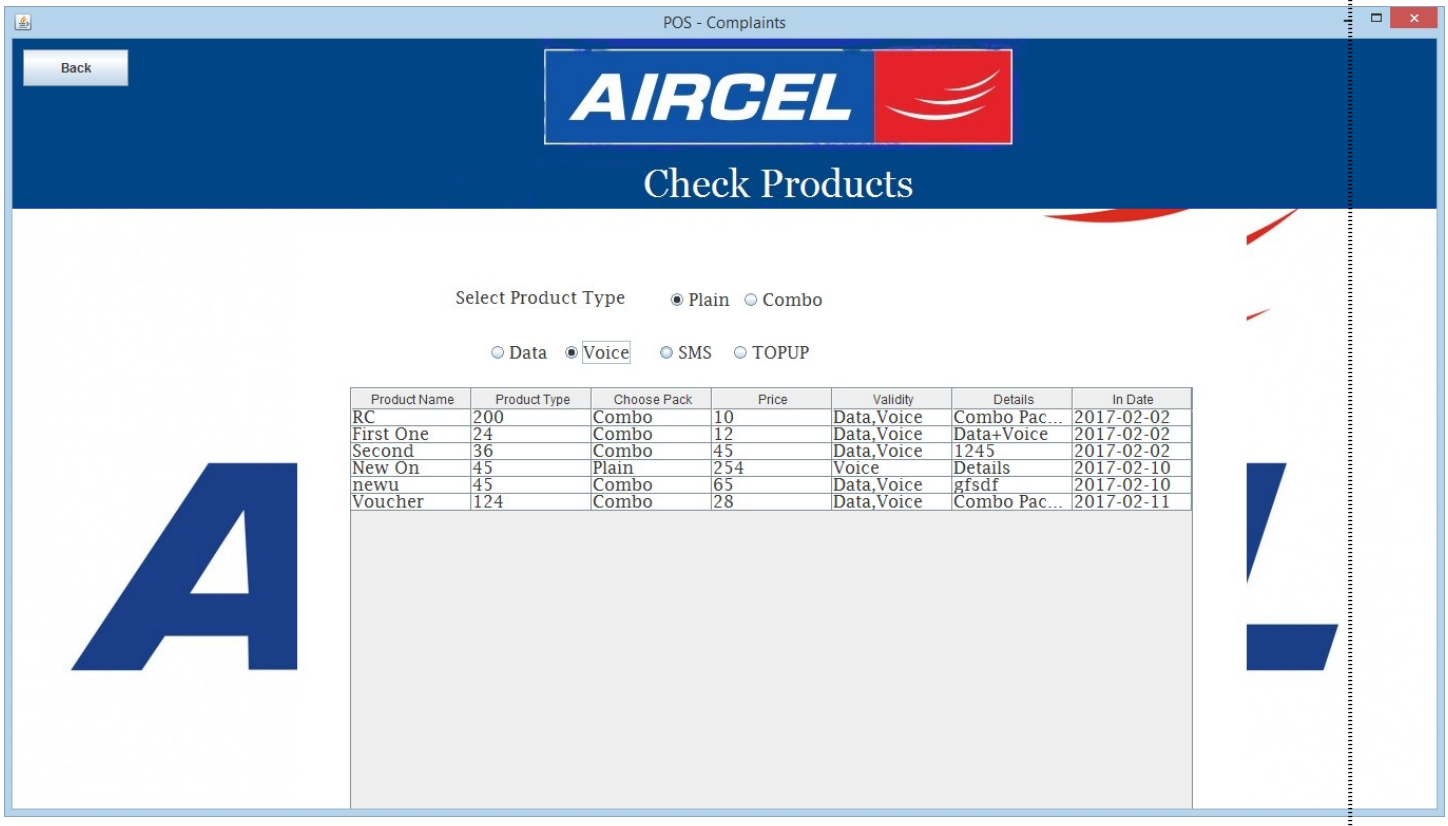

POS - Complaints
Back
AIRCEL
Network Issue Complaints
Date 2017-03-02
Reference Number Is 1118
Customer Name
Suraj
Cancel
Customer Name :: Suraj Raktate
Number Of Customer :: 9172628500
Address :: A/T Shrirampur
Place Of Network Issue :: AT hostel
Complaint Date :: 2017-02-04
Next


POS - Stock In
AIRCEL
Date 2017-03-02
Select Type
Daily
Date
Enter Date
1
1
2015
SIM
Voucher
E-Balance
View
Cancel


POS - Stock In
Back
AIRCEL
Stock
Date 2017-03-02
ALL
Voucher
SIM
SIM
Voucher
E Balance
Stock In Date
0
0
0
2017-01-01


POS - Complaints
AIRCEL
Network Issue Complaints
2017-03-02
Service Name
CallerTune
Price
38
Validity
30 Days
Details
Caller tune wit
h 30 Day Validi
ty only in 38 R
E
Submit
Clear
Cancel
Success
Submitted Successfully
OK


POS - Complaints
Back
AIRCEL
Check vAS
Date 2017-03-02
Enter Service name
Show
Cancel
Service name :: RC 11
Price :: 11
Validity :: 1Day
Details :: ooifnacah
Next
4:57 PM
3/2/2017


POS - Complaints
Back
AIRCEL
Check Products
Select Product Type
Plain
Combo
Data
Voice
SMS
TOPUP
Product Name
Product Type
Choose Pack
Price
Validity
Details
In Date
RC
200
Combo
10
Data,Voice
Combo Pac...
2017-02-02
First One
24
Combo
12
Data,Voice
Data+Voice
2017-02-02
Second
36
Combo
45
Data,Voice
1245
2017-02-02
New On
45
Plain
254
Voice
Details
2017-02-10
newu
45
Combo
65
Data,Voice
gfsdf
2017-02-10
Voucher
124
Combo
28
Data,Voice
Combo Pac...
2017-02-11

Advantages of the system:

- Maintaining and analyzing sales of the product in the market.
- Ability to meet user requirements.
- To keep accounts of purchase and sales .
- Handle all types of company’s transactions which includes sales/purchase strategy.
- Helps in gaining trust of wholesaler/retailer in weekly basics and evaluates their progress.
- Due to bulk product sales/purchase, it increases profitability and hence increases business performance.
- Reduction of risk.
- Convenient.
- Easy to use.
- Helpful in decision making.
- System is very userfriendly.

Drawbacks/disadvantages/ limitations of the system:

As existing system only provides text based interface which is not implemented in manual so response is not too good.The transactions are executed in offline mode. Hence online data capture and modification is not possible.

Offline reports cannot be generated due to batch mode execution hence there is need of reformation of the system with more advantages and flexibility.

As the distributor maintains all the product detail, their cost, time involved in handling data hence efficiency is not too good. Searching for required information from a lot of documents are complicated.

Due to import and export of different products, stock is not maintained or stock maintainance.

Time consuming or takes time to complete a task.

Distributor doesn’t sale single product in case required by wholesaler or retailer. As he has to deal in whole variety of different products.

Future Enhancement

- We will try to provide online services to user.
- Billing through credit cards
- New Products entry.
- New Schemes and Facilities.
- Due to drawback of the existing system computerization of the system is must.
- The work becomes easier and less complex due to computerization of the system.
- In future there may be deployment of some other web technologies to maximize wholesalers experience as well as for retailers.
- In our project there are some limitations which may be subject to future enhancement. We have concentrate only on maintenance of general system. Further in future some changes will be possible.

❖ Conclusion:

As we have studied this system, we conclude that this system works properly.
Wholesalers/retailers are satisfied,transactions are also performed in proper manner.
It is userfriendly for distributor,wholesaler as well as for retailer.
It encourages the paperless working environment.
It simplifies the process of inventory monitoring.
This system is suitable for immediate purpose but it is necessary to modify it and link it to activate database.
Also more security can be applied to make it more reliable.

Biblography:

The following books and manuals were referred during the process of developed system .

Books:

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