

Inventory, Stock and Sales Web Application

Prepared and Submitted by

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Inventory, Stock and Sales Web Application

Submitted in partial fulfillment of the requirement for the degree of
Bachelor of Technology in Computer Science & Engineering

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Ahmedabad – 382481 (India)
April, 2016

CERTIFICATE

This is to certify that the Major Project entitled “**Inventory, Stock and Sales Web Application**” submitted by **Harsh J. Patel(12bce057)**, towards the partial fulfillment of the requirements for the degree of Bachelors of Technology in Computer Engineering of Nirma University of Science and Technology, Ahmedabad is the record of work carried out by him under my supervision and guidance. In my opinion, the submitted work has reached a level required for being accepted for examination. The results embodied in this major project, to the best of my knowledge, haven’t been submitted to any other university or institution for award of any degree or diploma.

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ABSTRACT

Inventory, Stock and Sales Web Application is an application that aims to provide all the facilities related to any inventory management, stock management and sales of any company or startup. The aim of the project is to fulfill all the facilities in one application. The application is built on php and javascript. The application provides inventory management features for storing the product details on the database along with their images and stock. The application also provides the facility of storing the customer and supplier details. Editing and Deleting features are also available for the user to edit or delete any data. The application provides the facility of generating Pie Charts and Line charts for the sales reports. The stock share is described categorically using a pie chart. The sales report between and dates can be displayed in a table or can also be visually seen in a line chart. The application also provides the facility to download the data in an excel sheet for other purposes. The chart provides a drilldown feature which helps to categorically display data. The application also provides the facility of predicting the sales of any product for any particular date. The prediction algorithm predicts the sales of the product based on the best fitting line , linear regression algorithm. The application provides the feature of multi-users, which means different users with different permissions and profiles. Hence the application aims to provide a single interface and portal to manage inventory, stock and sales of any company or startup or any other business.

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CHAPTER 1

INTRODUCTION

This chapter describes about the project system, company and how it works, current scenario of existing system, scope of the project.

1.1 ABOUT THE COMPANY

1.1.1 Introduction to the Company

SDK-ITpro is a web development company and it aims to provide all solutions related to web technologies. It also provides you the facility of developing any web application according to your needs. SDK-ITpro have been helping small business owners, individuals and a huge assortment of global corporations to serve their customers better. We can help make your business profitable and appear professional. No matter how great of an idea you have, it will not come well into life without plan, skills, resources, technology, ideas and ability to find vital solutions using compatible technologies. Your business success determines on how well your idea is molded into realism. The company helps you bringing your ideas to form plans, advice on compatible technologies to mold it into thriving business. Whether you want a website built to be customized to your business needs, maintaining a legacy system, or building a new enterprise application or Open Source development, you can count on SDK-ITpro for all your web and application development needs. From start-ups to business corporations the company's vetted technology experts bring a wealth of experience and skill to help your project stand out, increase conversions, and ultimately be successful. SDK-ITpro can provide comprehensive technology solutions specific and well-defined to your customers or business needs.

1.1.2 Quality Policy

The company believes in providing the best quality check and inspect to any software and service maintenance for the delivered products. The quality policy adopted during the project included 3 testing phases after completion of each module and applying different testing methods to each module and packaging them. Regressive testing and big fixing is done to ensure that the product delivered has no bugs in them and quality is ensured and all the projects are completed in the stipulated time. The quality policy ensures no problems in the final product and on site support is also provided to clients on handling projects and time to time updates are also done to the projects.

1.2 THE SYSTEM

1.2.1 Definition of System

The project will be used by any company that has to keep a record of its items or inventory and also does the sales of that particular item and keep a track of the profit , quantity of item left and other such features. The project will have two users Admin (the owner of the company he can add, delete items, change the price and keep a track of suppliers and customers).The second user will be the sales person who will enter the sales of items depending on the order of customers, He can take the money do the entry in the system and update the system. The application will aim to provide one solution for inventory ,stock and sales management of any company and business.

1.2.2 Purpose and Objective

The purpose this project is to provide one package solution for inventory, stock and sales management. The project also offers the facility of predicting the sales of any particular product based on the date entered ,the project also aims to offer the facility of visualizing the sales data on a line graph. The project also aims on providing the facility of displaying the product share on a pie chart ,this helps the user in visualizing the data easily. The application also provides the facility of downloading the data in MS Excel format for other purposes. The application also provides different user profiles with different permissions and different abilities .The project's main aim is to provide one stop solution to inventory, stock and sales management department of any company or business.

1.2.3 About present system

There are many applications available online but they don't provide all the features in one package. This application will provide graphs and the power to predict the sales in one package. Other applications need to outsource different applications for prediction and displaying graphs. But this application aims at providing the best solution.

1.2.4 Proposed system

The project consists of different modules and different user profiles. The application will have a dashboard that will consist of all the basic features in the form of tabs and this will help the user to get all the features easily accessible. There will be a login page for the user to login (admin or other salesperson). To manage the inventory of a company, we need a database which has all the data fields and is consistent. All the data will be entered into the database which will be connected to the front end and the data will be presented with the help of queries.

All the modules will have one common database and different tables with id being their primary key. There will be a products tab which will contain all the information of the products along with their price and images. The admin will also have an edit and delete feature which can be used by the admin to delete or edit the information anytime. The images will be uploaded to the server and only the path of the image will be stored in the database.

There will be a sales tab that will have list of products along with a button to sell them. There will be a pop-up that will provide with the facility of computing the profit and all the sales details will be stored in the sales database which will help in generating the sales report and this will be helpful in generating graphs for visualizing the data.

There will be a customers tab that will track all the information about the customers and this will help in maintaining customer relationship management, all the details of the customers will be stored in the database and all the data can be edited or deleted by the admin user.

There will be a Dues tab which will track all the account details of all the suppliers along with the date. All the pending dues and credit will be displayed in this tab and this will be useful in tracking all the account details of the supplier. All this details will be useful in keeping a track of all the records and finding them easily using the search tab in the application. The search tab will help the user to search anything on the portal and this will make it easily accessible and so the user can search anything easily. All

these tabs will have their own tables.

There will be sales report tab which will display all the sales information from and to a particular date and will also display a graph for the same

There will be a product share tab that will display a pie chart of all the products categorically and this will have a drill down feature that will help in categorically drilling down into different categories and can help the user in further categorically visualizing the data .

There will also be a Predict tab that will help the user in predicting the sales of any product depending on a particular date. The algorithm will predict the sales of a product and this will help in forecasting sales and storing products in advance. This tab will help in forecasting the sales and it will help the user.

1.3 PROJECT PROFILE

1.3.1 Project title

The title of the project is “**Inventory, Stock and Sales Web Application**”. It is a one stop portal for inventory, stock and sales management.

1.3.2 Scope of Project

There is large scope for this project. There are many emerging start-ups and many businesses are growing and all businesses need a basic inventory and stock system. But many available applications do not have all features bundled into one application. Normally other applications don't have all features into one package and so they have to use different applications for different features and they have to outsource some features.

This application provides one stop solution for all the inventory, stock and sales requirement of any company .It also provides graphs and the prediction module inside it and so all the problems can be addressed in one application and this will provide all the functions and features at one place. The sales portal will also be embedded into this portal to keep track of all the sales and their dates. It will keep track of all sales along with their dates. The application also keeps track of all the sessions of login and logout and the application also provides the feature of storing data remotely on a database.

1.3.3 Project team

**Harsh Patel(12BCE057),
Nirma University,
Ahmedabad.**

1.3.4 Hardware/Software and Technologies Required

Software used:

- XAMPP Web Server
- PHP 5.3
- JavaScript
- Sublime Text
- Html and CSS
- High charts
- MySql
- PHP

Hardware Uses:

- Machine : Dell Inspiron 7520
- Microprocessor : Intel Core i5-3210M CPU (64 Bit)
- RAM : 4 GB
- Processing Speed : 2.50 GHz
- Operating System : Windows 7 Premium

CHAPTER 2

SYSTEM ANALYSIS

2.1 FEASIBILITY STUDIES

Feasibility study is most important phase of any project development. Before starting any project it should be analyzed thoroughly, whether to develop such kind of application is feasible or not in the current scenario. And to do this we did three different kind of analysis as operational feasibility, technical feasibility and economic feasibility.

2.1.1 Operational Feasibility

It is very important to decide whether with the available resource like number of members, is it possible to complete the project in the given time or not. The projects aims to provide one stop bundle for inventory, stock and sales management. Using his application any company or business can start their business really fast and at a good pace. This application will help business solve all their related problems. This application just needs one server which can also be a local computer and the application can be easily hosted on it.

So the application can be easily set up for any startup or business and this can be used easily as there are no large hardware requirements for it to function. so there will be no operational problems and all the database will be hosted on the server so it is operationally feasible.

2.1.2 Technical Feasibility

To develop this application, software that we require are Xampp server or any other hosting server, php modules, debugger browser, an IDE to write code like sublime text, a database hosting software and we also don't need internet connection if server is local, if server is remote then internet connection is required.

The user does not need any technical knowledge to use this application it is straight forward and user friendly. The dashboard and front page has icons and tiles that can help the user know all the features easily and he can easily know how to work on the application.

All the technologies used are compatible with all the current servers and current operating systems as well as open source systems so the application is technically feasible.

2.1.3 Financial and Economical Feasibility

As software requirements for our project are open source, so we don't need to pay anything for it. All the software are available over internet. For hosting the data one can use a private local server and a system with the bare minimum requirements and the application can configure itself on the local server.

If the server is remotely situated then you need internet connection to fetch the data but once it's cached there is no need of internet connection. The project uses highcharts which are freely available for use and also for the database one can use phpmyadmin database which is also available on the internet.

So the project is financially and economically feasible to develop in the stipulated time and it is economic.

2.2 FEATURES OF THE SYSTEM

2.2.1 Functional Features and Modules

- 1) **Dashboard:** This module will have all the features in the form of a dashboard. It will be a page that will have all the tabs in tiled format and all the tabs will be accessible through links. This will be the first page that will be displayed after a user log in.
- 2) **Products Module:** This module is will contain all the details of all the products. It will contain all the details of all the products in the stock along with their name, quantity, Image, price and id. All the details of all the products will be displayed in this module. All the data will be fetched from the database which will have the products details and the database used will be mysql. The module will also have a feature to search products based on keywords and there will be a feature to download the data into an excel format. All the details of products will editable and they can be deleted. The images will be stored on the server and the url will be in the database.
- 3) **Supplier Module:** This module will consist of all the details of all the suppliers that provide materials or are the suppliers to the company. This will help in tracking the suppliers depending on the goods. All the data will be stored in the back-end database and will be displayed in a table. All the supplier module will be editable and deleted by admin. The admin can also add new suppliers by the add supplier button.
- 4) **Customer Module:** This module will have all the details of all the customers and their contact details. Every time a new customer comes he gets added into the database so the user can keep track of the customers who purchase things, this helps in the sales portal. So customer relationship can be maintained and this can help the company gain profit and have a nice business. All the customers' data will be stored in the data base.
- 5) **Users Module:** This module stores different user profiles and based on that they have different access powers. We have an admin user profile which has all access to all features and tabs. The salesperson tab will not have access to the delete and edit features and other features that can affect the database he will have only some of the features for access. The users profile will be stored in the users' database.

- 6) **Dues Module:** The dues module will have information about all the account details and all the pending dues by the suppliers and all the balance remaining to be paid or all the credit that is there by the suppliers. This module will help the user to track the account section and this will help them to track all the accounts and will help in proper money management.
- 7) **Sessions Module:** This Module will track all the log in and log out sessions by the users and will also track the time of log in and log out and will also store the type of user using this application.
- 8) **Product Share Graph:** This module will generate a two level pie chart which will have a drill down feature and will show the product share based on category and different products in the stock. The pie chart generated will be a part of the module high charts.

The first level of the pie chart will have products based on their category and will have the categorization based on that.

The second level will get drilled down depending upon the different products inside the category.

- 9) **Sales Report:** This will generate a sales report between two dates. It will generate all the transactions between two dates and time periods. It will generate all the sales details with the profit , total revenue generated and all other details with the date to help analyze the data and all the information can be generated at a finger tip.
- 10) **Sales Graph :** This will generate a line chart and to help the user visually analyze the sales report and will generate a line chart that will keep track of all the sales along with the timeline. The line chart will be generated with the help of highstock library.
- 11) **Predict Module:** This module will predict the sales of any product based on the date entered. This module will help the user in forecasting sales and this will help in better understanding by the business. The algorithm used is linear regression and it will compute the best fitting lines between the date and quantity attributes.

The formula for a regression line is

$$Y' = bX + A$$

Above is the formula for linear regression

The slope (b) can be calculated as follows:

$$b = r \cdot s_Y / s_X$$

and the intercept (A) can be calculated as

$$A = M_Y - bM_X.$$

Where,

s = Standard Deviation

M = mean of the data

Based on the above equation a best fitting line can be generated which will plot a y-axis versus x-axis graph and based on the line generated it will forecast the sales of a product based on the date.

Non Functional Requirements:

- 1) **Security:** Each user has to keep their password secret so that nobody uses their ID. Moreover they should not reveal anything about their account details. This can prevent any manipulation to the database and help keep the system secure.
- 2) **Maintenance:** Always get the database into an excel format so that whenever the server is down the excel sheet can be imported. The export to excel feature is there in the application.
- 3) **Application Hosting:** This application can be hosted on a local private server or can also be hosted on a remote server which can be rented from different hosting sites.
- 4) **Responsibility:** All the data will remain confidential to the admin. Only he is able to use all the features of the system which include manipulating the database.
- 5) **Memory Requirement:** There is no huge memory requirement a space of 1 giga byte is enough, and more of it depends on the size of images used in products

2.3 CONTEXT DIAGRAM

2.3.1 Flow Diagram of Application

The below figure shows the flow diagram of admin side application and the action flow.

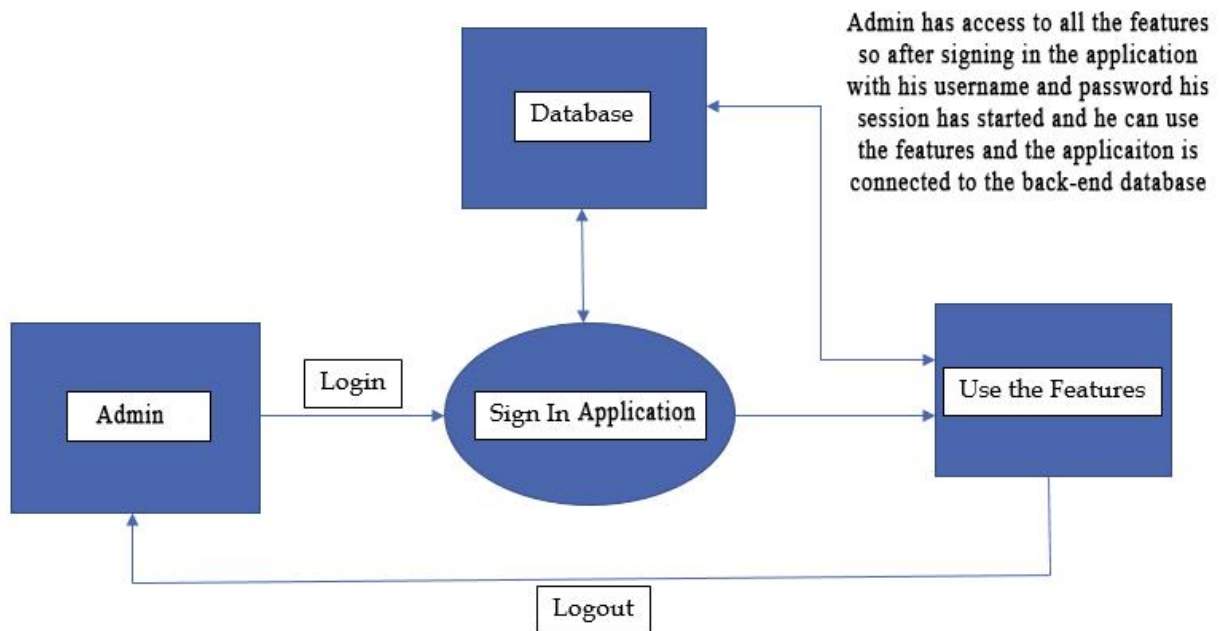


Figure 1: Flow diagram of Admin accessing the application

2.3.2 Sales Person Flow Diagram

The below figure shows the flow diagram of Sales Person

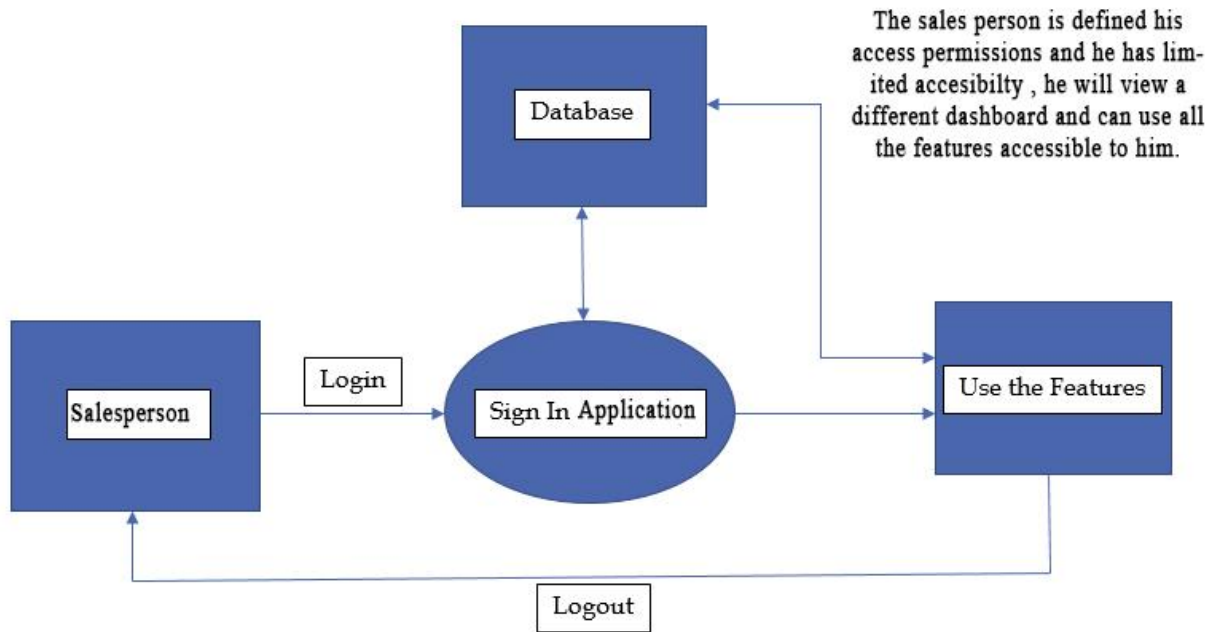


Figure 2: Flow diagram of Sales Person

2.4 FLOW CHART

2.4.1 Flow chart of application

Flow chart displaying the flow of the application with all the features and admin.

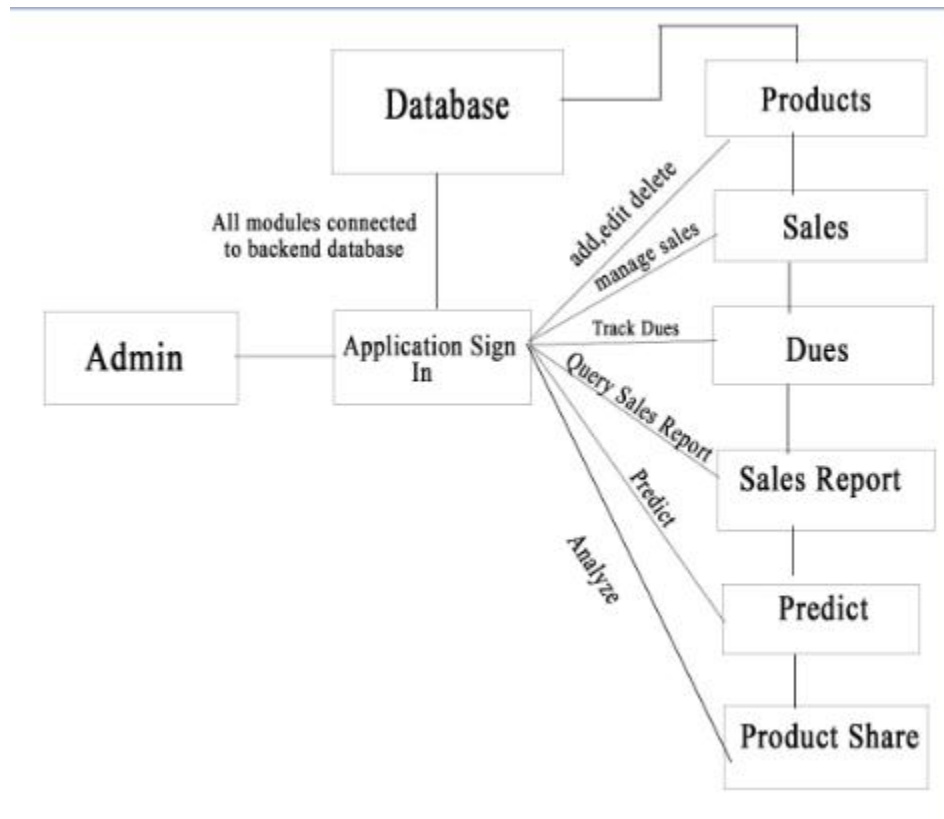


Figure 3: Flow Chart displaying all actions of the application

CHAPTER 3

SYSTEM DESIGN

3.1 DATABASE SCHEMA

3.1.1 Class Diagram for the application

The below diagram represent the database schema and class diagram for the application

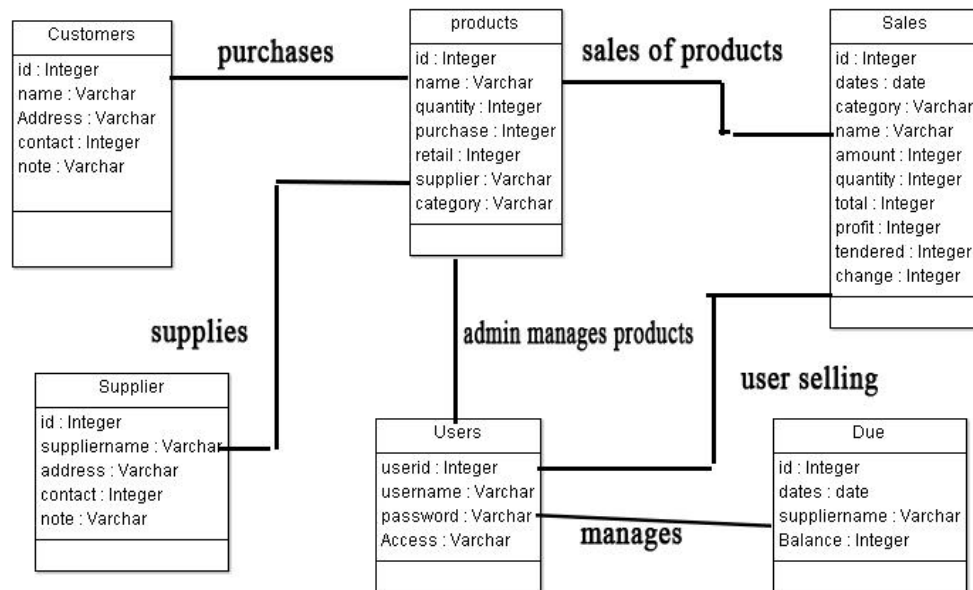


Figure 4: Schema and Class Diagram for the application

3.2 DATABASE DESIGN

3.2.1 Products Table

This table maintains the record of all the product details along with the image urls.

id	category	name	quantity	purchase	retail	supplier	img
26	Hardware	Gigabyte Motherboard	15	8000	10000	Harsh Technologies	photo/005.jpg
28	Software Licence	Norton Security	10	999	1200	Harsh Technologies	photo/002.jpg
29	External Accesories	Transcend USB Drive	4	250	275	Harsh Technologies	photo/007.jpg
30	Mobile devices	Transcend OTG	1	750	800	Harsh Technologies	photo/Desert.jpg
31	Hardware	Nvidia GPU	7	25000	28000	Harsh Technologies	photo/011.jpg

Figure 5: Database to maintain all the product data along with every details

#	Name	Type	Collation	Attributes	Null	Default	Extra
1	<u>id</u>	int(11)			No	None	AUTO_INCREMENT
2	<u>category</u>	varchar(100)	latin1_swedish_ci		No	None	
3	<u>name</u>	varchar(100)	latin1_swedish_ci		No	None	
4	<u>quantity</u>	int(11)			No	None	
5	<u>purchase</u>	int(11)			No	None	
6	<u>retail</u>	int(11)			No	None	
7	<u>supplier</u>	varchar(100)	latin1_swedish_ci		No	None	
8	<u>img</u>	varchar(25)	latin1_swedish_ci		Yes	NULL	

Figure 6 : Structure of the Products table

3.2.2 Sales Table

This table maintains the record of sales that happens on each date it stores all the transactions that has taken place at all dates.

id	dates	customers	category	name	amnt	quantity	total	profit	tendered	changed
4	2016-02-01	Harsh Patel	Software Licence	Norton Security	1200	3	3600	603	3700	100
5	2016-02-24	Harsh Patel	External Accesories	Transcend USB Drive	275	5	1375	125	1400	25
6	2016-02-25	Harsh Patel	Software Licence	Norton Security	1200	5	6000	1005	8000	2000
7	2016-02-25	Harsh Patel	Mobile devices	Transcend OTG	800	2	1600	100	1700	100
8	2016-02-26	Harsh Patel	External Accesories	Transcend USB Drive	275	1	275	25	300	25
9	2016-02-26	Harsh Patel	Mobile devices	Transcend OTG	800	2	1600	100	2000	400
10	2016-02-27	Harsh Patel	Mobile devices	Transcend OTG	800	3	2400	150	2500	100
11	2016-03-03	Harsh Patel	Hardware	Gigabyte Motherboard	10000	3	30000	6000	30000	0
12	2016-03-03	Harsh Patel	Software Licence	Norton Security	1200	2	2400	402	2500	100
13	2016-03-04	Harsh Patel	Hardware	Gigabyte Motherboard	10000	1	10000	2000	10000	0
14	2016-03-05	Harsh Patel	Hardware	Gigabyte Motherboard	10000	1	10000	2000	10000	0
15	2016-04-08	Harsh Patel	Hardware	Nvidia GPU	28000	1	28000	3000	30000	2000
16	2016-04-14	Harsh Patel	Hardware	Nvidia GPU	28000	2	56000	6000	60000	4000

Figure 7: Database to maintain Sales Report

Name	Type	Collation	Attributes	Null	Default	Extra
<u>id</u>	int(11)			No	None	AUTO_INCREMENT
dates	date			No	None	
customers	varchar(100)	latin1_swedish_ci		No	None	
category	varchar(100)	latin1_swedish_ci		No	None	
name	varchar(100)	latin1_swedish_ci		No	None	
amnt	int(11)			No	None	
quantity	int(11)			No	None	
total	int(11)			No	None	
profit	int(11)			No	None	
tendered	int(11)			No	None	
changed	int(11)			No	None	

Figure 8: Structure of Sales Table

3.2.3 Users Table

It stores all the user information for admin and any other profile you create

userid	username	password	access
1	admin	admin	Admin
2	salesperson	salesperson	Salesperson

Figure 9: Database to maintain details of admin

3.2.4 Supplier Table and Customer Table

This table maintains the record of suppliers who supply goods for the company or business.

id	suppliername	contactperson	address	contactno	note
18	Harsh Technologies	Harsh Patel	Ahmedabad	8866507519	-
19	abc suppliers	Yash	Science city,ahmedabad	1234567890	-

Figure 10: Database Table to maintain details of Suppliers

This table maintains the details and contact of all customers

id	name	contact	address	note
1	Harsh Patel	12345	Ahmedabad	-
3	XYZ	12345688	Mumbai	-

Figure 11: Database Table to maintain details of all customers

3.2.5 Dues and Predict Table

The Dues table holds all the balance and credit dues of the accounts.

id	dates	supplier	paid	balance
3	2016-04-05	Harsh Technologies	NULL	2500
5	2016-04-05	abc suppliers	NULL	4000
6	2016-04-05	abc suppliers	NULL	1234
7	2016-04-08	abc suppliers	NULL	6000

Figure 12: Dues Database Table

Predict Table

The predict Table holds the information of the products and their slopes based on the sales data to make a best fitting line for forecasting using linear regression.

dates	name	quantity	Slope
2016-02-01	Norton Security	3	-0.0025
2016-02-24	Transcend USB Drive	5	-2.0000
2016-02-25	Norton Security	5	-0.0025
2016-02-25	Transcend OTG	2	0.5000
2016-02-26	Transcend USB Drive	1	-2.0000
2016-02-26	Transcend OTG	2	0.5000
2016-02-27	Transcend OTG	3	0.5000
2016-03-03	Gigabyte Motherboard	3	-1.0000
2016-03-03	Norton Security	2	-0.0025
2016-03-04	Gigabyte Motherboard	1	-1.0000
2016-03-05	Gigabyte Motherboard	1	-1.0000
2016-04-08	Nvidia GPU	1	0.1667
2016-04-14	Nvidia GPU	2	0.1667

Figure 13: Slope of Products based on the quantity and Date sold

3.3 USE CASE DIAGRAM

3.3.1 Use Case Diagram of the Application

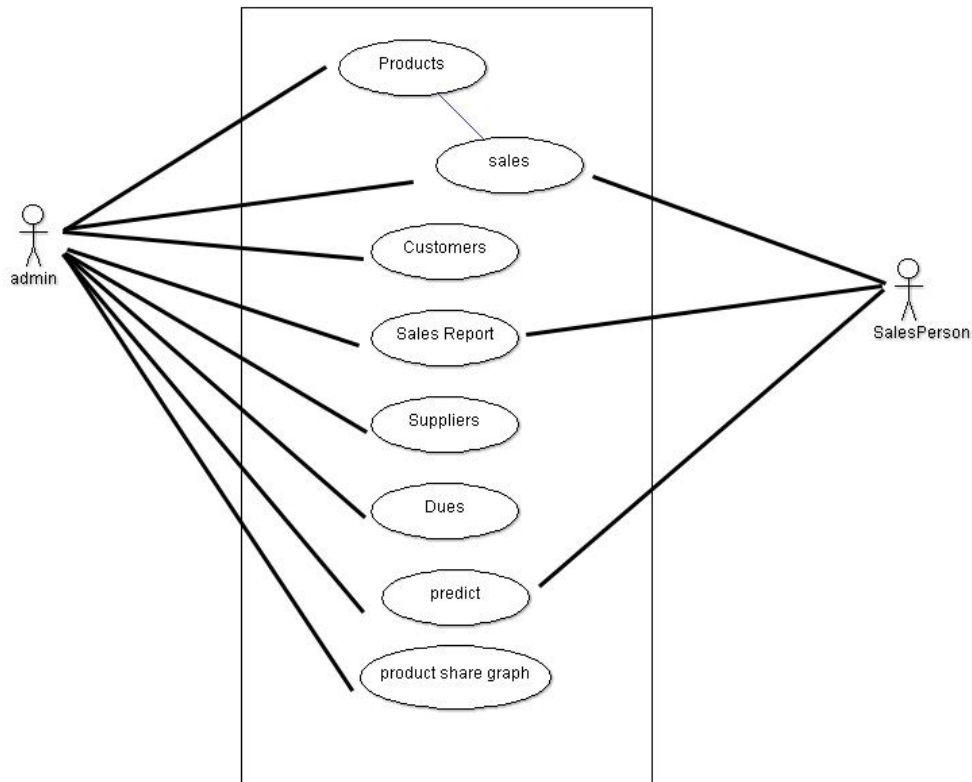


Figure 14: Use Case diagram of the application

3.6 SEQUENCE DIAGRAM

3.6.1 Sequence Diagram of the Application

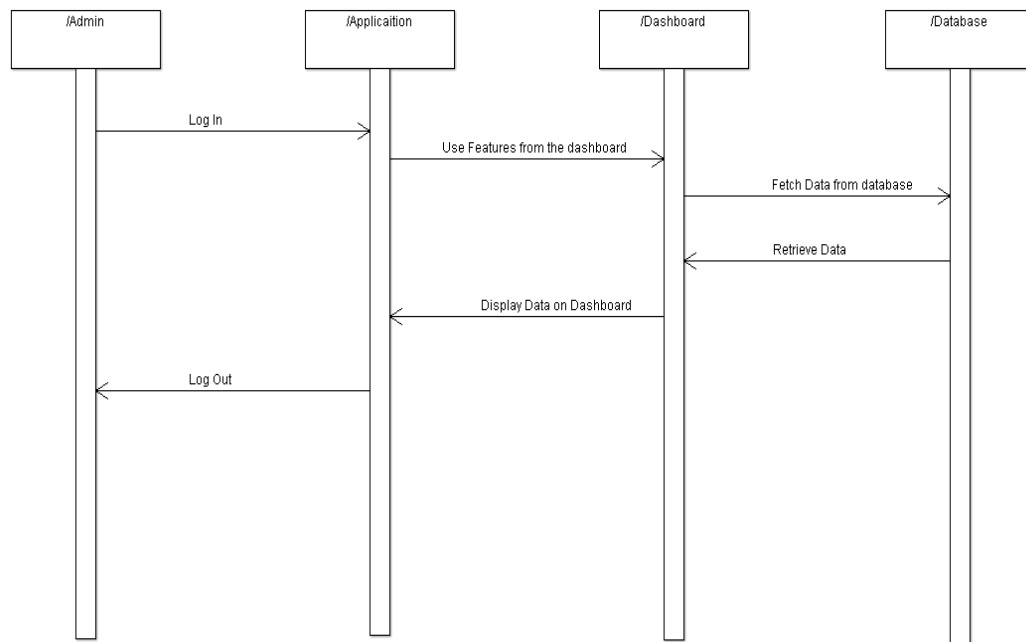


Figure 15: Sequence Diagram of the Application

CHAPTER 4

USER MANUAL

4.1 Login Page

This is the first page which shows the login screen. The user can login as an admin or as a salesperson. Different profiles have different access permissions. This is a page which has company name and logo. For a sample I have created my own page.



Figure 16: Login Page for admin and other users

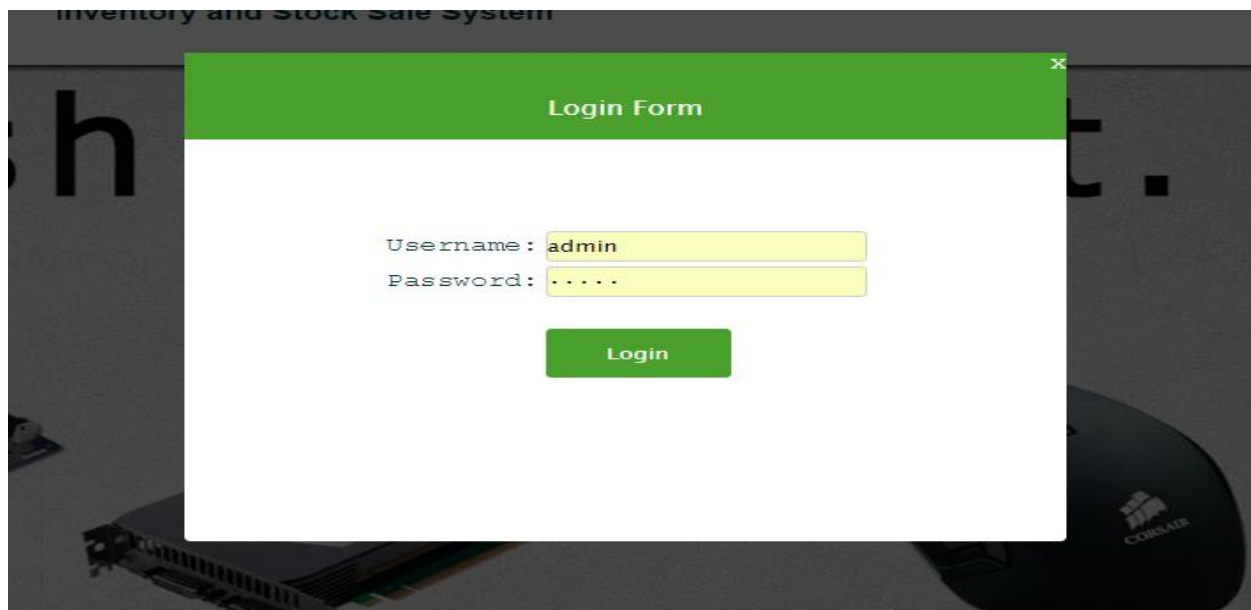


Figure 17: Login Pop-up Box

4.2 Dashboard

This is the dashboard page of the application, it will consist of all the features accessible to the user. It will be like an introduction page with all the features in the form of tiles or icons or tabs. The dashboard also shows the session date and time and also the person who is accessing the system (Admin or Salesperson).

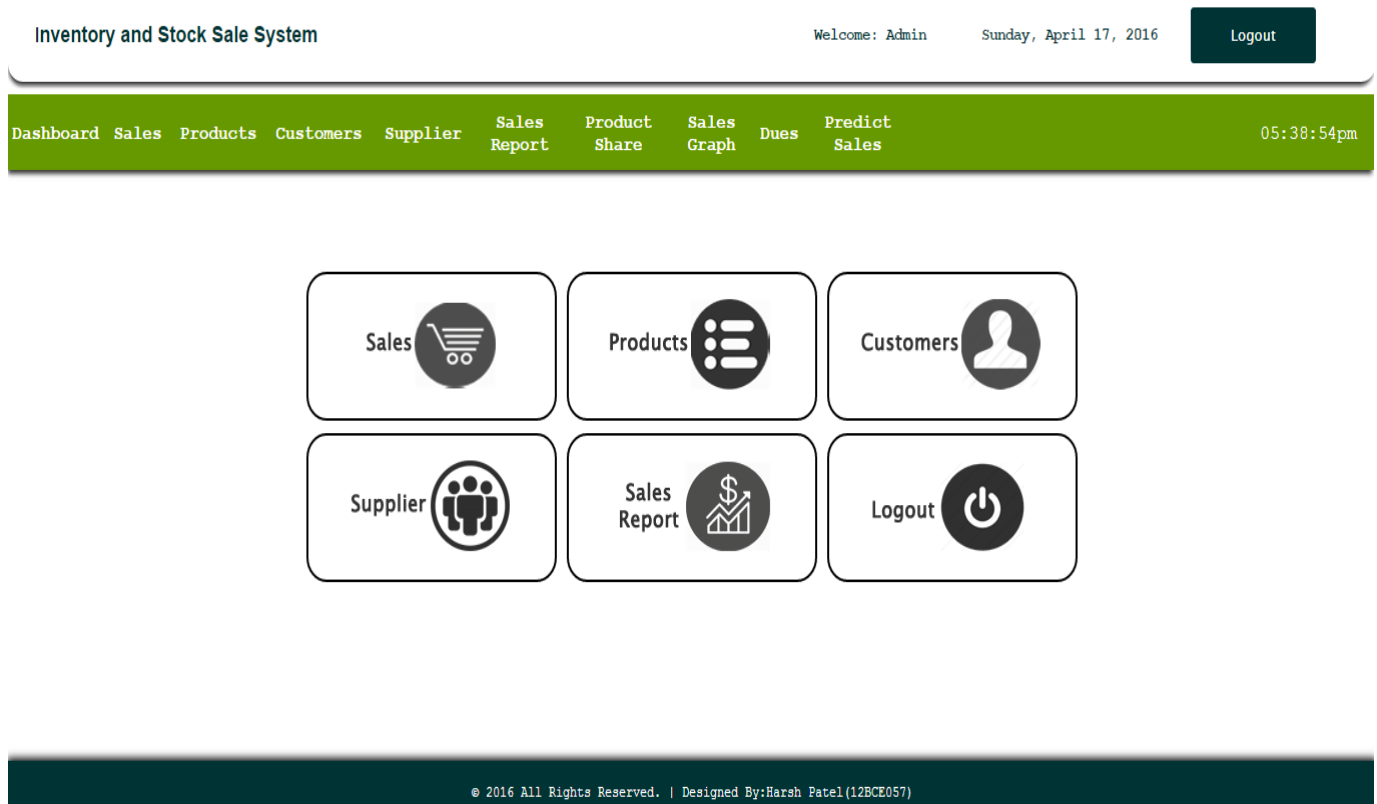


Figure 18: Dashboard which consists of all features

4.3 Products Tab

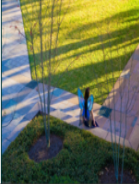

The products tab consists of all the details of all products along with their images. This tab will also have the search feature to search for any product. This tab will also have a button to download the data into an excel sheet. The admin can add, edit or delete products. I have used sample images to show the images. The images are stored on the server side of the application.

Inventory and Stock Sale System

Welcome: Admin Sunday, April 17, 2016 Logout

Dashboard Sales Products Customers Supplier Sales Report Product Share Sales Graph Dues Predict Sales 05:46:18pm

Search + Add Products Export to Excel

Products Information Table							
Category	Name	Quantity Left	Purchase	Retail	Supplier	Image	Action
Hardware	Gigabyte Motherboard	15 pcs.	Rs. 8000	Rs. 10000	Harsh Technologies		Edit Delete
Software Licence	Norton Security	10 pcs.	Rs. 999	Rs. 1200	Harsh Technologies		Edit Delete

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Figure 19: The products tab with the all the features

Welcome: Admin

Add Item Form

Category: Hardware

Name: Name

Quantity: Quantity

Purchase Amnt: Purchase amnt

Retail: Retail

Supplier: Harsh Technologies

Image: Choose File No file chosen

Submit

Edit Item

Category: Hardware

Name: Gigabyte Motherboard

Quantity: 15

Purchase Amnt: 8000

Retail: 10000

Supplier: Harsh Technologies

Image: Choose File No file chosen

Update Cancel

Figure 20: Add and Edit Item Form

4.4 Customers and Suppliers Tab

The customers tab will have all the contact information of all customers and this will help in keeping track of all customers. The suppliers tab will help in keeping track of all suppliers who supply goods to the company or business.

Inventory and Stock Sale System

Welcome: AdminSunday, April 17, 2016Logout

DashboardSalesProductsCustomersSupplierSales ReportProduct ShareSales GraphDuesPredict Sales

06:00:04pm

Search customers...

Search

+ Add Customers

Export to Excel

Customer Information Table				
Name	Contact	Address	Note	Action
Harsh Patel	12345	Ahmedabad	-	Delete
XYZ	12345688	Mumbai	-	Delete

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Figure 21: Customers Tab

Inventory and Stock Sale System

Welcome: AdminSunday, April 17, 2016Logout

DashboardSalesProductsCustomersSupplierSales ReportProduct ShareSales GraphDuesPredict Sales

06:01:02pm

Search supplier...

Search

+ Add Supplier

Export to Excel

Supplier Information Table					
Supplier Name	Contact Person	Address	Contact No.	Note	Action
Harsh Technologies	Harsh Patel	Ahmedabad	8866507519	-	Edit Delete
abc suppliers	Yash	Science city,ahmedabad	1234567890	-	Edit Delete

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Figure22: Supplier Tab

4.5 Product Share Tab

This tab will generate a two level pie chart which will categorically display the product share of all the products in the stock. This helps in visualizing the inventory stock. On clicking the pies we can get one level down.

For example this pie chart is categorized based on different categories , so to know the product share of Hardware we can click on the hardware pie and it will drill down further onto another level.

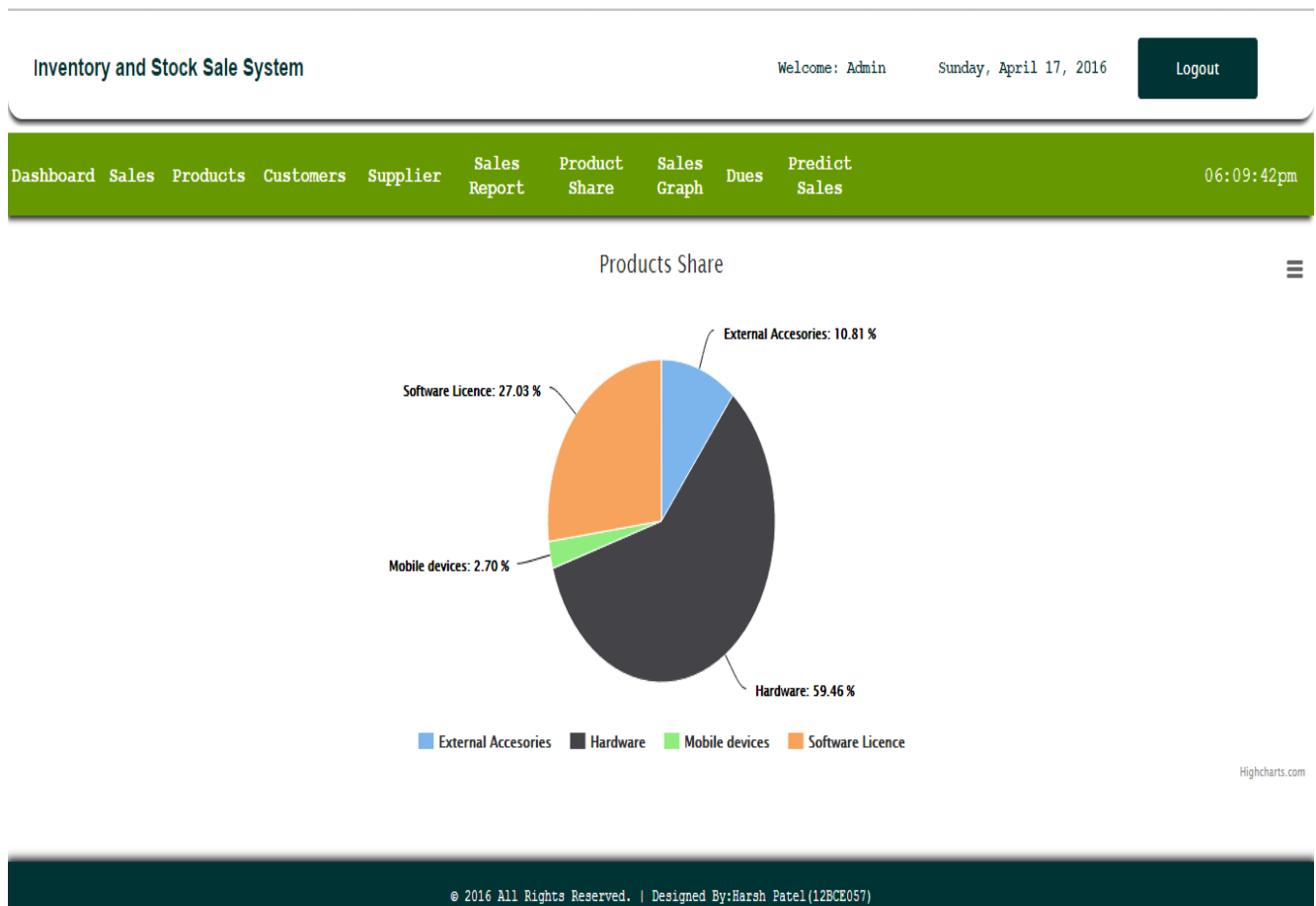


Figure 23: Level 1 pie chart which differentiates all the information based on category

As we click on the hardware pie it drills down to the level 2 of the pie chart and displays the pie chart of all the products in the hardware category .

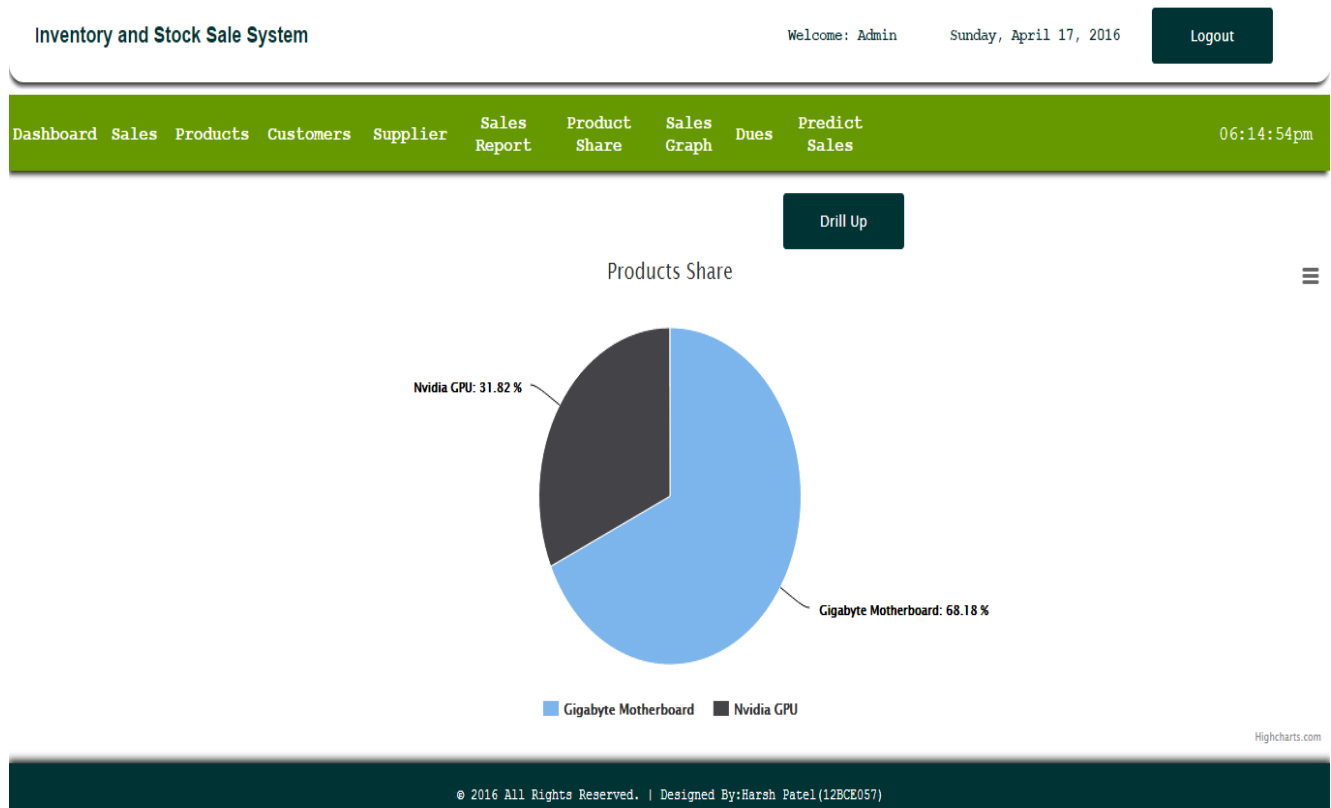


Figure 24: Level 2 Pie chart which shows all products in hardware category.

4.6 Sales Report Tab

This tab generates a sales report between any two dates. All the sales transactions , quantity , profits are displayed in a table with all the computations.

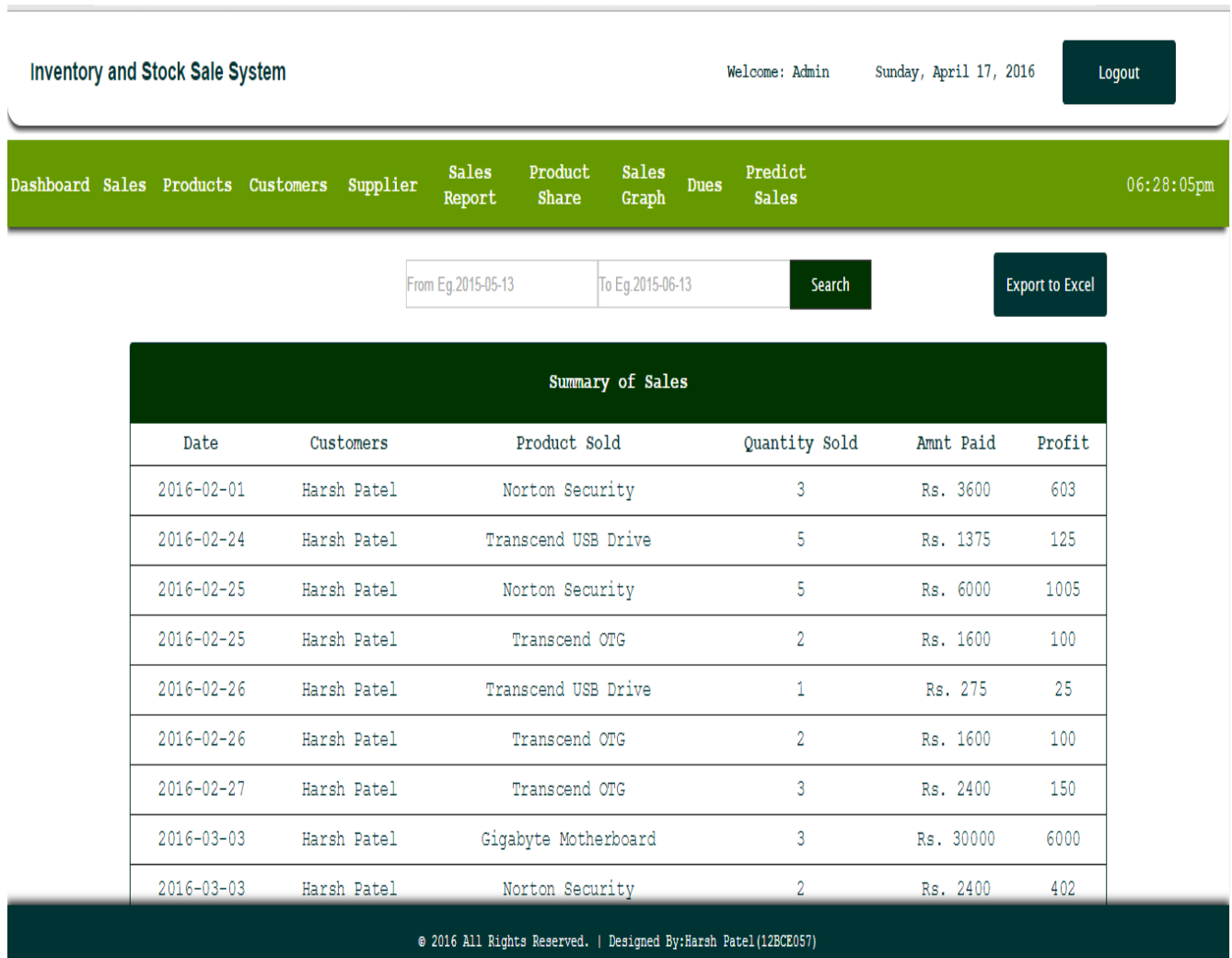


Figure 25: Sales Report Generated

4.7 Dues Tab

This tab consists of all the account details and balance remaining to be paid by the suppliers. This helps in keeping track of account details.

Inventory and Stock Sale System

Welcome: Admin Sunday, April 17, 2016 Logout

DashboardSalesProductsCustomersSupplierSales ReportProduct ShareSales GraphDuesPredict Sales06:31:50pm

Search + Add Dues Export to Excel

Dues Information Table			
Date	Supplier	Balance	Action
2016-04-05	Harsh Technologies	2500	<button>Delete</button>
2016-04-05	abc suppliers	4000	<button>Delete</button>
2016-04-05	abc suppliers	1234	<button>Delete</button>
2016-04-08	abc suppliers	6000	<button>Delete</button>

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Figure 26: Dues Tab that keeps track of all dues

4.8 Sales Report Graph

The sales report graph helps in visualizing the sales report in graph form.

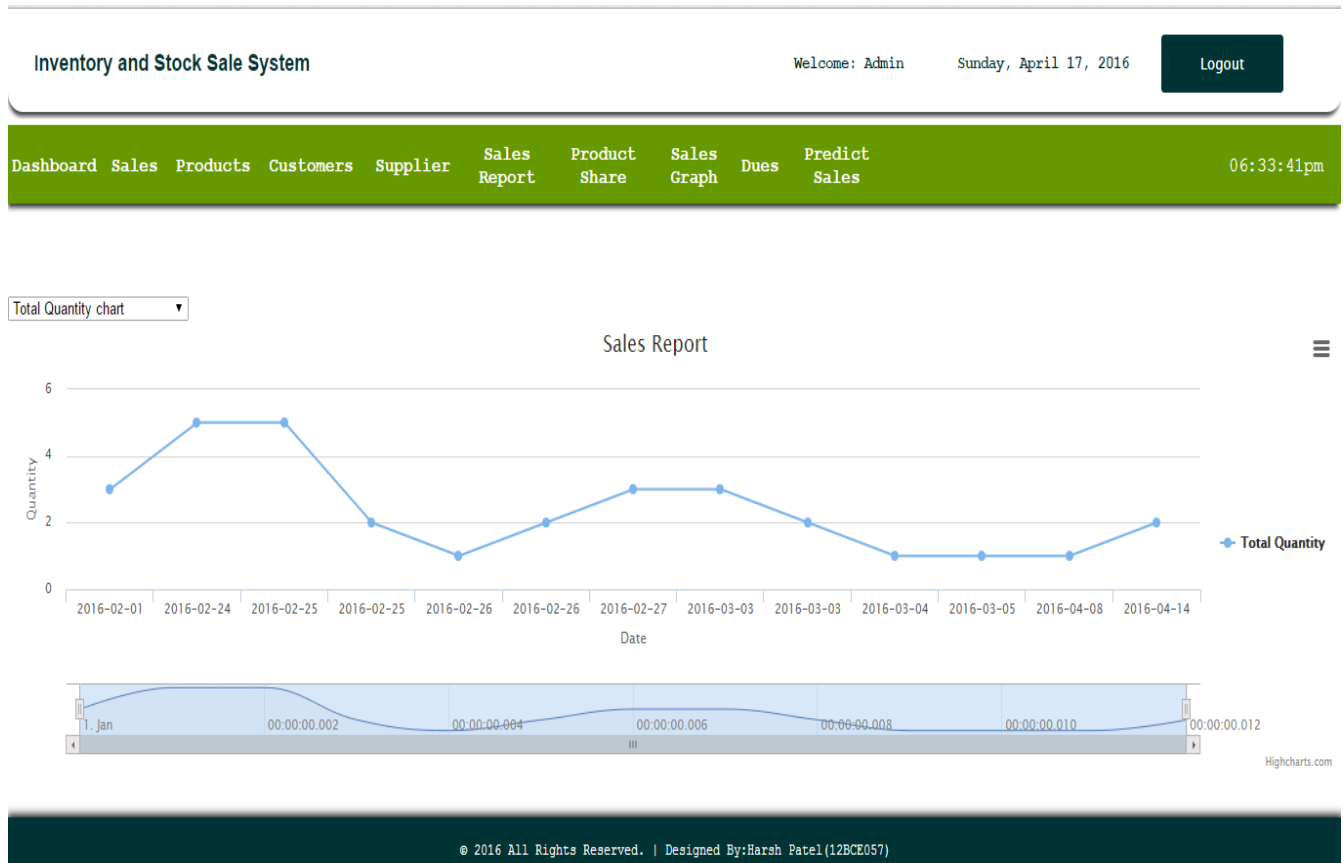


Figure 27: Sales Report Graph

4.9 Predict Tab

This tab allows us to enter the date we want to predict the sales for we can enter any date and based on the linear regression algorithm it will forecast the sales of all the products based on that date.

Inventory and Stock Sale System

Welcome: Admin Tuesday, April 19, 2016 Logout

Dashboard Sales Products Customers Supplier Sales Report Product Share Sales Graph Dues 02:23:04am

Predict

Dues Information Table	
Product Name	Sales Predicted
Gigabyte Motherboard	4
Norton Security	4
Nvidia GPU	3
Transcend OTG	8
Transcend USB Drive	5

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Figure 28: Predict Tab

CHAPTER 5

TESTING

This is one of the most important phases of any project development. I did different types of testing while developing our application in different phases.

Module Testing: In this testing I tested the application after completion of each module and always tested for bugs and rectified in the module itself. Any bug in the module is rectified there itself and all modules are tested individually and this helps in preventing bugs further when we integrate the module and this helps in developing a bug free application.

Integrated Testing: Module testing is performed after development of every module. But in this type of testing, I integrated two or three modules and tested them for bugs. For example connecting the products tab with the database and checking if the data is fetched properly and all the data are aligned in the proper columns.

Integrated Testing helps in packaging different modules together and finding bugs and rectifying them and this helps in making the application bug free.

System Testing: In System Testing all the modules are integrated together and the application is tested completely by me looking for bugs and rectifying them. All the bugs are checked after connecting the front end to the back end and the bugs are checked and rectified.

Beta Testing: The application is made available for testing to other developers and the client is given a beta copy and based on their feedback and suggestions updates and changes are made.

Bugs discovered during this stage are noted down, suggestions are noted down and depending on that different suggestions and bugs updates and changes are made in the system.

Following are the different validations made while testing so that appropriate data is filled into the application.

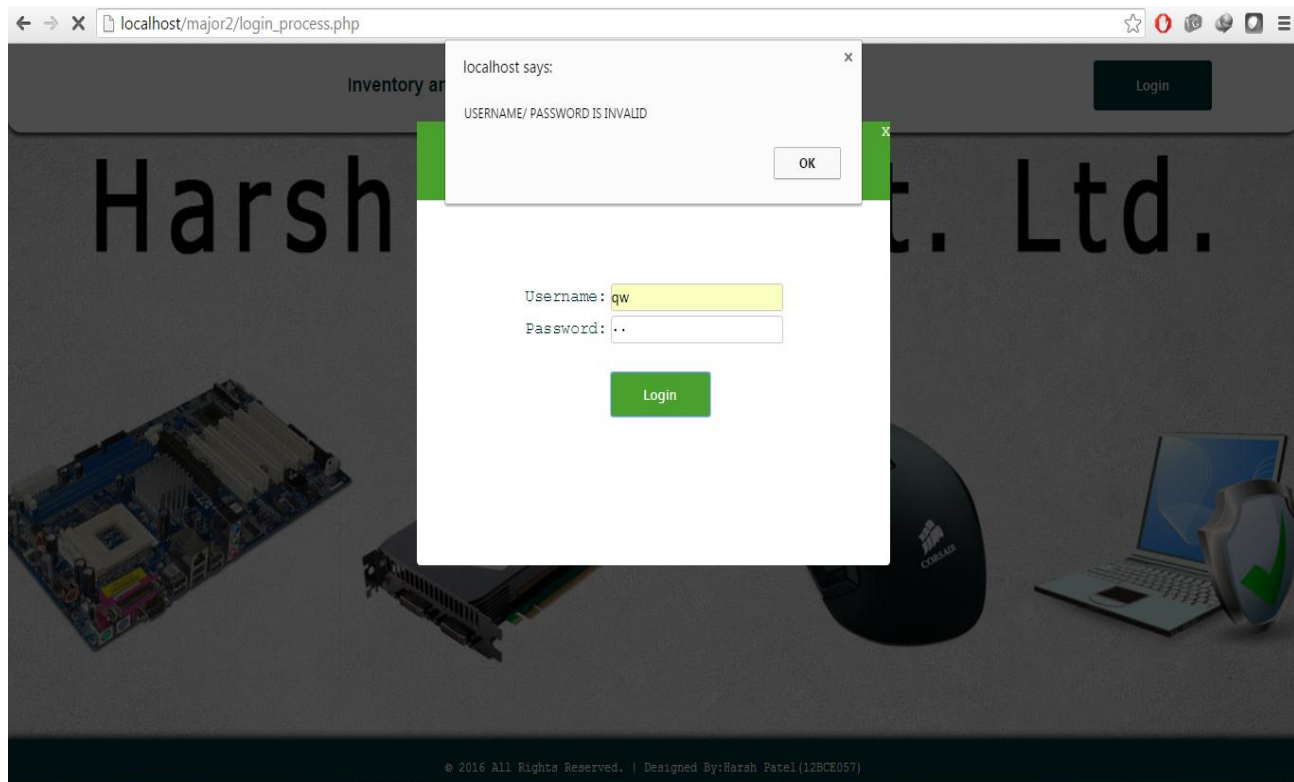


Figure 29: Login Page checking username and password

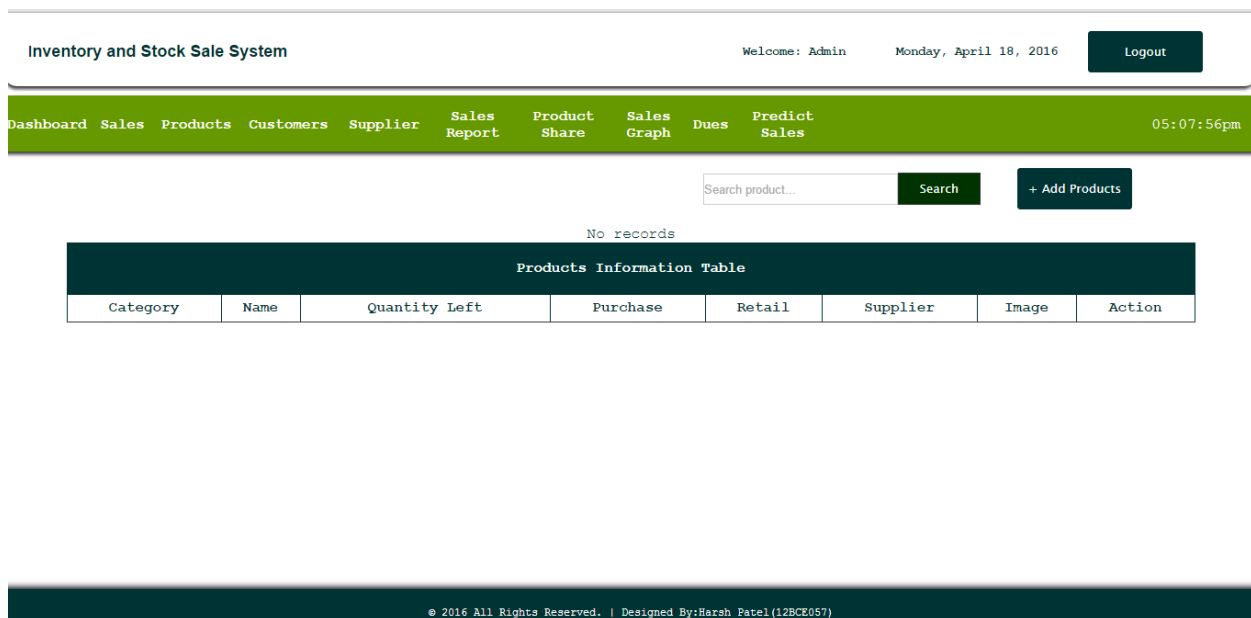


Figure 30: Checking the search bar button and searching a product which does not exist. And it displays no records.

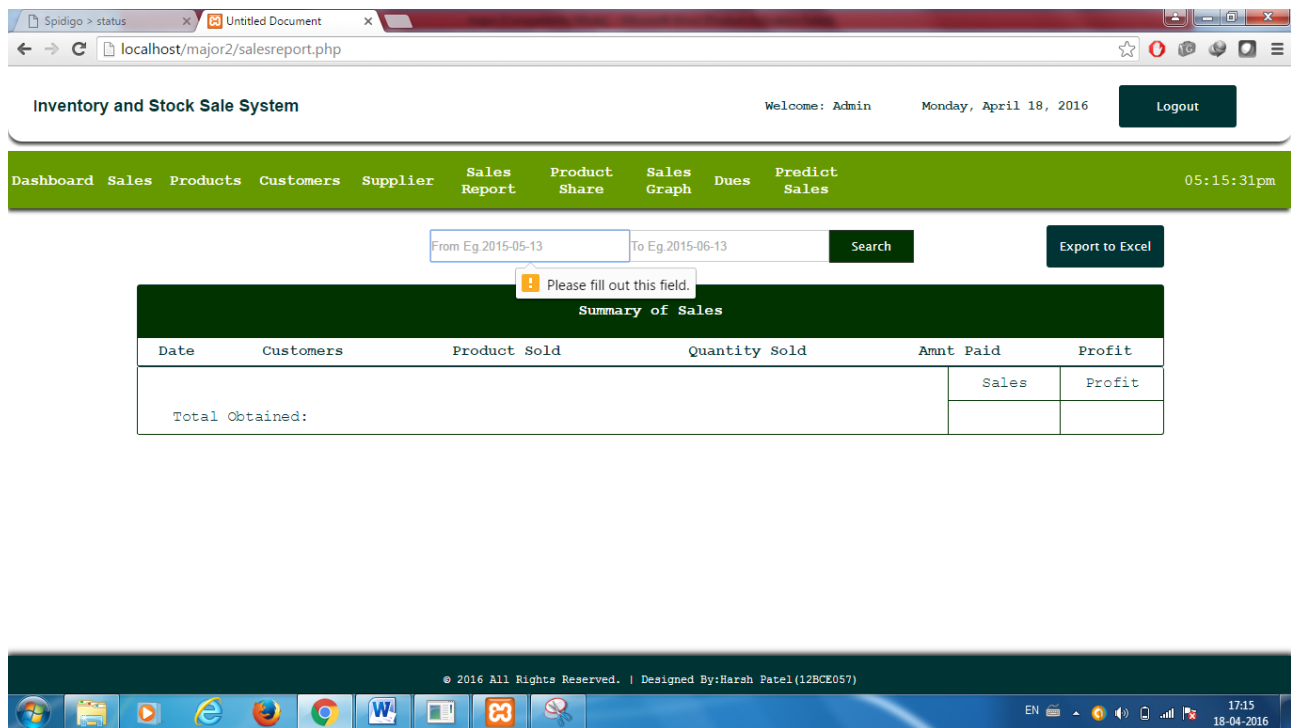


Figure 31: Sales Report needs the date field to get the sales analysis and so the field asks for the same.

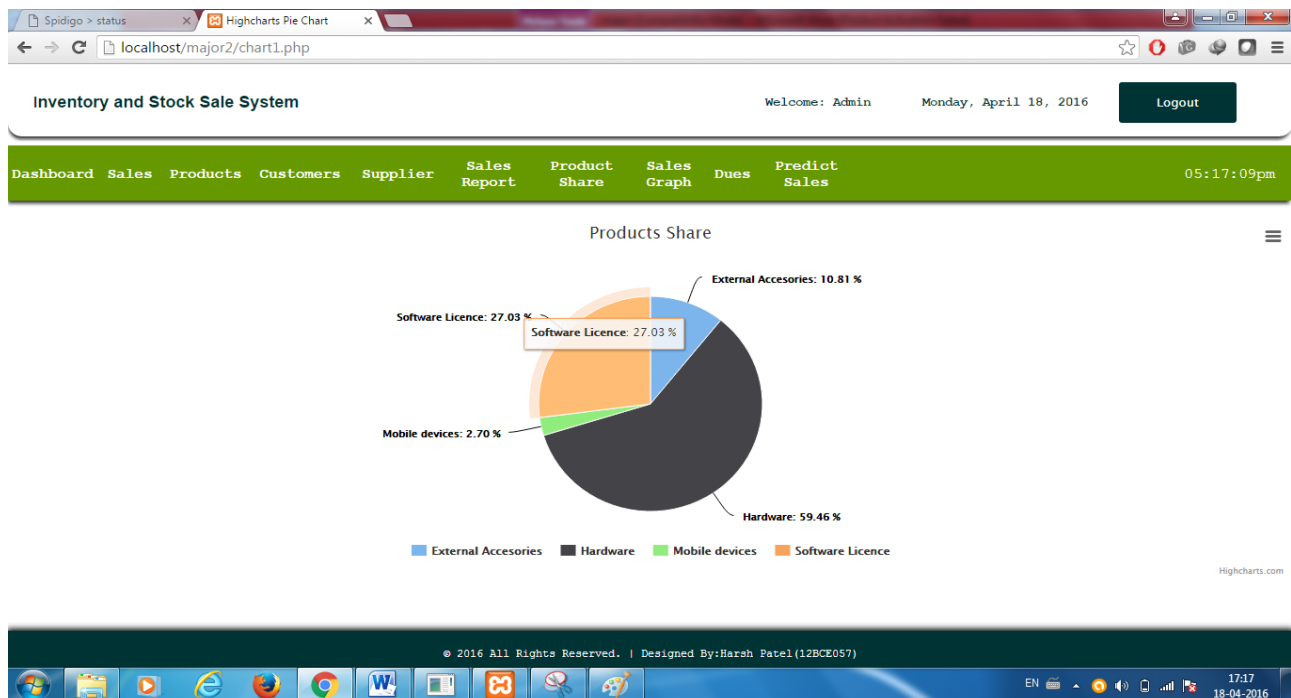


Figure 32: Checking the percentages of the generated pie charts with the tooltip

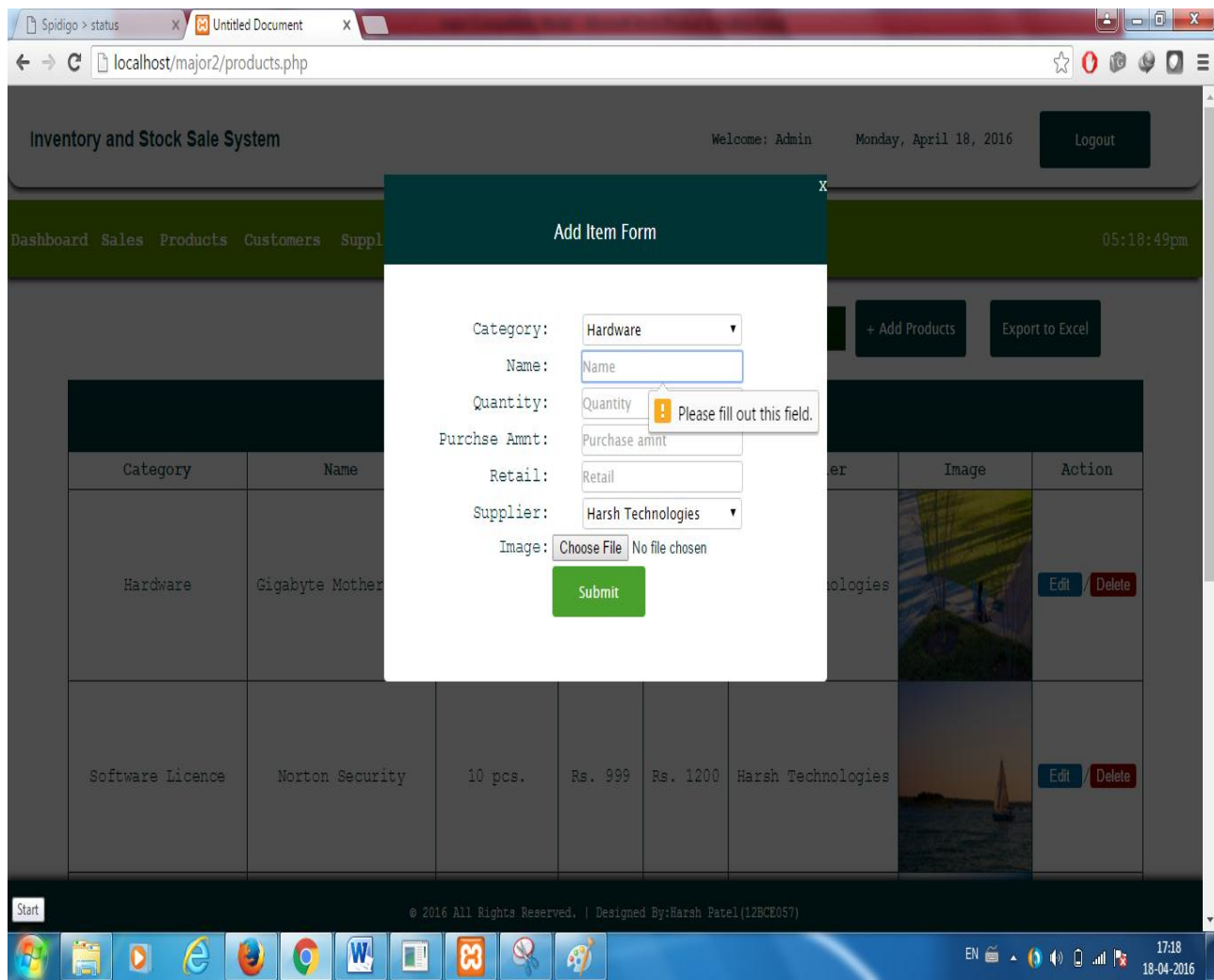


Figure 33: Product Name is necessary in the add product form so this condition is validated.

CHAPTER 6

FUTURE SCOPE

The application which I have developed helps any business or startup to get a bundled solution for inventory, stock and sales management. As we know every industry has an inventory and as technology is progressing every company needs a solution to this.

This is an age of technology and visual technology, So the data presentation in graphs can help the user to analyze large amount of data easily and do computations accordingly

Companies have many suppliers and it is difficult to keep track of them and their dues which are remaining to be paid, all these features need to be present in one bundled application

As data mining is growing companies need the feature of predicting their sales , so they could store in their inventory in advance and keep sufficient stock .Different algorithms can be developed for accurate prediction and this can be used to predict the sales of a particular product and this can help in increasing the profit of the company and this will help the company grow fast and enable good progress.

Hence this is the future scope of the project.

CHAPTER 7

CONCLUSION

The main aim of the project was to provide one stop solution to any company or business that deals with inventory, stock and sales .As we know there are many start-ups nowadays so the main aim was to build an application that will have all the features bundled into one place, so the users don't have to use different applications for doing one task this will help them to have just one applications and all their problems solved.

The project also allows the users to visually see the data in the form of graphs and charts ,this will enable more visual representation as it is attractive and help the company professionally and enables good progress of the country.

Working on this project has helped me learn new technologies and has also helped me learn about the new trends existing in the current technology world, this helped me in learning new technology and new languages.

CHAPTER 8

APPENDIX

8.1 TOOLS USED

Some of the tools which we have used are:

1. Xampp Server
2. Sublime Text
3. PHP 5.3
4. Java Script
5. HTML
6. CSS
7. MySQL
8. High Charts
9. Line Charts
10. PhpMyAdmin
11. MS Word
12. MS Excel
13. MS PowerPoint
14. Adobe Photoshop
15. FTP Server
16. FireBug
17. PostMan
18. Local Server

CHAPTER 9

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6. <http://www.csstutorial.net>
7. <http://www.html.net/css>
8. <http://www.tutorialspoint.com/css>