

BCA SYNOPSIS-REPORT

ON
Automation of Digital Mobile World

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BCSP-064

BY
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AUTOMATION OF DIGITAL MOBILE WORLD

BCA Project Proposal (Synopsis)



Submitted to



*in partial fulfilment of the requirement
for the award of the degree of*

BACHELOR OF COMPUTER APPLICATION

(BCA)

By

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Place : Patna

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Date :. 20/11/2022

SYNOPSIS SUMMARY INFORMATION

SUBJECT/TITLE : AUTOMATION OF DIGITAL MOBILE WORLD

FRONT & BACK END TOOLS : Visual Basic 2013, SQL Server 2014

PROJECT CODE : BCSP-064.

PROJECT CATEGORIES : RDBMS.

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TITLE OF THE PROJECT

AUTOMATION OF DIGITAL MOBILE WORLD

INTRODUCTION

The Automation of Digital Mobile Store is developed for desktop systems to facilitate mobile shop owners management of customer details and inventory data, which will include mobile phones and accessories. It can be used efficiently for physically separated shops in different locations.

This is a big mobile shop in this area for retail shopping that contains a wide variety of latest as well as old fashion mobiles/Smartphone of various companies and its related accessories. It is located in main market area of Islampur, Nalanda, Bihar near Devi Temple. This shop sells, supply mobiles and accessories materials as a retailer mainly but also supply products as distributor to nearby villages to small shopkeeper. It takes its input materials at broad level mainly from the agency and large distributor of the respected company mostly from Patna. This shop also delivers the mobile products through courier services in special case to the order given to their special customer.

This software will provide in a simple and easy to operate user interface, which can be managed by any user without having prior in-depth knowledge of the computer system. One can use this software to get a sales report. Administrators can pull data, from any location from the server. This software is a complete package for small organizations which

will allow them to keep track of their sales and inventory, and provide a computerized billing system.

There are various applications with more complex implementation and features available in the market, but they are generally very expensive. Therefore, creating an application with the basic requirement of low cost is essential for small organizations. This application will allow stores to manage customer details, keep inventory of all products and purchase information, in a very simple way, using a state-of the-art software application. It will automatically generate invoices and update inventory.

OBJECTIVES

With this system management could easily maintain or handle the accounting and other manageable work as well as administrative activity effectively taking less time.

The project provides the full automated information to the owner of this shop regarding the work related to the customer i.e. purchase, repairing and guarantee maintenance of Mobile & accessories items mainly, which was previously maintained and handled almost manually by the shop's staff which was boring, unsystematic time consuming i.e. this project will fully computerized/automate the work, for the both staff members and customers mainly i.e. customer information, order/purchase entry, order delivery, stock information, account information etc.

The main objective for developing this project is to organize their daily activities like billing, mobile information, stock details, warranty maintenance, repairing etc. It also provides time to time current information related to new launch mobile. It can help for

the concerned with purchasing and selling mobiles, maintaining their inventory, generating sales invoices and generating reminders of mobiles. The purpose of the project is to build an application program to reduce the manual work for managing the mobile shop. This application has a good appearance and is very easy to operate. It is very simple and easy to access at vb. It is a very simple source code. It saves us time and money. This project provides a lot of features to manage in very well manner. This project contains a lot of advance modules which makes the back end system very powerful and easy to use.

PROJECT CATEGORIES

This project is basically categorized as web based Relationship Database Management System (RDBMS). The project is based on three tier architecture. The three tier architecture where the application is divided into three logical constituents.

- ❖ Presentation layer – In this layer mainly following pages contained:
 - Web Pages
 - User Control
 - Admin Control
 - Master Pages
- ❖ Business Layer – Business Logic,
 - Result Engine
 - User permissions logic
 - Access Rights

- ❖ Data Layer – Provide handling and validation of data (Sql Server 2014 in this case).
 - Sql Server 2014

TOOLS/PLATFORM, HARDWARE & SOFTWARE REQUIREMENT SPECIFICATIONS

Software Requirement:

Front End Tools	: Visual Basic 2013
Back End Tools	: SQL Server 2014
Operating System	: Windows 10 Pro
Documentation	: MS- Word 2007

Minimum Hardware Requirements:

CPU	: Intel Dual Core processor,2.0GHz
RAM	: 2 GB/More
HARD DISK	: 160 GB/More
PRINTER	: Inkjet

SYSTEM ANALYSIS

Problem Definition:

Existing System:

- As this system is very new opening and hence most of details are maintained manually. Due to this the data retrieved is time consuming and calculation errors occur. Even when the data is initially maintained on spreadsheet hence inconsistency occurs as an order might be missed or wrongly entered or twice.
- Data are store in excel sheet which takes lot of time and data may be corrupted. As storage and exchange of data is achieved only by use of excel sheets which lack validation capabilities, there is always risk of invalid, inaccurate or incomplete data being fed in computer.
- Difficulty in managing multiple forms.
- Lack of security.
- The existing system was not very effective & was highly time consuming.
- The current system works manually.
- The existing system was somewhat paper-based(paper-work) which takes time.
- The rate at which the work done is very slow due to non-utilization of computerized system.
- It does not provide better data facilities as well as data availability on fingertip.
- Inconsistency was the major problem in the existing system as there is no proper facility was provided to update the data.

- In case user wants to find out details of particular Mobiles whole database record are displayed. It is difficult to remember all data & consumes large volume of paper work.
- Large storage space is required to keep top the file and register in proper coordination's.

Thus, in the present existing system the report generation becomes very difficult.

Proposed System:

The proposed system would be computerized and has been developed using advance language therefore it will give more facilities than present existing system. These may be -

- It will provide quick access to any data. In this system user have to enter the data only once and then it will get linked with all files. This reduces the workload of user and it is also a time saving process. The information about any subscriber can be easily retrieved. The system maintains all records easy.
- All the information about sale, purchase will be maintaining properly in this system.
- All manual calculation of sale or all the money management will be performed by the computer automatically.
- This system will provide timely report information.
- It will produce report for sale, bill information.
- The computer can hold amount of data in its storage device.
- The operation and speed of the computer is very high. Hence we can calculate result and print any report within seconds.
- Any difficulties we can solve easily.
- A database application can be stored in computer effectively.

- It is very user friendly and easy to handle.
- So the automated computerized system is more suitable than the manual system.

Feasibility about the System:

Feasibility is a test of system proposal according to its workability impact on the organization, ability to meet user needs & effective use of resources. Three key considerations are involved in the feasibility analysis are as under -

Operational feasibility of the online gallery art system to find out whether the system will be functional after its development and installation?

Technical feasibility of the online gallery art system to examine out whether the current technology is sufficient for the development of the system.

Economic feasibility this analysis is most frequently used method for comparing the cost with benefit or income that is expected from the developed system.

System Requirements Specifications (SRS):

After analysing the requirements of the task to be performed, the next step is to analyse the problem and understand its context. The first activity in the phase is studying the existing system and other is to understand the requirements and domain of the new system. Both the activities are equally important, but the first activity serves as a basis of giving the functional specifications and then successful design of the proposed system. Understanding the properties and requirements of a new system is more difficult and requires creative thinking and understanding of existing running system is also difficult, improper understanding of present system can lead diversion from solution.

Software Requirements Specification (SRS) is the starting point of the software developing activity. As system grows more complex it becomes evident that the goal of the entire system cannot be easily comprehended. Hence the need for the requirement phase arose. The software project is initiated by the client needs. The SRS is the means of translating the ideas of the minds of clients (the input) into a formal document (the output of the requirement phase).

The SRS phase consists of two basic activities:

Problem/Requirement Analysis:

The process is order and more nebulous of the two, deals with understand the problem, the goal and constraints.

Requirement Specification:

Here, the focus is on specifying what has been found giving analysis such as representation, specification languages and tools, and checking the specifications are addressed during this activity. The requirement phase terminates with the production of the validate SRS document. Producing the SRS document is the basic of this phase.

Role of SRS:

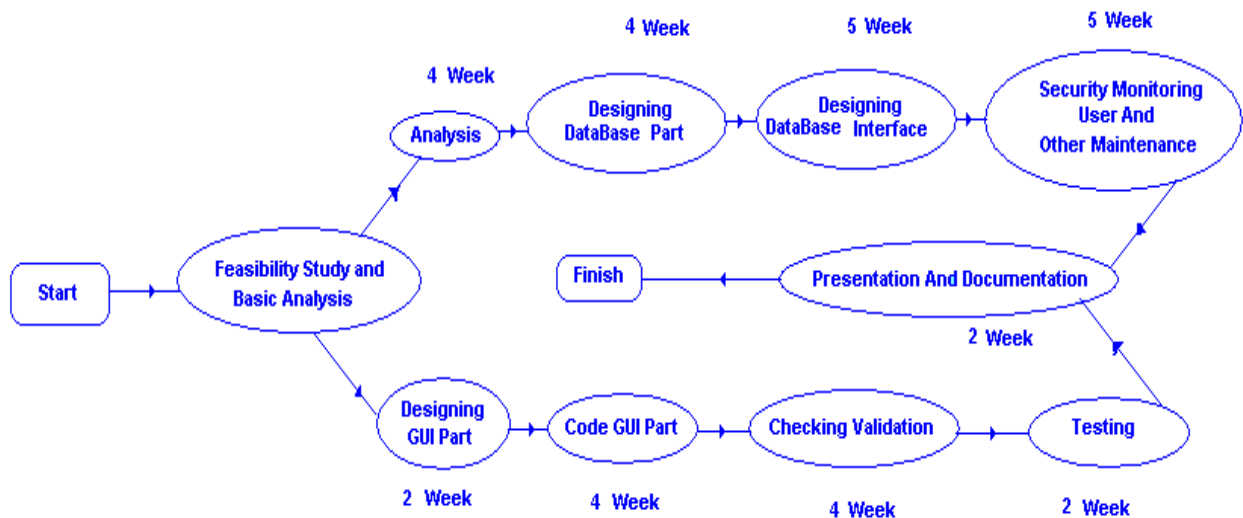
The purpose of the SRS is to reduce the communication gap between the clients and the developers. SRS is the medium though which the client and user needs are accurately specified. It forms the basis of software development. A good SRS should satisfy all the parties involved in the system.

Planning and Scheduling Chart

Pert Chart

PERT (Project Evolution and Review Technique) charts consist of a network of boxes and arrows. The boxes represent activities and the arrows represent task dependencies. PERT is organized by events and activities or tasks. PERT have more advantages and they are likely to be used for more complex projects.

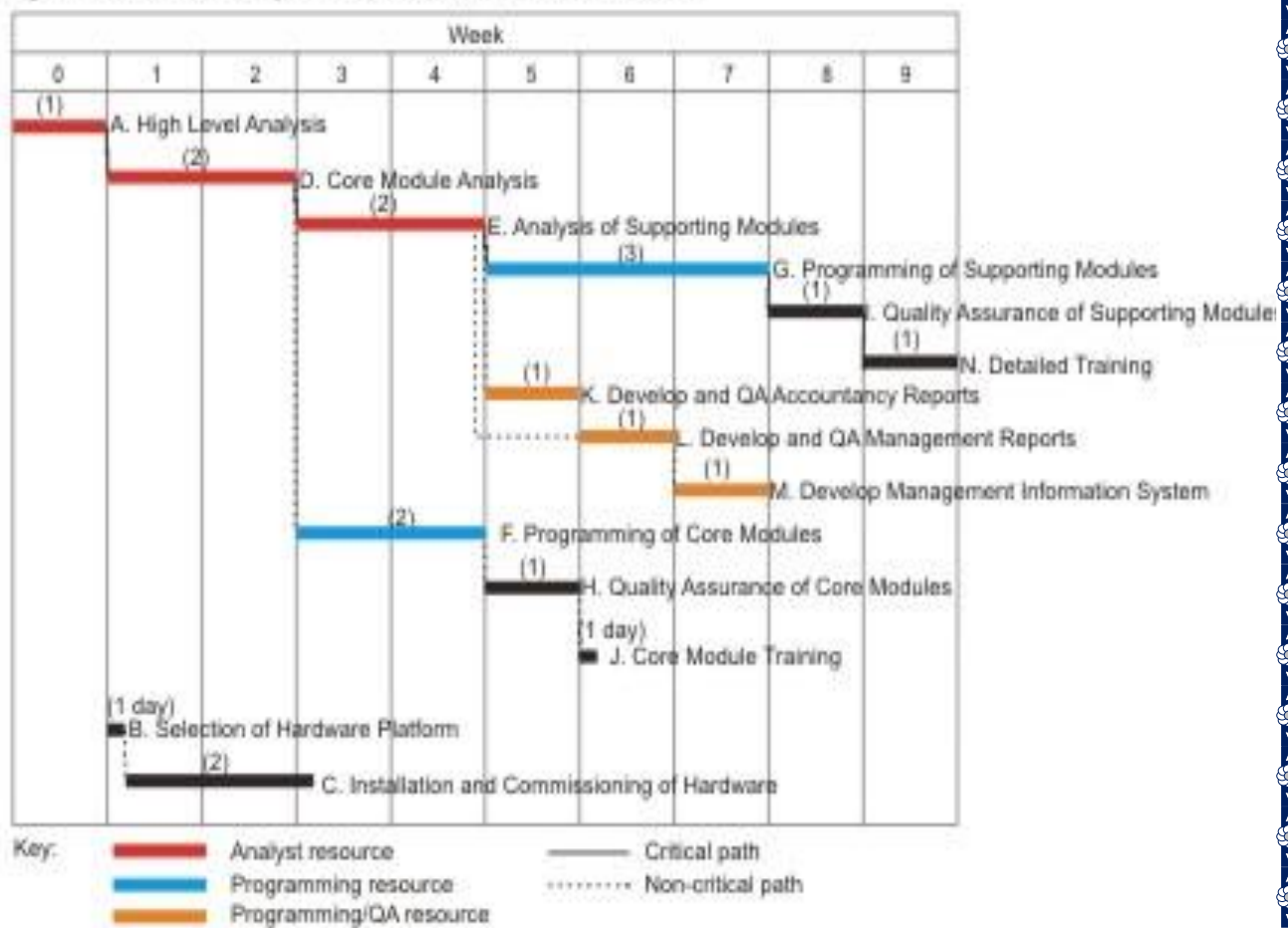
Through PERT chart the various task paths are defined. PERT enables the calculation of critical path. Each path consists of combination of tasks, which must be completed. The time and the cost associated with each task along a path are calculated, and the path that requires the greatest amount of elapsed time is the critical path.



Gantt chart

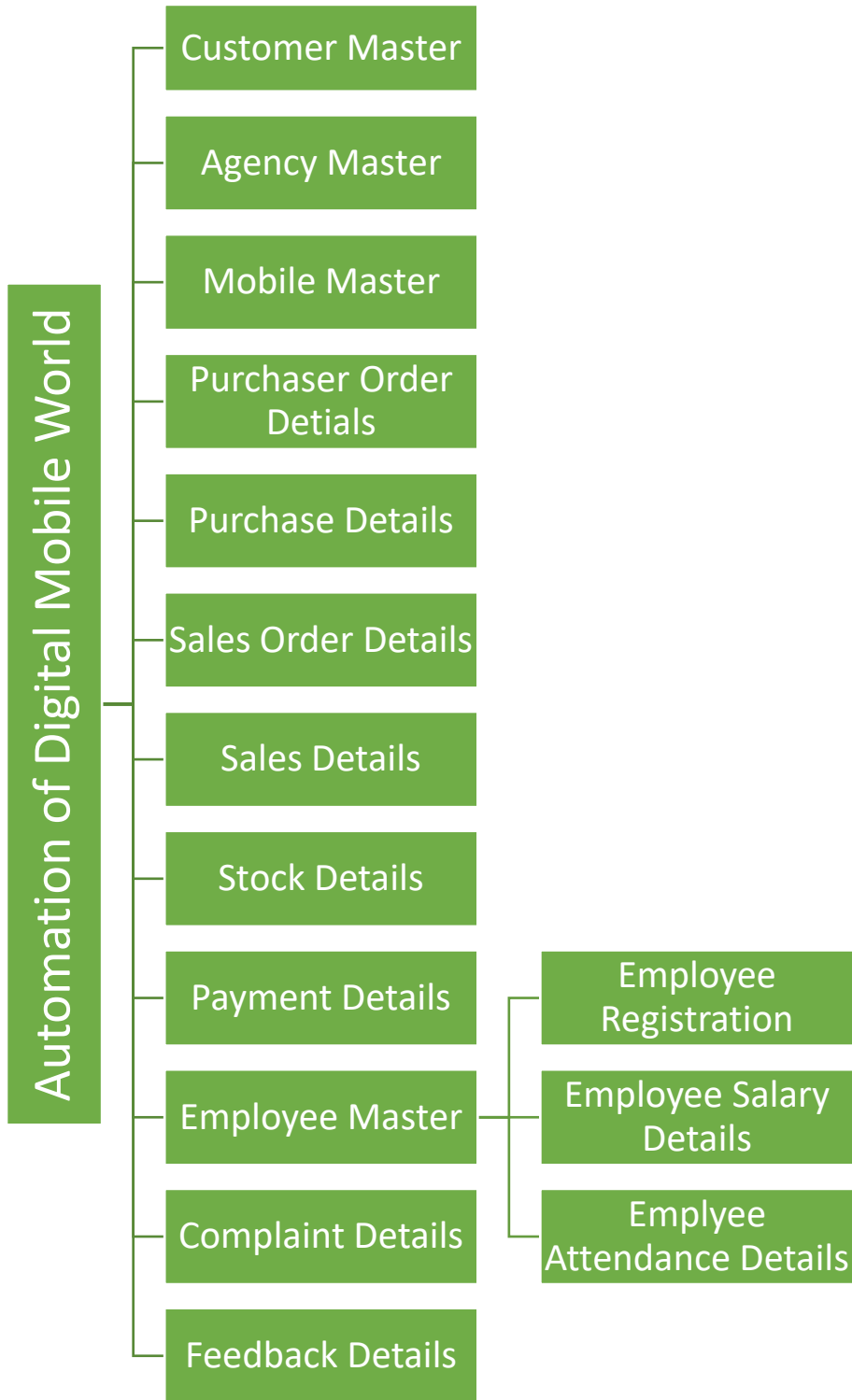
Gantt Charts are a project control technique that can be used for several purposes including scheduling, budgeting and resource planning. A Gantt chart is a bar chart with each bar representing an activity. The bars are drawn against a time line. The length of each bar is proportional to the length of time planned for the activity.

Figure 3: Critical Path Analysis: Activities Scheduled on a Gantt Chart



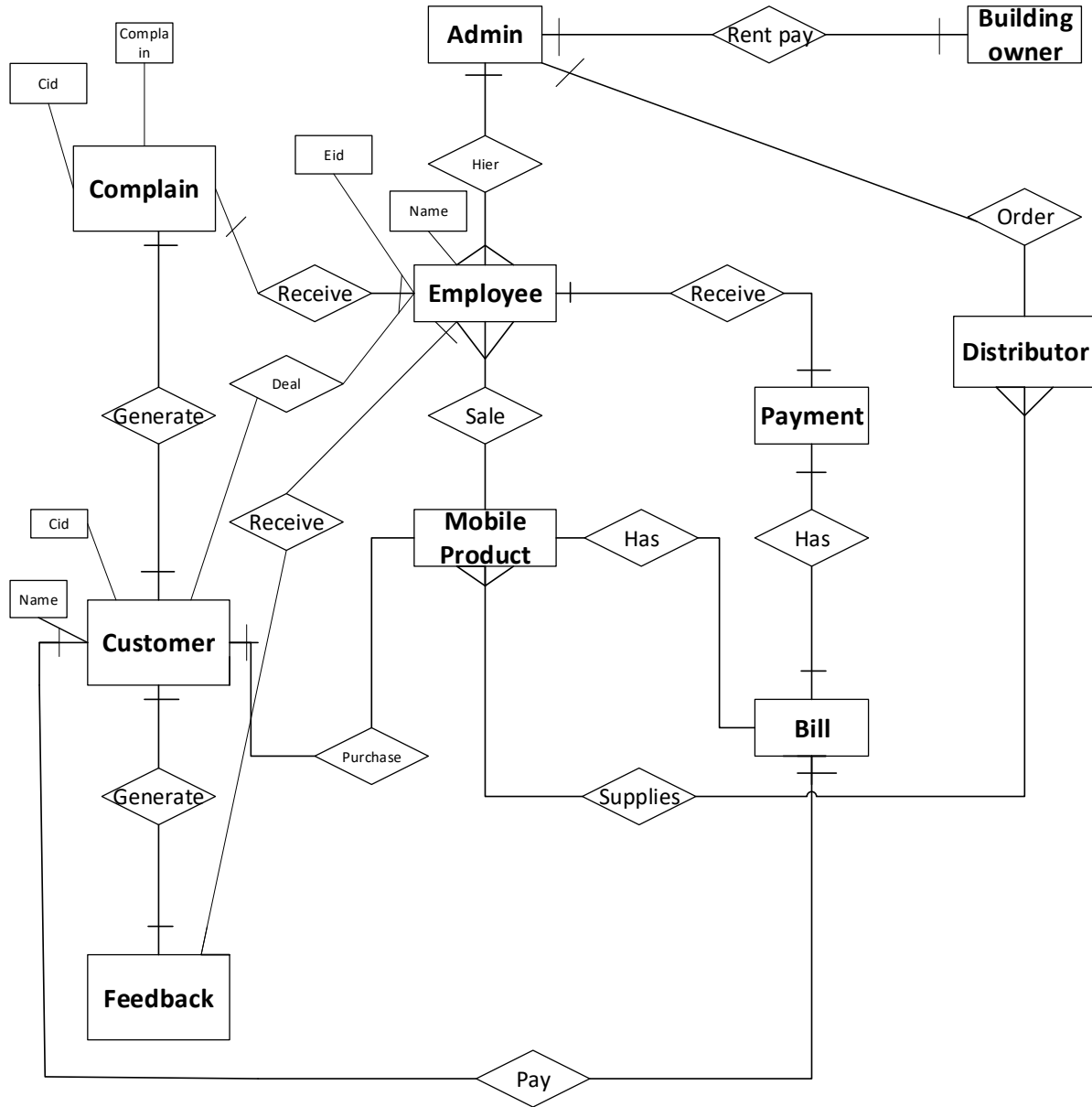
SYSTEM DESIGN

Structure Chart:



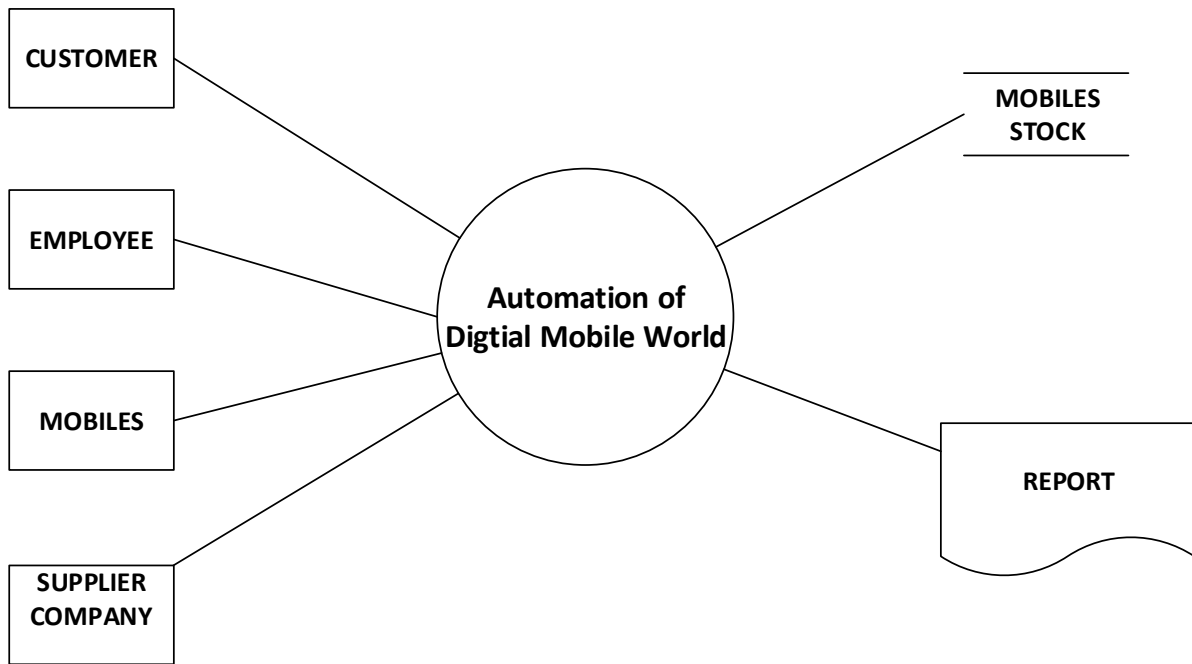
Entity Relationship Diagram:

ERD For Smile Mobile shop



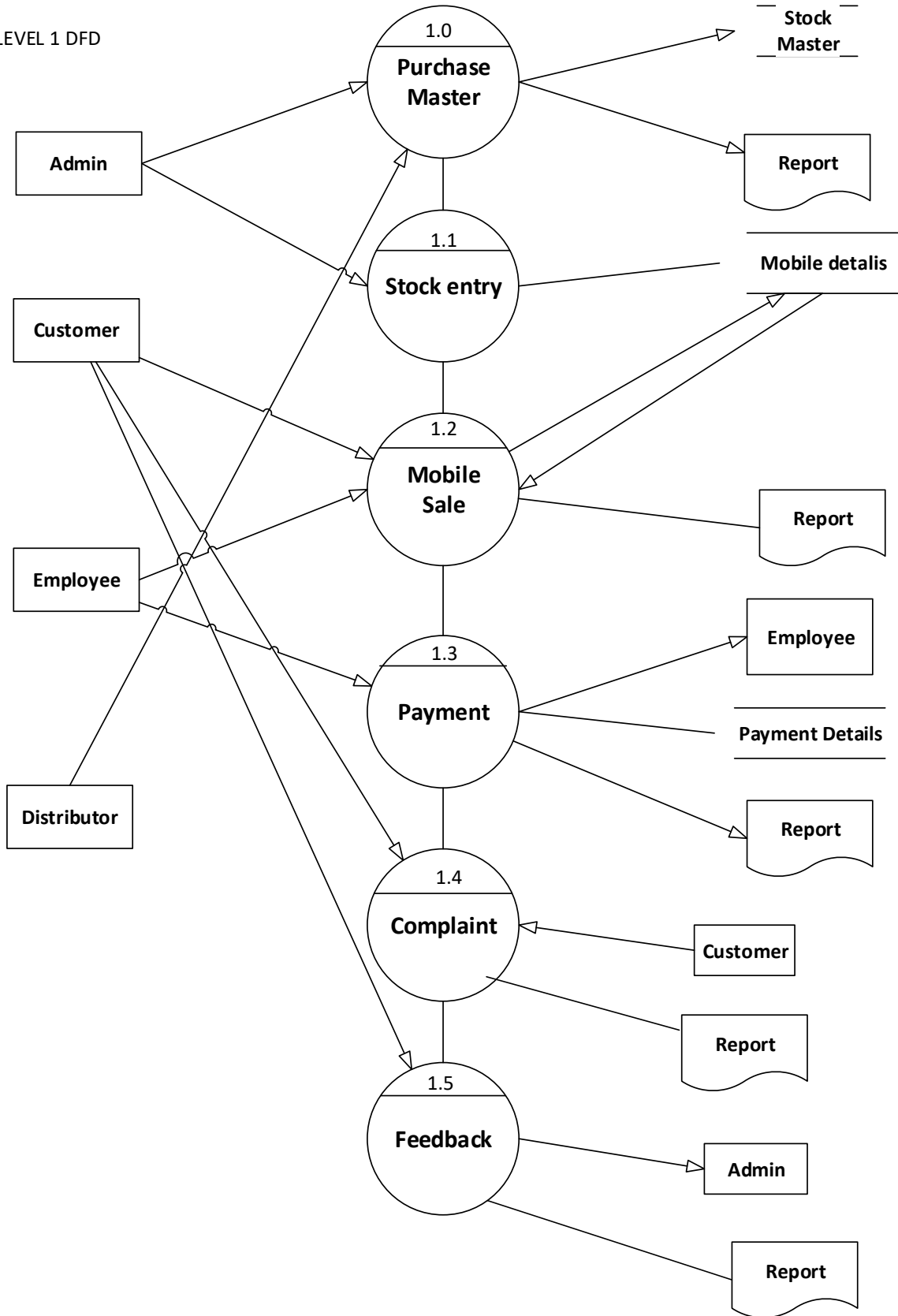
Data Flow Diagram (DFD):

Context Level DFD

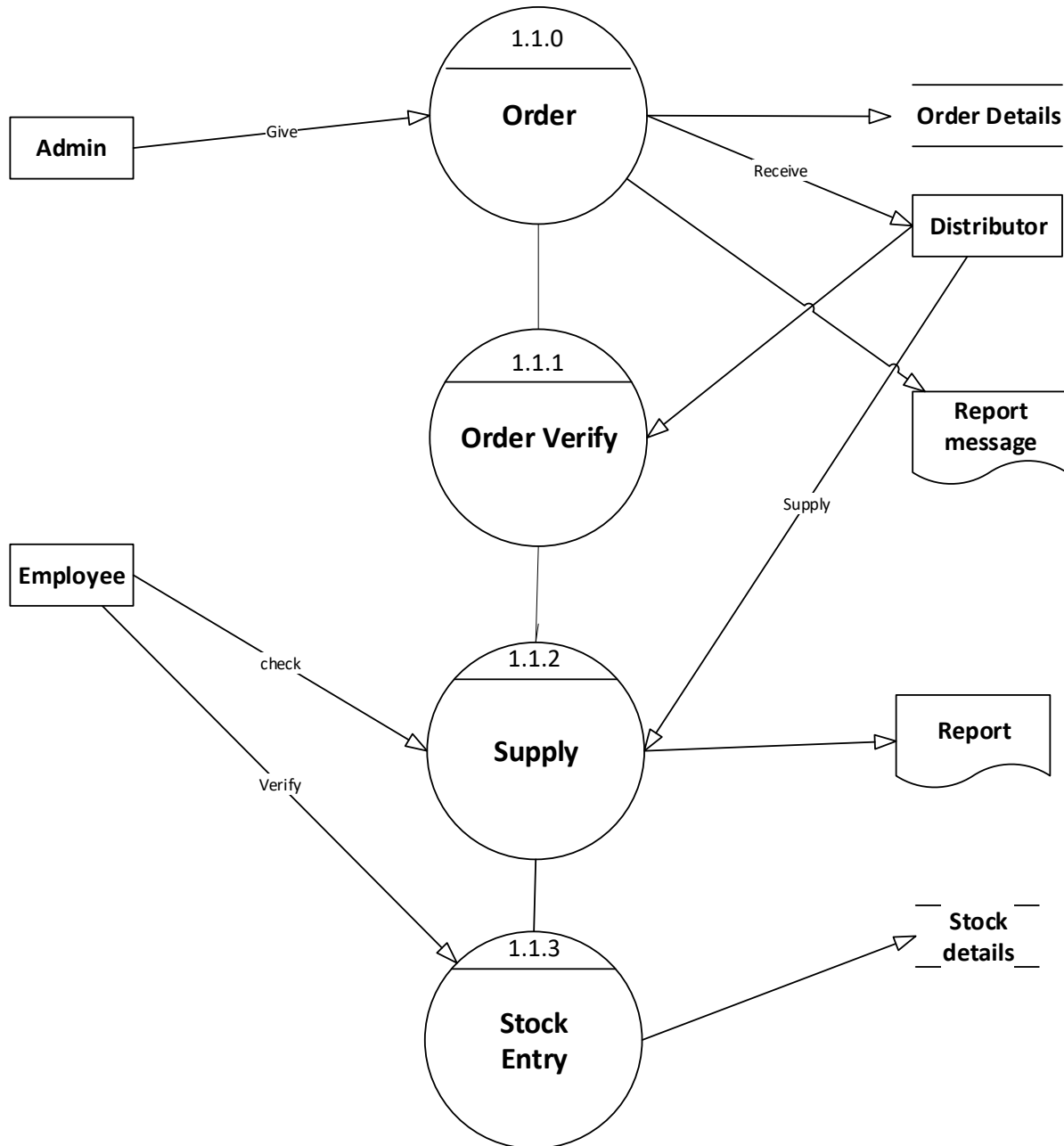


Zero level DFD

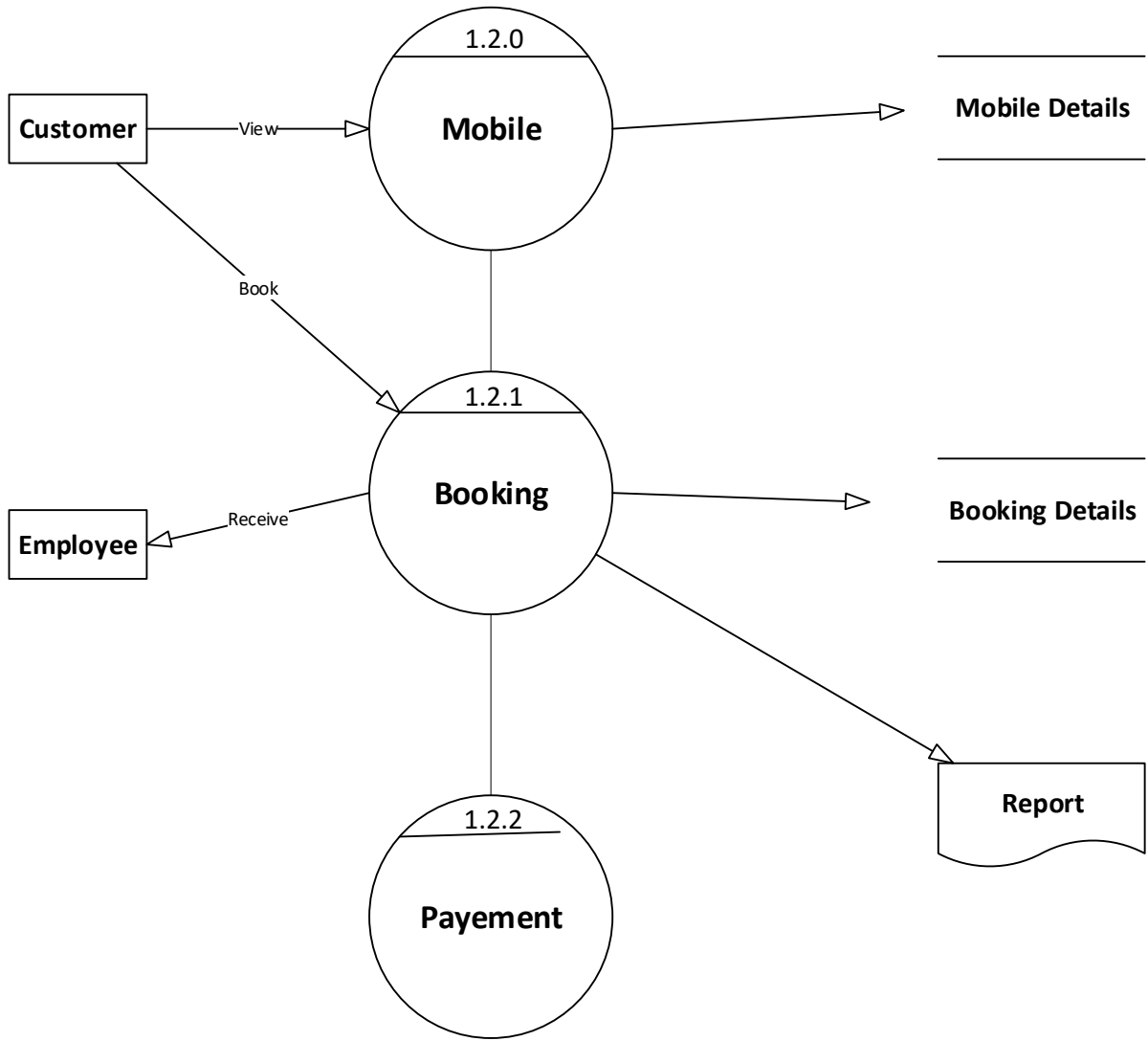
LEVEL 1 DFD



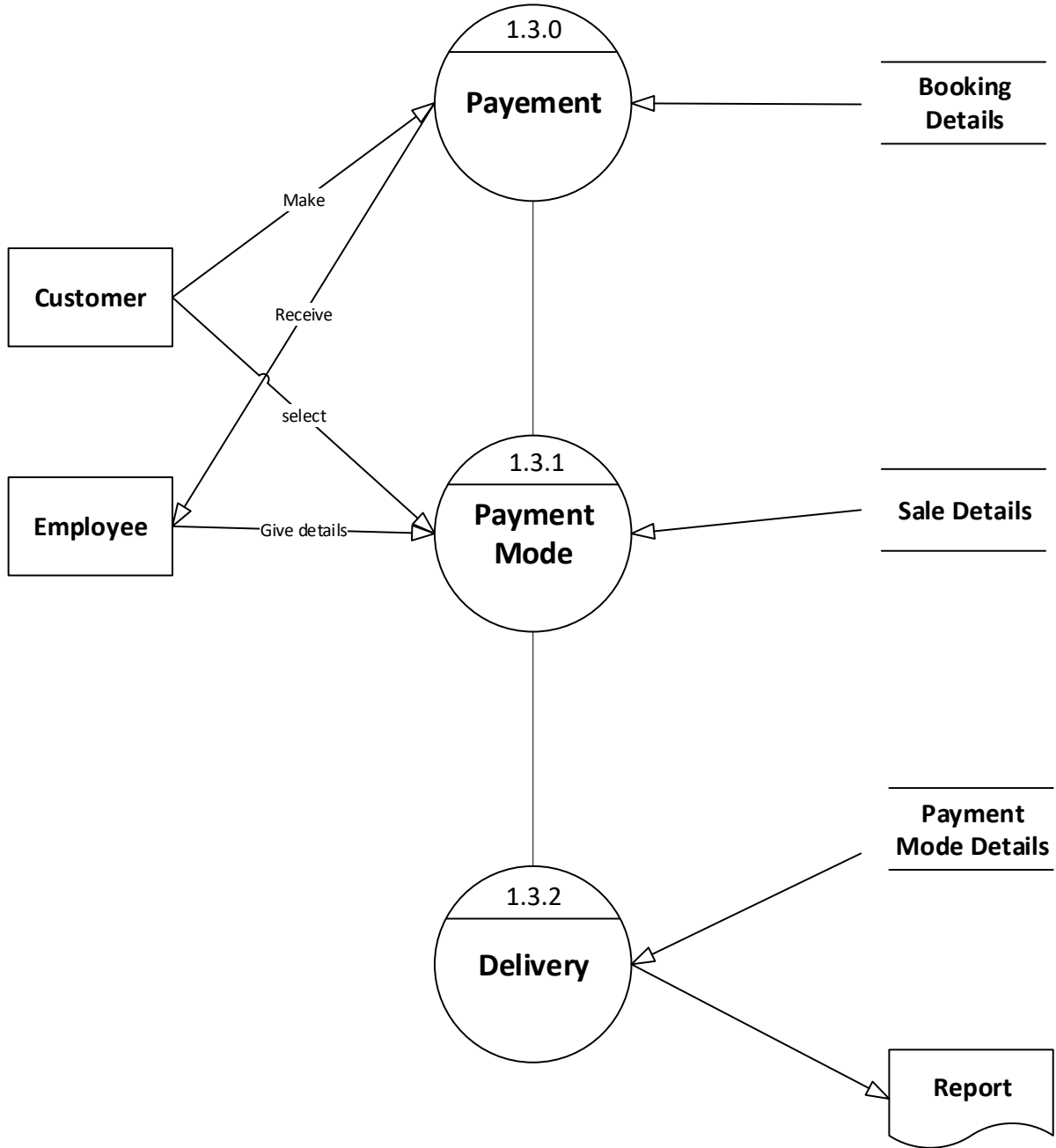
Two level Diagram : Order



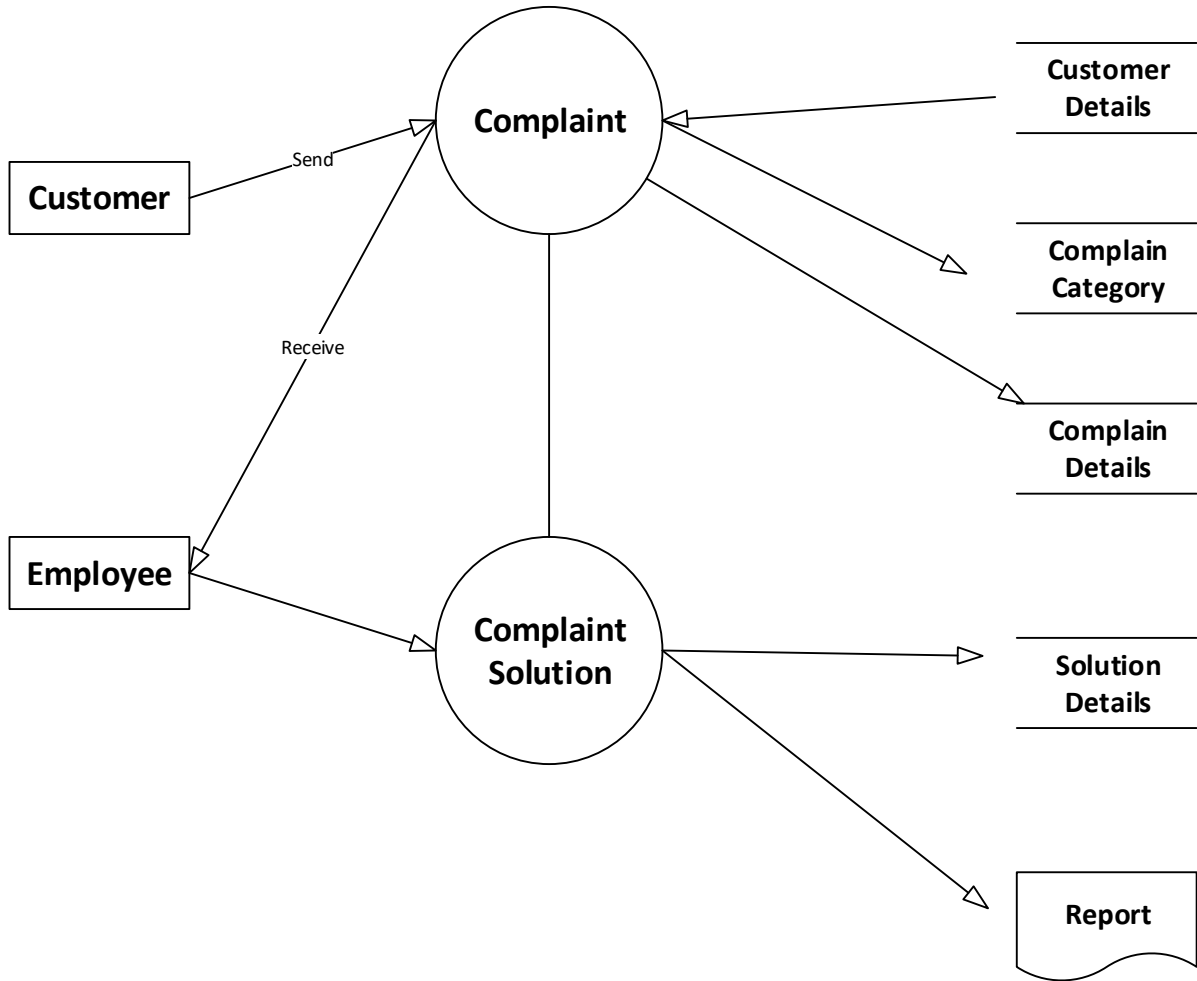
Level 2 : Booking



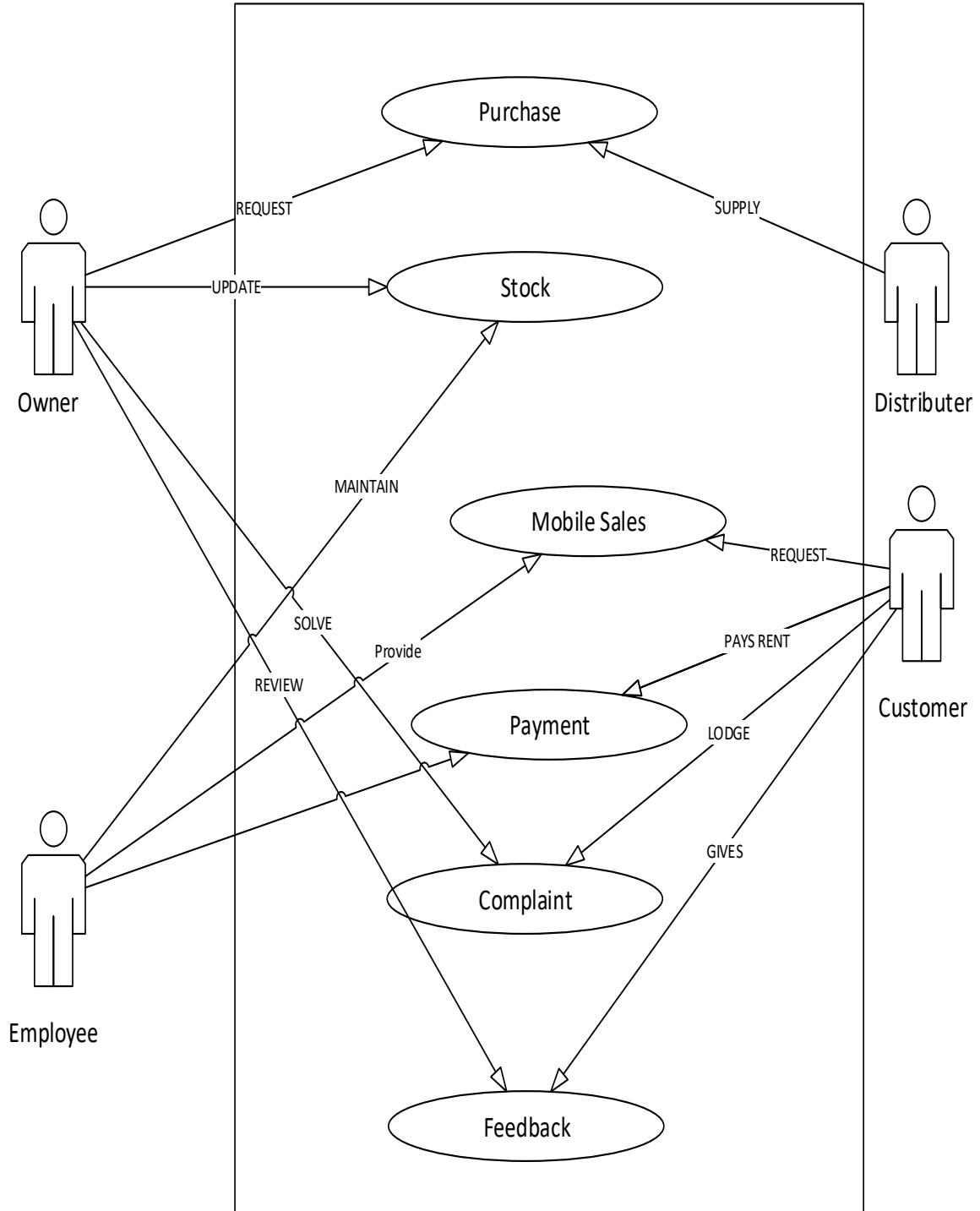
Level 2 : Payment



Level 2 : Complaint



Use Case Diagram:



NUMBER OF MODULES:

1. Mobile Master Details
2. Purchase Order Details
3. Purchase Master Details
4. Sale Order Details
5. Sales Master Details
6. Stock Details
7. Customer Master
8. Agency/Distributor Master
9. Payment Details
10. Employee Salary Details
11. Employee Attendance Details
12. Complaint/Warranty Details
13. Feedback Details
14. Contact Us Details

DATABASE DESIGN/DATA STRUCTURE OF EACH MODULE

Table Name: Customer Registration

Sno.	Fields /Attribute Name	Data Type(Size)	Constraints	Descriptions
1.	SINo	Varchar(20)	Not Null	Serial Number
2.	Cid	Varchar(20)	Primary Key	Customer ID
3.	Cname	Varchar(50)	Not Null	Customer Name
4.	Fname	Varchar(50)	Null	Father's Name
5.	Gen	Varchar(20)	Null	Gender
6.	Mob	Int(20)	Not Null	Mobile Number
7.	Email	Varchar(20)	Not Null	Email ID
8.	Add1	Varchar(100)	Not Null	Address 1
9.	Add2	Varchar(100)	Not Null	Address 2
10.	State	Varchar(20)	Not Null	State
11.	Remarks	Varchar(200)	Null	

Table Name: Agency Master

Sno.	Fields /Attribute Name	Data Type(Size)	Constraints	Descriptions
1.	SINo	Varchar(20)	Unique Key	Serial Number
2.	AgyID	Varchar(20)	Primary Key	Agency ID
3.	Agyname	Varchar(50)	Not Null	Agency Name
4.	Mob	Int (20)	Not Null	Mobile Number
5.	Email	Varchar(20)	Not Null	Email ID
6.	Add1	Varchar(100)	Not Null	Address 1
7.	Add2	Varchar(100)	Not Null	Address 2
8.	State	Varchar(20)	Not Null	State
9.	Remarks	Varchar(200)	Null	

Table Name: Mobile/Product Details

Sno.	Fields /Attribute Name	Data Type(Size)	Constraints	Descriptions
1.	SINo	Int (20)	Unique Key	Serial Number
2.	Mobid	Varchar(20)	Primary Key	Mobile ID
3.	MobType	Varchar(50)	Not Null	Mobile Type
4.	MobStr	Varchar(50)	Not Null	Storage Location
5.	MobNm	Varchar(50)	Not Null	Mobile Name
6.	CompName	Varchar(50)	Not Null	Company Name
7.	IMEI	Varchar(100)	Not Null	IMEI Number
8.	DtMfd	Date	Not Null	Date of Manufactured
9.	RAM	Varchar(50)	Null	
10.	BATTERY	Varchar(50)	Null	
11.	ProDetail	Varchar(50)	Null	Processor
12.	DisplayType	Varchar(50)	Null	
13.	DisplaySize	Varchar(50)	Null	
14.	Charger	Varchar(50)	Null	
15.	Earphone	Varchar(50)	Null	
16.	Remarks	Varchar(200)	Null	

Table Name: Purchase Order Detail

Sno.	Fields /Attribute Name	Data Type(Size)	Constraints	Descriptions
1.	SINo	Int(20)	Not Null	Serial Number
2.	PurID	Varchar(50)	Primary Key	Purchase ID
3.	Agid	Varchar(50)	Foreign Key	Agency ID
4.	MobID	Varchar(50)	Foreign Key	Product ID
5.	DtPurchase	Date	Not Null	Date of Purchase
6.	Qty	Int (50)	Not Null	Quantity
7.	UtPrice	Int (50)	Not Null	Unit Price
8.	TPrice	Int (50)	Not Null	Total Price
9.	Remarks	Varchar(250)	Not Null	

Table Name: Sale Detail

Sno.	Fields /Attribute Name	Data Type(Size)	Constraints	Descriptions
1.	SINo	Int(20)	Primary Key	Serial Number
2.	Cid	Varchar(50)	Foreign Key	Customer ID
3.	MobID	Varchar(50)	Foreign Key	Product ID
4.	Cname	Varchar(50)	Not Null	Customer Name
5.	CAdd	Varchar(200)	Not Null	Customer Address
6.	MobNo	Varchar(50)	Null	Mobile Number
7.	DtSale	Date	Not Null	Date of Sale
8.	Qty	Int (50)	Not Null	Quantity
9.	UtPrice	Int (50)	Not Null	Unit Price
10.	TPrice	Int (50)	Not Null	Total Price
11.	Remarks	Varchar(250)	Not Null	

Table Name: Contact Us Detail

Sno.	Fields /Attribute Name	Data Type(Size)	Constraints	Descriptions
1.	SINo	Varchar(20)	Primary Key	Serial Number
2.	Cid	Varchar(50)	Not Null	Customer ID
3.	CName	Varchar(50)	Not Null	Customer Name
4.	CEmail	Varchar(50)	Not Null	Email ID
5.	Remarks	Varchar(200)	Null	

PROCESS LOGIC OF EACH MODULE

Customer Registration Module -

This module is used to store the customer information in a proper way for future orders. The information may contain name, address, mobile no., email id etc. This information can be used by admin for the replacement or exchange the products.

Agency Master Module -

In this module, an admin can create new agency details master list for purchasing mobile products of different companies.

Purchase Order Module -

In this module, a user/registered customer can send his booked or purchased product details. This site by giving required information in a proper way for delivery of products also. The information may contain products name, quantity, order date, address etc. This information can be used by admin for delivery the product.

Payment Module -

This module is used to see the details of mobile configuration along with price details and payment mode. The information may contain like payment id, customer name, payment amount, date of payment, etc.

Complaint Details Module -

In this module a user files complaint regarding a problem about the purchased product, sometimes the behaviour of staffs etc. The user can only fill & send the information but admin can edit and take suitable action for betterment.

Feedback Details Module -

In this module, a user can give their valuable feedback of the delivered product, employee conducts and time spending in the shop. It will help the other new user and the admin of the shop for betterment of his shop's rule and regulations.

SOFTWARE TESTING PROCESS

We can use following type of the test as per our requirements in our project. They may be –

- ❖ White box testing
- ❖ Black box testing

These two testing may be performed level wise in systematic order: -

- ❖ Unit testing
- ❖ Module testing
- ❖ Integration testing
- ❖ System testing

We can also perform several test cases for each module in our project for purify the project.

SECURITY MECHANISM

This system is provided with authentication, without this user can not open his account. So only the legitimate users are allowed to use the application. If the legitimate users share the authentication information, then the system is open to outsiders also.

It is well known to all category of people that if we do not put any security over the working mechanism of any organization in any kind of field either it governmental or non – governmental then there is a chance of 99% that a mass of people tries to put obstacles in the path of working system and some time the important data may be hampered or leaked by some unwanted person. Hence there is a need of assigning a security process in whole organization. For this purpose, I also assigned a password to limit the access to the project.

Password prevents direct access to the protected item/project through unauthorized user. A password can contain any combination of letter, numerals, spaces and symbols and it can be up to 20 characters long. As and when a password is typed character will be displayed in the form of asterisk (*). Here password typed is case sensitive and the password entered for administration has facility to edit any recorded/existing data and other for the employees that works on it.

LIST OF REPORTS

The following reports are:

- ❖ Mobile Master Report
- ❖ Stock Master Report
- ❖ Customer Payment Report
- ❖ Customer Purchase Order Report
- ❖ Sale Order Report
- ❖ Customer Complaint Report
- ❖ Customer Feedback Report

FUTURE SCOPE & FURTHER ENHANCEMENT OF THE PROJECT

The future implementation of this project will be online help for the customers with chatting facility with website administrator. Customer may use debit card or credit card facility to purchase products when implement with secured payment gateway techniques.

This system will reduce the manual operation required to maintain all the records of booking information. And also generates the various reports for analysis. Main concept of the project is to enter transaction reports and to maintain customer records. Hence this software can be used in other mobile showroom to maintain their record easily.

Automation of Digital Mobile World will be useful for system staff members and customers i.e. for whole system. Administration has total picture of account and other activities that will help to taking any decisions and future improvements. It is designed to computerized whole functions of Customer Management of Smile Mobile Shop. The system will have

computerized the activity of customer and staff members as well, computerized invoice generation, account handling, stock maintenance etc. It will automate the manual and complicated process related with Digital Mobile Shop.

MS Sql Server 2014 and VB 2013 both have better internet/web interactions facility. So same project can easily upgrade for client–server based application for internet / intranet application in future, if required.

BIBLIOGRAPHY

Books:

Name of Books	Author
❖ IGNOU Block	IGNOU
❖ System Analysis and Design	Ellias. M. Award, Galgotia Publications, New Delhi
❖ System Analysis and Design Concepts	Jeffrey A. Hoffer, Joey F. George
❖ Software Engineering	Roger .S. Pressman, McGraw Hill Publications

Website:

- <https://www.google.com>
- <https://www.Stackoverflow.com>
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- <https://www.Javatpoint.com>
- <https://www.YouTube.com>