SMART SALE SYSTEM

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This Report Presented in partial Fulfillment of the Requirements for the Degree of Bachelor of Science in Computer Science and Engineering.

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APPROVAL

Our project titled "Smart Sale System" submitted by A.M. Faisal Kabir, ID No: 141-15-3360, Md. Anwarul Islam, ID No: 141-15-3394 & Md. Mostafizur Rahman, ID No: 141-15-3245 to the Department of Computer Science & Engineering, Daffodil International University, has been accepted as satisfactory for the partial fulfillment of the requirements for the Degree of B.Sc in Computer Science & Engineering & approved as to its style and contents. This presentation has been held on 6th May 2018.

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DECLARATION

We hereby declare that, this project has been done by us under the supervision of Anup Majumder, Lecturer, Department of CSE Daffodil International University. We also declare that neither this project nor any part of this project has been submitted elsewhere for award of any degree or diploma.

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ABSTRACT

Now a day's digitization has become essential component for organization and industry. Everyone is wanting to done their job easier and comfort. This reason, we have developed web based application for Smart Sale System for shops. This app will help the shoppers to execute and monitor whole process very easily. In this system, the administrator can keep track the information about his products and also help to monitor the system. It is understood that using this apps any one can maintain their descriptive list. This developed app consists of various modules to operate the apps. In the admin module, users can get important information about products. It can include number of products which are sold, stock products number and so on. From this module user can produce different types of reports. User can also keep their attentions about sales and supply. In addition, user can calculate their revenue, return of legitimacy, losses. This apps also supports barcode reader. All in all, our project gives extensive solution for Smart Sale System.

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CHAPTER 1 INTRODUCTION

1.1 Introduction

The Smart Sale System is a smart solution especially for small retailers to enhance the business and customer's experience [1]. Multiple benefits could be achieved through Point of sales for staff, management, and customers. Staff will be able to assist customers in the arrangement to buy the products. Instant payment accepted through credit card. It helps the sales team to get real-time product information including its sale as well as customer feedback. Staff will be more productive and effective. Staff will be able to assist customers towards the right decision about their purchase. An efficient Smart Sale System will automatically simplify the inventory as well as staff management. It allows the management to identify and highlight the best-selling products. Smart retail will support the business to make customers happier with time as well as money saving approach. It encourages the management to take profitable decisions for staff, customer and business ease. Smart retail is also beneficent to market the brand because it displays the real-time insights.

The number of computer users is increasing day by day and also developing features. If we want to keep state within the modern world, we need to improve our technology. So we choose web apps for development to easier our daily lifestyle. From a while, web-based apps are using for Smart Sale System. But in the modern world are using online application whichever is insecure for maintenance losses data in users and organization. In this case, we use web based application for Smart Sale System.

1.2 Motivation

An administrator can easily keep his or her sales information and invoice and capable to collect different types of reports also [2]. Our apps feature has written below.

- Register Purchase Order
- Invoice stored up items with unlimited number

- Strong security level
- Multiple branches
- Cataloging sales

We work this system because of people's life easier and feel relax. Sometimes person went to the stationary shop but he/she could not buy which he/she want. That's why we develop this system to maintain a super shop where all type of products is available.

1.3 Objective

The main purpose of our project is to improve traditional sale system. Our consignment is to overcome their problems and save time. Smart Sale System is that system to provide check payments include product discount or without discount but this discount you select only. Using our system, the owner of organization can sell their products easily and take their client satisfied. In the modern world people are so busy so that we build our system thinking to their valuable time.

1.4 Expected outcome

Our expectation is to generate a system with minimum time and better performance for a customer. A table is given below based on our expected outcome comparing time, effort, complexity:

Concern	Old System	New System
Time	Time consumption high	Less time consuming
Complexity	High	Low
Effort	More	Less
Searching result	Individual	Merged

1.5 Report layout

1.5.1 System Analysis and Design

In this stage, the software overall structure, the software design, and development process and its new features are defined. In terms of the SQL server technology, the number of a layer for the architecture, structure design and database design etc are defined in this stage. Also, create a software development model.

There are many types of software development life cycle model [3]:

- Waterfall model
- Spiral method model
- Iterative and incremental method
- V-model

Analysis and design is a cycle of development. When the software will be design obviously its need to analysis first and last stage of development is the implement of the software for requirement fulfill.

1.5.2 Development and Implementation

In this stage, the designs are converted into programming code. Web programs are written using Sublime Text and Xampp for local host. There are languages to develop on the software such as PHP, JavaScript. Also has a different platform.

1.5.3 Testing

When software design and development is complete then the program is testing the Application [4]. Different type of testing method is available for result out. Some institute is created their own testing tools.

Type of testing are-

- Unit testing
- Functional testing
- Integration testing
- System testing
- Performance testing

- Usability testing
- Acceptance testing

1.5.4 Maintenance

In this stage, we define how to handle of the software. Software product are modifying after delivery to correct faults, to improve performance or other activities. In computing, the changes in the system could instantly affect the software progress. The software should be improved to contain changes that could arise during the post-implementation season.

CHAPTER 2 BACKGROUND

2.1 Introduction

This chapter, we will explain all tasks that we need to concern before taking a step ahead. Our goal is that how can we provide a better platform for users.

In our project PHP is the tool we used as front-end of the Smart Sale System as a back-end MySQL is used our system. MySQL is popularly used as database. In this time many country people use this type of system to maintain their modern super shops.

2.2 Related Works

The system is used for the transaction can happen this type of environment where retail super shop, cash counter in the store. It can apply to the real Smart Sale System hardware and software together with but not limited to electronic register system of cash, screen-touch display, printer receipts. The much different organization, extending from restaurants, hotels, beauty salons and don't forget- the retail environment using this system. In the most basic sense, if something can be swapped for financial value, a Smart Sale System can be used. Smart Sale System Software necessity reasons

2.2.1 Quick and Proper sales

It comes down sales to all. If you are going to stay in business, then you can make sales. Sales are the main part of your business and how you manage this procedure is essential to your success. A Smart Sale System makes sure that everything works easily for every transaction.

2.2.2 Control inventory

If sales are number one, then goods inventory control is a close second. Without good inventory control, your failure out on sales, overstock needless product, and loses out on high-profit margins. A Smart Sale System needs to keep an accurate calculation of each product in our shop. It approves you to see what items are selling, what products are available on the rack, and what you need to order.

2.2.3 Time saving

Smart Sale System give you sales data the ability to analyze. You can measure the effectiveness of fix price and announcement campaign. You will know what items need to the customer and how much. You can make out high margin items and honor them next time. You can calculate easily in your daily total cost, revenue, and profit. Collected data analysis helps to warn your future needs.

2.2.4 Take Decisions Based On Data

If you want to continue your business you need to make decisions day to day based on facts and data otherwise, you are gambling with your money and time. The system should give reports on sales and inventory that helps to make purchasing decisions.

2.3 Comparative Studies

There is so many complexities in the existing systems. Those systems are time-consuming and need extra efforts. Those systems are not so much effective. But in our system we have designed the database in a dynamic way. Users don't need to take unnecessary stress to get their output. Here users can keep their important information and they can keep connected with their daily updates.

2.4 Scope of the problem

All system has probability to show some problem. When we will implement our system in real life then if it takes some trouble then we will solve it.

Our system benefits are given below:

2.4.1 Using benefits of Smart Sale System

A Smart Sale System will streamline business operations, including inventory and seller management along with streamlining Smart Sale System processes. The following overview highlights some of the typical benefits and operation of using a Smart Sale System.

• **Inventory:** A Smart Sale System allows you to classify inventory by a number of fields for easily find out and sorting of your stock. A standard record hierarchy would involve

Store, Dept., Class, Subclass, Item Type, Size, and Color. Most systems also offer extended inventory classifications to track extra classifications such as extra find out and additional product details. You can find your product easily with a quick search and select your catalogue to track number on hand and restock levels for each item in your inventory. You can generally track alternatives, suppliers, surnames and relationships.

- Smart Sale System: You have allowed to minimizing price errors and faster checkout. A Smart Sale System permits cash register to process transactions and distribute customers efficiently and also allows managers to maintain stable control. Some advantages of using a system include the capability to automatically find up and sell products depend on pre-set sales, quantity discount, and proposed price levels. In addition to the Smart Sale System, also able to support different transactions, including cash.
- Purchasing: A Smart Sale System help you to restock items easily with lower vendor price. You can create purchase order quickly and add items easily. When you will be pursuing your product then you will take a printed receipt for show your all products are available.
- Analysis and Reports: A Smart Sale System will allow searching, print and preview everyday report, and receipt number. You can take decision to analysis the previous records and can take step what to do.

2.5 Smart Sale System Feature and Explanation

- Admin Registration: Firstly, admin has to register for Smart Sale System.
- Admin/Suppliers login: The Smart Sale System software is only able to login admin with his username and password.
- Add New Suppliers: To sell the product, it will add a new user. Suppliers Contain here which has name, password, and roll.
- Delete Suppliers: Admin also can delete Suppliers.
- Buy product: A customer has to come shop to buy the products and also Customer can order his/her chosen products.
- **Bill Payment:** Customer will pay bills for products with their credit card, debit card and bkash.

- Alert Stock: When product items are low then it will be alert the user.
- Selling Summary: Purchaser details, Details of sales, Bill payment details.
- **Purchaser Details:** Purchaser name, Address and Purchaser products.
- **Details of sales:** product quantity, total amount.
- **Details of payments:** Cards, cash and change.
- **Delivery Receipts:** Salesperson will provide the purchaser delivery reports.
- **Inventory product:** Many products have inventoried there.
- **Inventory product print:** Inventory list will print.
- Product Add: New items will add by Suppliers. This product has Item code, description, price, discount and tax.
- **Product search:** when you search product you will know how much products are available.
- **Product Edit:** If need to edit product code or something then it can be edited.
- Product Update: If need to update product details, items name and price then it can be updated.
- **Product delete:** Delete product items if it is not needed.
- Reports print Daily/Weekly/Monthly/Yearly: Products sales reports print daily/weekly/monthly/yearly to know business profit or loss.

CHAPTER 3

REQUIREMENT SPECIFICATION

3.1 Business Process Modeling

Model of process represents the system of working of the entity system. This process represents the concept level of a process. This following model the process of our system is indicated step by step .Used model in the system is given below.

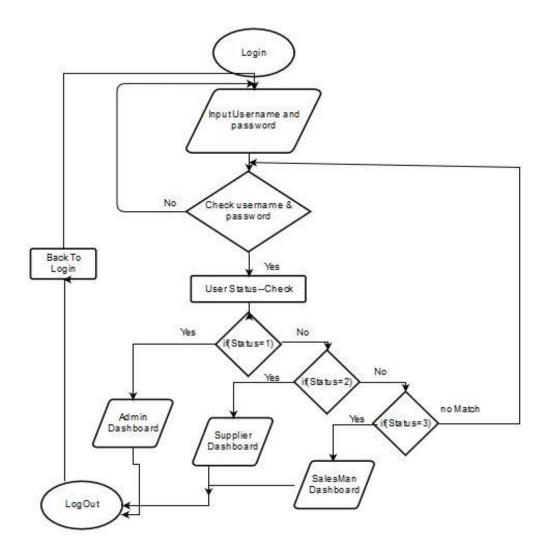


Figure 3.1: Model of Smart Sale System

3.2 Requirement Collection and Analysis

Software requirements

- Admin, Salesman, Supplier
- Customer can select chosen products.
- Time convenience
- User friendly
- Easily accessible
- Login system for admin
- Login system for Salesman
- Login system for Supplier
- Customer can get offer by his/her shopping statistics.

The Smart Sale System necessity supplies high-level of functional necessity. The activities of the Smart Sale System are discussed below. Admin do directly login this system but sales parson can login which is verified by admin. If a user uses his/her username and password, then a user can access all function.

Hardware and Software Requirements for Our System

Hardware Requirements:

- Server Configuration: Minimum storage 1 GB, Bandwidth which you are needed
- Ram: 2GB
- Laptop or desktop pc or Smart phone

Software Requirements:

- Operating System such as Windows/Mac
- Language: PHP
- Database: XAMPP MySql Database
- Chrome or other browser

Communications Requirements:

E-mail, web browser, network server communications protocols, electronic forms, and communications interfaces can be provided. In this case, we can use communication models such as FTP or HTTP to give security using encryption algorithms and synchronization tools.

3.3 Use Case Modeling and Description

Use case model represents various types of users and their activities of a system. In this model are indicate the activities of admin, Salesman, Supplier, and customer.

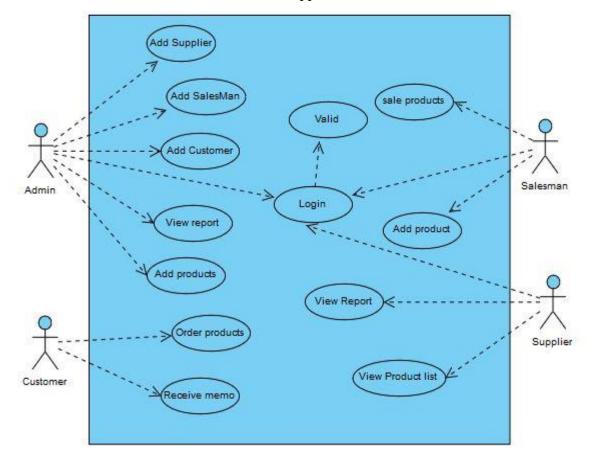


Figure 3.2: Use Case Model of Smart Sale System

3.4 Logical Data Model

This process used to identify and analyses requirement needed to support the business processes within the help of corresponding information systems in organizations. Three main parts of an Entity-Relationship diagram are the entities, which are concepts that can have data stored about them, the relationship between those entities, and the cardinality, which defines that relationship in terms of numbers.

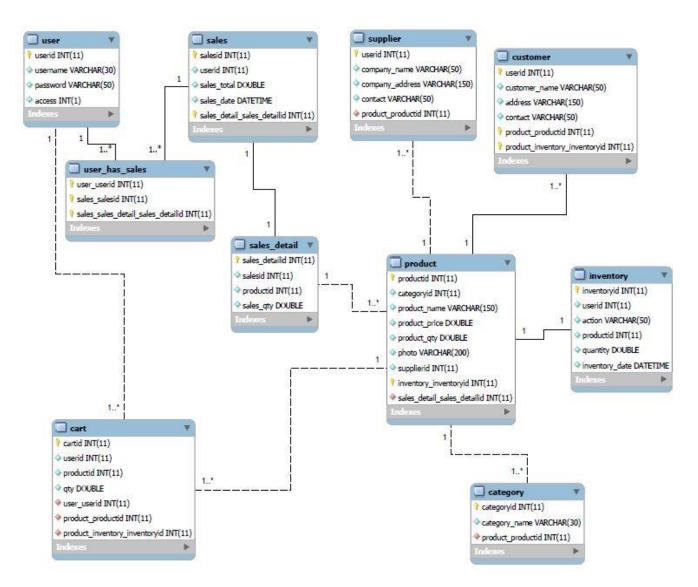


Figure 3.3: Logical Data Model of Smart Sale System

3.5 Design Requirements

Our system will make tusk unique with design requirements. If we want to get actual output in a short time we produced designed database carefully and in an ornamental way. There is different type of user panel (Admin, Salesman and Supplier). All data requirements are arranged in differentiated form. We have different section for information storage so that organization can be benefited easily from this system. These system users are able to have a great amount of control over their purpose in completing purposes.

3.6 Summary

Smart Sale System is the most basic function to handle sales. The cashier will start a new sale transaction when a customer comes at a Smart Sale System counter with goods to buy. When a good is read by the Smart Sale System, it will take the name and price of this good from the backend catalog system and associated with inventory system to understand the stock amount of this good. The customer can pay with cash or credit card when the sale transaction is over. When the payment is successful then a receipt will be printed.

CHAPTER 4 DESIGN SPECIFICATION

4.1 Front-End Design

Usually front-end design consists of two parts: web design part and web development part. Front-end design includes creating the HTML, jQuery, CSS, and JavaScript that make up a user interface. Coding patterns are about placing a set of connections between elements. By codifying these connections as a set of policies instead of a single, stand-alone template, we make it feasible for other developers to extend our work while remaining faithful to its core ideas. This is visible while using a website is a compound of HTML, CSS, and JavaScript all being managed by a browser. Here added things like fonts, home, menus bar, buttons, sliders, contact forms of different types like login, logout, add, delete etc. Basically, we have used the PHP, Java-Script, HTML, CSS and Bootstrap to design the system. We will present the total process that we have used in our project.

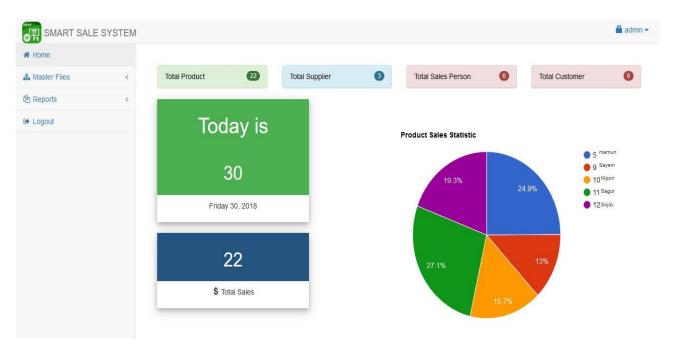


Figure 4.1: Front-End Design of Smart Sale System

HTML: For our websites we use hypertext mark-up languages. That means whatever manual you the manuals in our websites that have made up with HTML. So we have designed a page title and header titles for each feature.

Java-Script: HTML content can change by JavaScript. There are many JavaScript HTML methods one of them is getElementById(). This example applies the method to "find" an HTML element and changes the element content to "Hello JavaScript".

CSS: CSS is used to style our web pages, design, display size and screen size defined by device. By using CSS we can add lots of designs, colors, text-alignment, text-styles and everything that would make our system more charming.

4.2 Back-end Design

In Back-end of our system has been designed by PHP. PHP is a server-side scripting language designed primarily for web development. It is used as a general-purpose programming language and used MySQL database only. In our database 9 table are created to maintain data. SQL query language and PHP parsing have a strong bonding. whole logical parts are made by PHP. Some major task done by PHP point to point is discussed below.

- PHP used for validate of user.
- Major algorithm is written in PHP.
- Transfer data between pages uses \$_POST method of PHP.
- Logical part developed by PHP code.
- Control statement part done by PHP.

For our system we use PHP and examples are given below.

```
include('session.php');
       $name=$ POST['name'];
       $category=$_POST['category'];
       $price=$ POST['price'];
       $supplier=$ POST['supplier'];
       $qty=$_POST['qty'];
       $fileInfo = PATHINFO($ FILES["image"]["name"]);
       if (empty($_FILES["image"]["name"])){
<
         if ($fileInfo['extension'] == "jpg" OR $fileInfo['extension'] == "png") {
           $newFilename = $fileInfo['filename'] . "_" . time() . "." . $fileInfo['extension'];
          move uploaded file($ FILES["image"]["tmp name"], "../upload/" . $newFilename);
          $location = "upload/" . $newFilename;
            <script>
              window.alert('Photo not added. Please upload JPG or PNG photo only!');
            </script>
```

Figure 4.2: Back-end Design of Smart Sale System

4.3 Interaction Design and UX

Our system works on the basis of some condition. Only Admin can add salesperson in the system. When salesman sale some product then the customer data are stored in the database.

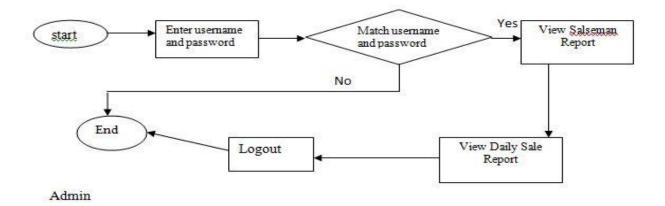
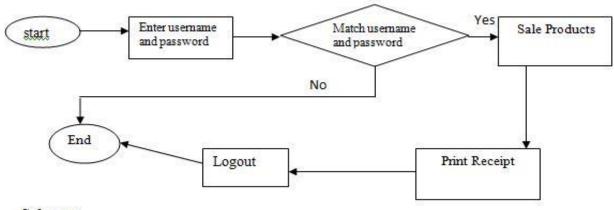


Figure 4.3.1: Interaction Design and UX for Admin



Salesman

Figure 4.3.2: Interaction Design and UX for Salesman

4.4 Implementation Requirements

To developing our system, we used some special virtual ambiance to make our task easier. Implementing the project to use in actual time execution it needs a server in system then system will be installed. Server provided by XAMPP virtual server system is used for developing purpose. PHP and MySQL support us to complete our project by using as a server. The browser supports the system to run smoothly by using HTML, CSS and JavaScript. In future, our development may change.

CHAPTER 5

IMPLEMENTATION AND TESTING

5.1 Implementation of database

In our system maintenance Database is the central part. Therefore, worldwide many database management systems are being used. We choose MySQL for our project. MySQL is open source and popular database for worldwide. It has become the first option for web-based application with its safety, easy-to-use and performance. MySQL is the most approved for web-based system because of its open-source relational database system.

Database knowledge is shortly given below:

- Pos.sql is our database name which is using.
- 11 tables in our database.

	Structure	D	SQL	Q	Search		Query	Exp	ort 📕	Import	🤌 Opera	ations	Privileges «	🕸 Rout	ines 🚫 E
E	ilters								,511			1			
Con	taining the wo	ord-													
	Table 🔺	Act	ion								Rows @	Туре	Collation	Size	Overhead
	cart		🔲 Br	owse	M Struc	ture	💐 Search	≩ i Insert	🚍 Empty	y 🥥 Drop		InnoDB	latin1_swedish_ci	16 Kil	в –
	category	1	🔲 Br	owse	JA Struc	ture	👌 Search	≩ i Insert	🚍 Empt	y 🥥 Drop	3	InnoDB	latin1_swedish_ci	16 Kil	в –
	customer		🔲 Br	owse	M Struc	ture	💐 Search	🛃 insert	层 Empty	y 🥥 Drop	5	InnoDB	latin1_swedish_ci	16 Kil	в –
	inventory		🔲 Br	owse	M Struc	ture	🔹 Search	≩ ∉ Insert	层 Empty	y 🥥 Drop	43	InnoDB	latin1_swedish_ci	16 Ki	в –
	people	俞	🔲 Br	owse	M Struc	ture	💐 Search	≩ e Insert	📻 Empt	y 🥥 Drop	2	InnoDB	latin1_swedish_ci	16 Kil	в –
	product		🔲 Br	owse	K Struc	ture	🐮 Search	∃e Insert	层 Empt	y 🥥 Drop	22	InnoDB	latin1_swedish_ci	16 Ki	в –
	sales	☆	🔲 Br	owse	M Struc	ture	💐 Search	🛃 insert	🚍 Empty	y 🥥 Drop	23	InnoDB	latin1_swedish_ci	16 Kil	в –
	salesman		Br	owse	Je Struc	ture	💐 Search	≩e Insert	👷 Empt	y 🥥 Drop	5	InnoDB	latin1_swedish_ci	16 Kil	в –
	sales_detail		🔲 Br	owse	M Struc	ture	💐 Search	<mark>≩</mark> ∉ Insert	层 Empty	y 🥥 Drop	39	InnoDB	latin1_swedish_ci	16 Ki	в –
	supplier		Br	owse	JA Struc	ture	💐 Search	≩ i Insert	🚍 Empt	y 🥥 Drop	3	InnoDB	latin1_swedish_ci	16 Ki	в –
	user	俞	🔲 Br	owse	M Struc	ture	💐 Search	≩ e Insert	🚍 Empt	y 🥥 Drop	15	InnoDB	latin1_swedish_ci	16 Kil	в. –
	11 tables	Sur	n								161	InnoDB	latin1_swedish_ci	176 Kil	B OB

Figure 5.1: Database Structure of Smart Sale System

5.2 Implementation of Front-End Design

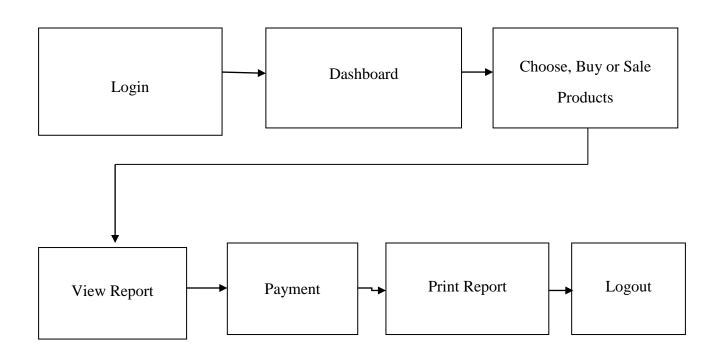


Figure 5.2: Block Diagram of Smart Sale System

5.3 Implementation of Interaction

For developing a project must need to implementation of interaction. Our project is a webbased project in this case Many resources and user activity need to interact. MySQL is used as a database. Most tasks of the system are related to data. So each time connection with the server for better performance of Organization.

5.4 Testing and Implementation

Whole process requirement is tested by us because we don't have any professional tester [5]. In this case, we know very well about our feature and we have written down the points of features and tested expectation of Organization. Our project Testing has been implemented. Each developing module is working very well and verified.

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In this purpose we can say unit testing is completed. When the development part of our project is completed then we have tested interactions between the pages, intent to intent. That's why we can speak every type of testing like unit testing, integration testing and acceptance are done by our system.

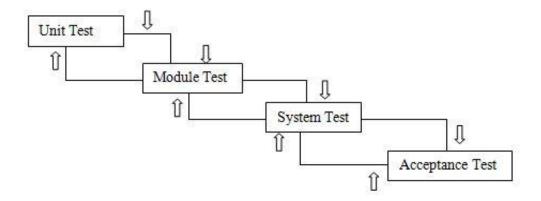


Figure 5.3: Testing model of Smart Sale System

Unit Test

In our system we tested each part to make sure that our design is correctly implemented. we ensure that each part of our system works as per requirement.

Module Test

We also tested collection of dependent parts such as an object class, object data type and operation.

System Test

System testing has been carried out remarked that this system works following to expectation.

Acceptance Test

Accepted test completed by Customer. This system provides required output as expected by them.

5.5 Test Results and Reports

The report development is a main concern of our project. Firstly, our System is Sale oriented. Each system needs an output as a result. As our testing report we have seen all expected results. This statement is obviously important and time saving for the Organization.

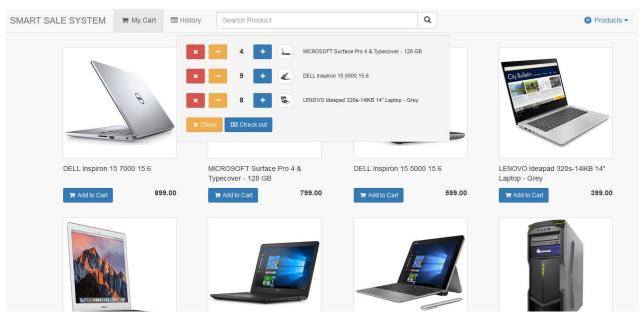


Figure 5.4: Front end design of Smart Sale System

CHAPTER 6 CONCLUSION AND FUTURE SCOPE

6.1 Discussion

We have Fulfill the aims and the objectives of the project. The server Web Based Application for Smart Sale System is done by using PHP, CSS, HTML, JavaScript, MySQL, Atom. We believe that getting approved system will be easier and less time consuming and less effort by developing this system. Front-end and Back-end development improvement the stage of this project. Information stored and keeping updated with the latest scope is the main challenge. Once input collection data is done requirements then we can be done within a short time.

6.2 Conclusion

There are some features which may improve the process if we can add some features. It can be used by Organization or Admin. As discussed earlier our system is unique and has good for customer. While the point of sale systems are an essential part of today's commercial workplace, the details and benefits available for purchase can be mind-boggling to the beginner shopper. It is important to narrow down the various selections available in order to find which Smart Sale System will best suit a special user. Shopping on allows the option of narrowing selections to find the important options, in addition to providing shoppers to buy from sellers worldwide.

6.3 Scope for Further Developments

Some of the work we completed but we continued this project to develop day by day [6].

- Use more technical pointers to improve the Security level [7].
- In future messaging system of cash receipt in customers mobile.
- Maintain the ability to handle virtually any size installation for any type of business.
- In future Biometrics system will be included [7].
- CMV(Cash, MasterCard and Visa) payment system will be developed in future.

REFERENCES

[1] Smart Sale System Information << https://solutiondots.com/blog/smart-retail-point-sales-pos-system/>> last accessed on 01-12-2017 at 01:00am.

[2] Motivation<<https://en.wikipedia.org/wiki/Point_of_sale>> last accessed on 03-12-2017 at 12:00pm.

[3] Software development life cycle model (SDLC) <<http://istqbexamcertification.com/what-are-the-software-development-life-cycle-sdlc-phases/>>last accessed on 30-01-2018 at 12:00pm.

[4] Testing<<https://www.codeproject.com/Tips/351122/What-is-software-testing-What-are-the-different-ty>> last accessed on 10-02-2018 at 12:00pm.

[5] Testing and Implementation << http://pl.cs.jhu.edu/oose/lectures/implement-test.shtml>> last accessed on 15-03-2018 at 12:00pm.

[6] Future scope idea<<http://dbs4pos.com/point-of-sale-products/product/Future-POS >>, last accessed on 29-03-2018 at 10:00am.

[7] Future idea<<http://www.possoftwareguide.com/articles/future-pos-software.html>>, last accessed on 01-04-2018 at 2:00pm.

APPENDIX

Appendix A: Code Reflection:

```
<!-- Full Details -->
<div class="modal fade" id="detail<?php echo $sqrow['salesid']; ?>" tabindex="-1"
role="dialog" aria-labelledby="myModalLabel" aria-hidden="true">
<div class="modal-dialog modal-lg">
<div class="modal-content">
<div class="modal-header">
<button
               type="button"
                                    class="close"
                                                         data-dismiss="modal"
                                                                                     aria-
hidden="true">×</button>
<center><h4 class="modal-title" id="myModalLabel">Purchase Details</h4></center>
</div>
<div class="modal-body">
<?php
$sales=mysqli_query($conn,"select
                                     *
                                          from
                                                   sales
                                                           left
                                                                   join
                                                                           customer
                                                                                       on
customer.userid=sales.userid where salesid="".$sqrow['salesid'].""");
$srow=mysqli_fetch_array($sales);
?>
<div class="container-fluid">
<div class="row">
<div class="col-lg-12">
<span>SalesMan:
                       <strong><?php
                                             echo
                                                         ucwords($srow['customer_name']);
?></strong></span>
                                                                                      Y",
          class="pull-right">Date:
                                      <strong><?php
                                                          echo
                                                                   date("F
                                                                               d.
<span
strtotime($srow['sales_date'])); ?></strong></span>
</div>
</div>
<div style="height:10px;"></div>
<div class="row">
<div class="col-lg-12">
```

```
<thead>
Product Name
Price
Purchase Qty
SubTotal
</thead>
<?php
$total=0;
$pd=mysqli_query($conn,"select
                         *
                             from
                                   sales_detail
                                             left
                                                  join
                                                        product
                                                                on
product.productid=sales_detail.productid where salesid="".$sqrow['salesid'].""");
while($pdrow=mysqli_fetch_array($pd)){
?>
<?php echo ucwords($pdrow['product_name']); ?>
<?php echo number_format($pdrow['product_price'],2); ?>
<?php echo $pdrow['sales_qty']; ?>
<?php
$subtotal=$pdrow['product_price']*$pdrow['sales_qty'];
echo number_format($subtotal,2);
$total+=$subtotal;
?>
<?php
}
```

```
?>
```

PRINT

```
<span class="glyphicon glyphicon-print" aria-hidden="true"></span>
</button>
<script type="text/javascript">
$(document).on('change', '#dailyDate', function(event) {
event.preventDefault();
/* Act on the event */
var date = $('#dailyDate').val();
if(date == " \parallel date == null)
$('#printBut').hide();
}else{
$('#printBut').show();
}
dailySales(date);
});
$('#printBut').click(function(event) {
/* Act on the event */
var date = $('#dailyDate').val();
window.open('full_details.php?salesid='$sqrow['salesid'],'width=600,height=400');
});
</script>
<script>
function printContent(el){
var restorepage = document.body.innerHTML;
var printcontent = document.getElementById(el).innerHTML;
document.body.innerHTML = printcontent;
window.print();
document.body.innerHTML = restorepage;
}
</script>
</div>
```

```
<br/><button type="button" class="btn btn-default" data-dismiss="modal"><i class="fa fa-
times"></i> Close</button></div></div></button onclick="myFunction()">Print this page</button></script></script></script></script></script></script></script></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div>
```

Appendix B: Related Diagrams:

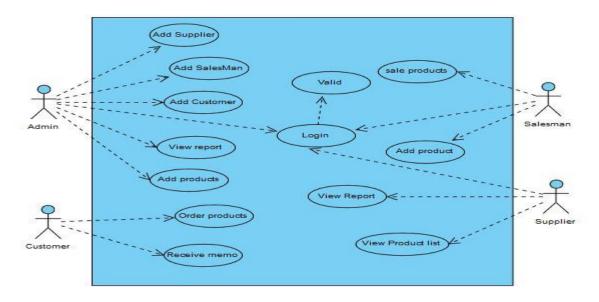


Figure 3.2: Use Case Model of Smart Sale System

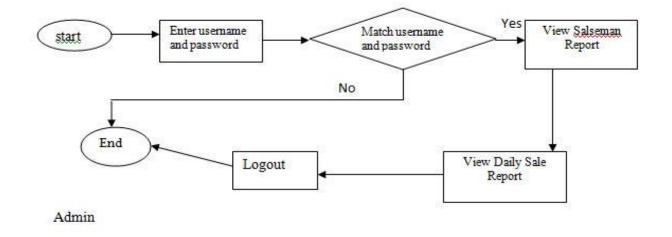


Figure 4.3.1: Interaction Design and UX for Admin

	Structure		SQL	9	Search		Query	📕 Ехро	ort 🔜 I	mport	🥜 Оре	era	tions	Privileges	8 R	outin	es 🕑 Even
F	ilters																
Co	ntaining the wo	ord:															
	Table 🔺	Act	tion								Rows (0	Туре	Collation	Size	÷ 1	Overhead
	cart	会	Bro	owse	Struc	ture	😻 Search	🛃 insert	 E mpty	Drop		1	InnoDB	latin1_swedish_ci	16	KiB	-
	category	1	Bro	owse	M Struc	ture	😵 Search	3 i e Insert	层 Empty	😂 Drop		з	InnoDB	latin1_swedish_ci	16	KiB	-
	customer	会	Bro	owse	Struc	ture	💐 Search	👫 Insert	层 Empty	😂 Drop		5	InnoDB	latin1_swedish_ci	16	KiB	-
	inventory	\$	Bro	owse	JA Struc	ture	🛓 Search	≩ ċ Insert	👷 Empty	Orop		43	InnoDB	latin1_swedish_ci	16	KiB	-
	people	余	Bro	owse	M Struc	ture	🖎 Search	≩ -i Insert	燥 Empty	Orop		2	InnoDB	latin1_swedish_ci	16	KiB	-
	product	-	Bro	owse	JA Struc	ture	🔹 Search	≩e Insert	层 Empty	Orop		22	InnoDB	latin1_swedish_ci	16	KiB	
	sales		🔲 Bro	owse	Struc	ture	💐 Search	🛃 insert	🚍 Empty	Orop		23	InnoDB	latin1_swedish_ci	16	KiB	(L)
	salesman	-	Bro	owse	Je Struc	ture	Rearch	≩e Insert	👷 Empty	Orop		5	InnoDB	latin1_swedish_ci	16	KiB	-
	sales_detail	☆	Bro	owse	M Struc	ture	💐 Search	ad Insert	层 Empty	Orop		39	InnoDB	latin1_swedish_ci	16	KiB	-
	supplier	ŵ	Bro	owse	JA Struc	ture	😽 Search	3ai Insert	🚍 Empty	🔵 Drop		з	InnoDB	latin1_swedish_ci	16	KiB	-
	user	合	Bro	owse	M Struc	ture	💐 Search	3-i Insert	层 Empty	Orop		15	InnoDB	latin1_swedish_ci	16	KiB	
	11 tables	Su	m								1	61	InnoDB	latin1_swedish_ci	176	KiB	0 B

Figure 5.1: Database Structure of Smart Sale System

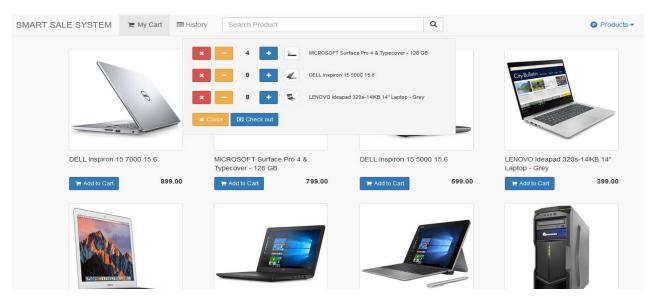


Figure 5.4: Front end design of Smart Sale System

