

Accounts and Inventory Management System (Web Based)

A project developed by using PHP, MySql, CSS, XML, Java Script and some light graphics for the course of CS-645 of M.Sc in Computer Science.

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Project Descriptions

In business, maintaining inventory amount aligned with accounts is most important. In manual or discrete systems, it is quite hard and makes overall business management complex. Also daily sales and purchase transactions does not have instant reflections in business's financial statement if it is maintained manually or discretely. Therefore it is harder to generate revenue and profit reports.

Integrated Accounts and Inventory Management System is a type of software that combines major financial accounting functions into one application. Replacing several discrete systems or programs eliminates the need for separate books or records for ordering, costing and other management accounting purposes. Integrating these features helps standardize procedures for recording transactions and disseminating financial information and interconnects the reporting activities of companies' different functional areas such as point of sale terminals, offices and stock facilities.

Integrated Accounts and Inventory Management System furnish information regarding the cost of each product, job or operation as well as comprehensive information about the profit or loss of an entire organization. These systems help management achieve and maintain control over operations by enabling companies to determine marginal costs, variances and abnormal losses or gains. This system can also handle additional processes such as inventory purchases, assembly and sales and sending information like statements and invoices to customers or vendors. Additionally, this systems can be used to estimate, report and monitor a company's job costs as well as track and convert employee time into payroll.

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Chapter 1: Introduction

1.1 Introduction

Integrated accounting makes accounting as easy as processing orders. Rather than manually re-keying information from inventory management into a standalone accounting system, which costs time and errors, an integrated accounting system automatically receives a constant flow of data from inventory management. Since the information flows automatically, the financials are always up to date. And even sophisticated accounting operations like job costing and commission calculation are performed automatically just by processing the orders.

Inventory management is an important aspect of any successful business. It is the process of overseeing and controlling the flow of inventory units a business uses in the production or manufacture of goods for sale or distribution. Inventories are usually made up of a combination of goods, raw materials and finished products, and effective management of these items is essential to ensure optimal stock levels and to maximize the earning potential of the company. It also allows a business to prevent or mitigate any inventory-associated losses. Inventory management software is used by businesses for various reasons: it can track the costs of inventory throughout the manufacture and sales process, tell businesses when to replenish stock, and allow them to track profits. It can also be used to forecast inventory levels and prices, as well as expected product demand. An inventory management system monitors all aspects of a company's inventory as items move through the production and sales process. The process involves tracking customer orders, shipping, costs, stock and sales. There are some critical elements every system needs in order to function efficiently. This includes well-organized location names, easy to read and unambiguous location labels, unique item numbers, units of measure, a good starting count, good policies and – most importantly – people who know and can follow those policies.

Effective accounts and inventory management is important as not only is inventory one of the most valuable assets to a business; there is a direct link between inventory levels and company profits. Inventory represents an investment that is tied up until either the item is sold, or it is used

in the production of another item that is sold. Businesses are reliant on having items in stock; otherwise customers will simply go to a competitor who can provide what they want.

1.2 Characteristics of Integrated Accounts and Inventory Management System

Integrated Accounts and Inventory Management System is made up of several key components working together to create a cohesive system for many organizations. These features include:

Contacts

All customer, vendors, employees, branches and projects used are treated as contacts but can be identified separately using different flags.

Double Entry Accounting

Functions include Purchase Orders, Sales Orders, Invoicing, Journal Entries, Customer Payments, Vendor Payment and more.

Asset tracking

When a product is in a warehouse or store, it can be tracked via its barcode and/or other tracking criteria, such as serial number, lot number or revision number. Inventory management software often utilizes barcode, radio-frequency identification (RFID), and/or wireless tracking technology.

Reorder Point

Should inventory reach a specific threshold, a company's inventory management system can be programmed to tell managers to reorder that product. This helps companies avoid running out of products or tying up too much capital in inventory.

Service management

Companies that are primarily service-oriented rather than product-oriented can use inventory management software to track the cost of the materials they use to provide services, such as cleaning supplies. This way, they can attach prices to their services that reflect the total cost of performing them.

Product identification

Barcodes are often the means whereby data on products and orders are inputted into inventory management software. A barcode reader is used to read barcodes and look up information on the products they represent. Radio-frequency identification (RFID) tags and wireless methods of product identification are also growing in popularity.

Modern inventory software programs may use QR codes or NFC tags to identify inventory items and smartphones as scanners. This method provides an option for businesses to track inventory using barcode scanning without a need to purchase expensive scanning hardware.

1.3 Features of Proposed System

This Integrated Accounts and Inventory Management System offers core and non-core feature modules, all of which have the same user experience and are seamlessly interconnected.

Core modules include:

- Accounts receivable and accounts payable ledgers.
- Debt collection
- Bank reconciliation.
- General ledgers.
- Stock inventory.
- Invoicing/Billing and bookkeeping.
- Purchase Invoicing.

Non-core modules:

These are optional; examples include electronic payment processing, payroll and time sheet management, departmental accounting and support for multi-currency or value-added taxation.

1.4 Advantages of this System

Prevent stock outs and wastage

Optimising inventory stock helps maintain customer satisfaction and avoid wastage. Storage and handling costs are associated with every inventory item stored. So collecting excess inventory stock will lead to unsold items sitting on shelves, which is a cost in itself and even more so if items become damaged or obsolete. However, on the other hand, having a shortage of items will lead to missed sales opportunities and disappointed customers.

Having an integrated inventory management and accounting software solution can increase the accuracy of data analysis and provide valuable insights such as sales forecasts and cash flow. Solutions that have real-time visibility will benefit businesses to plan out more accurate levels of inventory stock required for demand.

Reduce labour expenses

A significant part of a business's expenditure is spent on labour costs. When integrating inventory management and accounting software the chances of unnecessary labour intensive manual feeding of components that relate to each other are reduced – saving time and money.

Compiling accurate financial reports

Every business needs to check inventory stock with accounting data to avoid discrepancies. Accuracy is important for key stakeholders and investors, not only accurate financial statements for tax purposes. If there are continual major discrepancies, then root causes should be investigated. Integrating the transactions of your inventory management system with the back-office accounting system will help to remove complications, mistakes and delays.

Enhanced automation

Integrating two of the most vital software of your business into one platform streamlines processes and with real-time solutions the data available increases automation in the business. The important decisions can be based on the output from the integrated software, uncovering potentially valuable insights for inventory management decisions and also allows for efficient and accurate financial reports that can be obtained effectively through the integration.

1.5 Motivation

Distribution of consumable products has been managed the same way for many years; however, market conditions are changing rapidly. Normally suppliers will send an account manager to their customer's physical location to write replenishment stock orders. This dated way of restocking inventory is expensive, inefficient, and provides little accountability. We can solve this issue also by our project. And we can also reduce data losses to make profit high.

1.6 Objectives

General efficiency:

- To increase efficiency and services to the customers through better application of technology in daily operation.
- For increasing the efficiency of the system we used object oriented programming method.
- To be able to stand out from competitors in the accounts and inventory category.

Specific objectives:

- To manage product with its indexing number of each
- To ensure profit more
- Provides a Real-Time View of All Transactions
- Helps in Calculating Accurate Job Costings and Commissions
- Increases the Reliability of Data Entry
- Increases Productivity at Work
- Speeds up Decision Making

1.7 Goals of the Project

The main goals of this system are to sell different types of products to the customers using a specific index for each product. The web based system ensures role based users. Admin can keep track of all operation with the panel. Manager can manage the outlets. Sales person can handle sales related operation and also some input related operation. Journal entries and book-keeping are made by users with proper roles. All these financial activities are recorded using a single software system. Inventory and back-office system integration is real-time, flexible, transparent to users, reconcilable and scalable

1.8 Methodology of the Project

The system development method used was RAD and FIFO method. For analysing and designing system approach used was Object Oriented Analysis and Design (OOAD) and the modelling language used was UML the three stages in RAD are Requirements Planning Phase, User Design Phase and Implementation Phase.

FIFO method:

First-In, First-Out (FIFO) is one of the methods commonly used to estimate the value of inventory on hand at the end of an accounting period and the cost of goods sold during the period. This method assumes that inventory purchased or manufactured first is sold first and newer inventory remains unsold. Thus cost of older inventory is assigned to cost of goods sold and that of newer inventory is assigned to ending inventory. The actual flow of inventory may not exactly match the first-in, first-out pattern.

RAD method:

Rapid application development is a form of agile software development methodology. Unlike Waterfall methods, RAD emphasizes working software and user feedback over strict planning and requirements recording. In other words, RAD is less talk, more action.

1.9 Technology Stack

To build up this website I have used the main language of programming PHP.

- For making decision I have used FIFO (First In First Out) algorithm.
- For database system, I have used MariaDB.
- For designing the view in both front-end and back-end, I have used HTML, CSS.
- Programming languages: PHP
- Database system: MariaDB
- Markup languages: UML, HTML, CSS, XML

1.10 Limitations

Without proper maintaining and proper input of data .The system may provide an automatic serial number for each incoming and outgoing goods recording, recording of the quality of goods, cooperation contracts, demand reports of goods and procurement letters in order to avoid redundancy of data and loss of evidence reporting records.

Chapter 2: System Analysis

Development of web based systems requires analysis of the process to be digitized in order to enable a correct system, a system that functions as required and to assist the potential users of the system understand the general functionality of the system. The analysis specifies the system's objectives and constraints to which designers have to comply. The purpose of doing analysis is to transform the system's major inputs into structured specification. This has mainly two requirement section- Admin section and User section.

2.1 Requirement Analysis

- Admin needs to login to the system to operate the system. Admin has an individual or unique login ID, password and a user level. Through this ID and password admin can login into the system.
- Admin privileged users can create other users.
- There are specific privileges.
- Multiple privileges can be grouped together to form a Role.
- Roles or individual Privilege(s) can be assigned to a User.
- Admin can have full access to all modules, e.g. (Add, Delete, Update and View).
- Admin can delete user from user panel.
- Admin can have access in the user and product details.
- Users can look for a product from a selected category.
- User can add a product to the site with full details of that product.
- Users can process sales order, sales invoice, sales return & customer credit memo.
- Users can process purchase order, purchase invoice, purchase return & vendor credit memo.
- Users can post General Journal Entry
- Users can post Debit, Credit and Contra Vouchers.
- Users can Reconcile Bank Accounts.
- Users can Process Customer Receipt, Customer Deposit and Customer Refund.
- Users can Process Vendor Payment, Vendor Deposit and Vendor Refund.

- Users can create new products, Transfer products and Make adjustment of Products.
- Admin can create new Store.
- Admin can access Master Configurations.
- Admin can generate new fiscal year, update fiscal year changes, change current accounting period.

2.2 Use Case Diagram

Use Case Diagram of Sales Module

Use case diagram of Sales Module is given in the following figure 2.1

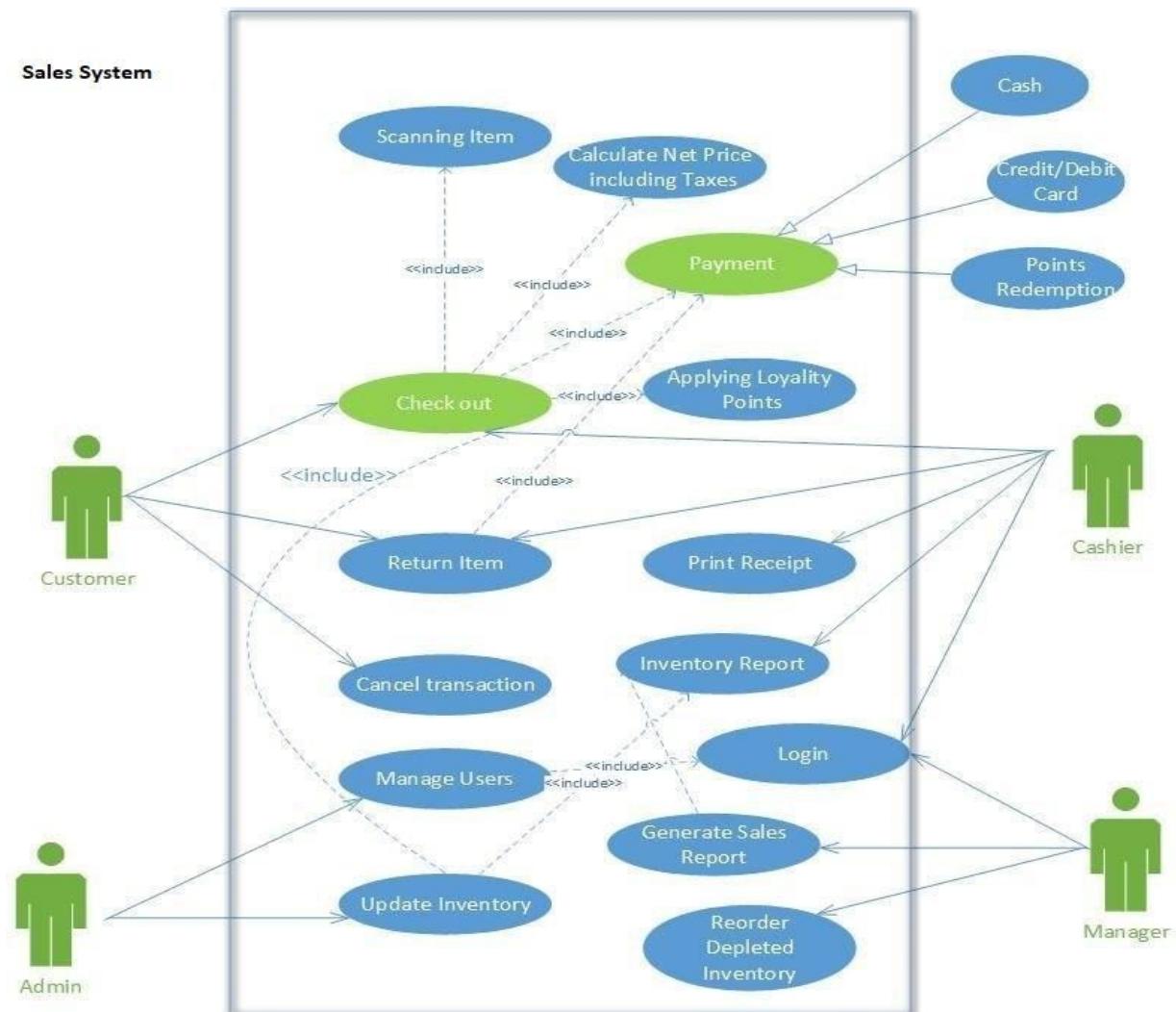


Figure 2. 1: Use case diagram of Sales Module

Use Case: Check out -Textual Description

Use Case Name	Check out
Summary	Customer finishes purchasing items and make payment
Actors	Store Customer and Cashier
Preconditions	Customer queue up to reach POS terminal and cashier is available
Description	<ol style="list-style-type: none"> 1. Customer arrives at POS terminal with all items to be purchased 2. Cashier login and starts new sale 3. Cashier scans the items to be purchased using bar code scanner 4. System retrieves item specifications from catalogue and records sale line item, and presents description, price, quantity and running total. Cashier repeat until last item is scanned. 5. System calculates total price with taxes and display to customer 6. Cashier asks the mode of payment 7. Customer selects mode and make payment, and system handles the payment. 8. System records completed sale and sends sale information to the external Inventory system for stock update. 9. System presents the receipt. 10. Customer leaves with receipt and all goods purchased.
Alternatives	<ol style="list-style-type: none"> 1. Customer cancels the transaction 2. Cashier suspends the sale 3. Cashier logs out. 5. Customer chooses to pay by cash but don't have enough cash
Post Conditions	Payment is approved. Sale is recorded and saved in the system. Receipt is printed and inventory is updated.

Use Case: Payment – Textual Description

Use Case Name	Payment
Summary	Customer chooses the mode of payment
Actors	Store Customer
Preconditions	Cashier scanned all the items and total is available on display screen
Description	<ol style="list-style-type: none"> 1. Cashier asks for the mode of payment 2. Customer chooses the mode of payment either debit/credit, cash or reward/gift card. 3. Cashier selects the method on POS software. 4. Customer make the payment 5. Payment approved message and receipt is generated.
Alternatives	<ol style="list-style-type: none"> 1. Customer chooses to pay by any combination of three Payment methods. 2. If customer chooses to pay by debit/ credit but enters the wrong pin. 3. If customer selects card/debit payment and tap the card but tap is not applicable. 4. If customer chooses to pay by cash but don't have sufficient Amount. 5. If customer chooses to pay by gift or reward card but the Balance is not enough. 6. If customer enters the wrong pin three times, the card will be blocked. 7. If the total sale amount is above \$100, the tap on card will not work.
Post Conditions	Payment is approved.

2.3 Activity Diagram

Activity Diagram of Sales Module

Activity diagram of Sales Module is given in the following figure 2.2

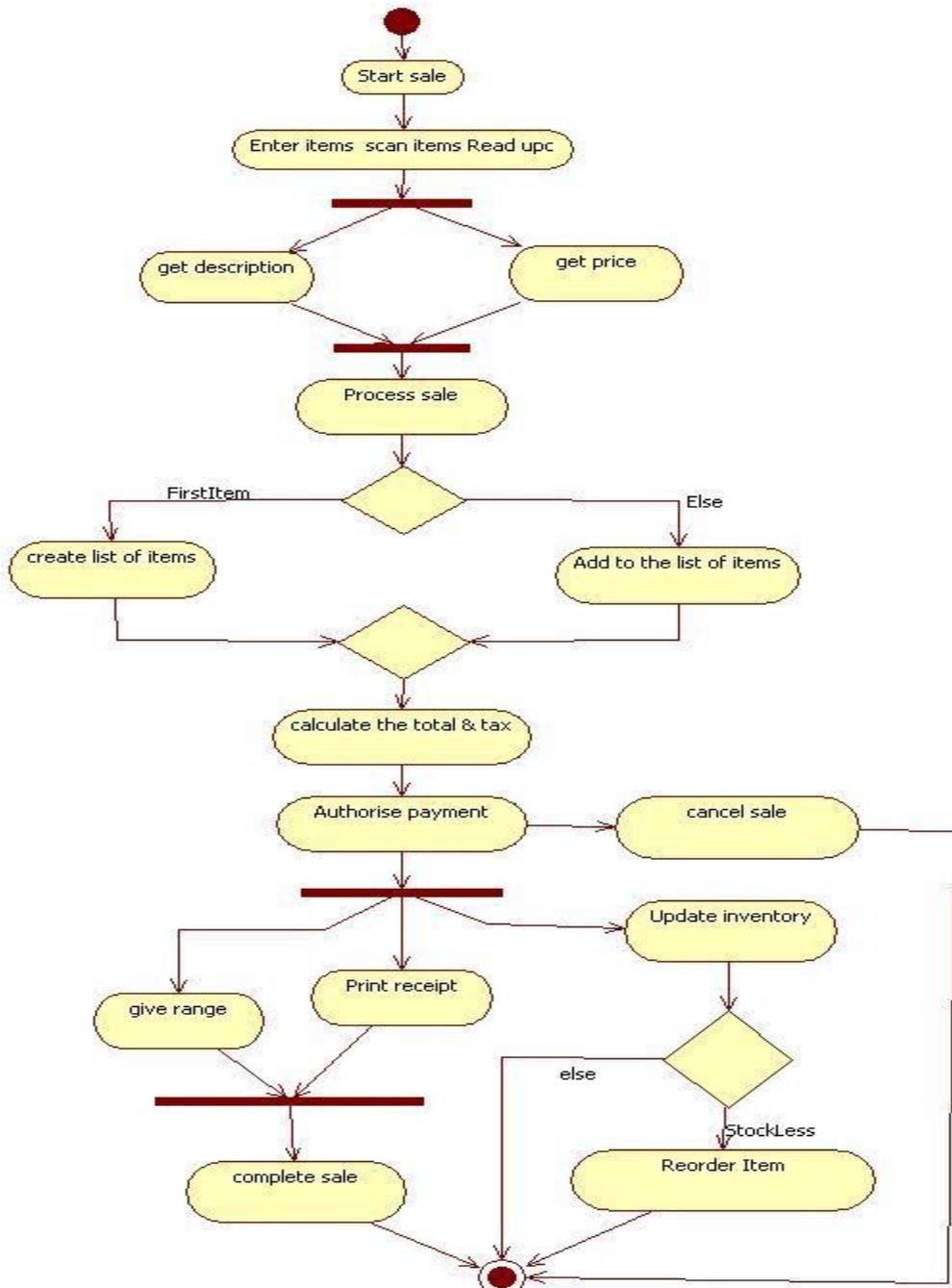


Figure 2. 2: Activity diagram Of Sales Module

2.4 Class Diagram

Class Diagram for Sales Module

Class diagram of Sales Module is given in the following figure 2.3

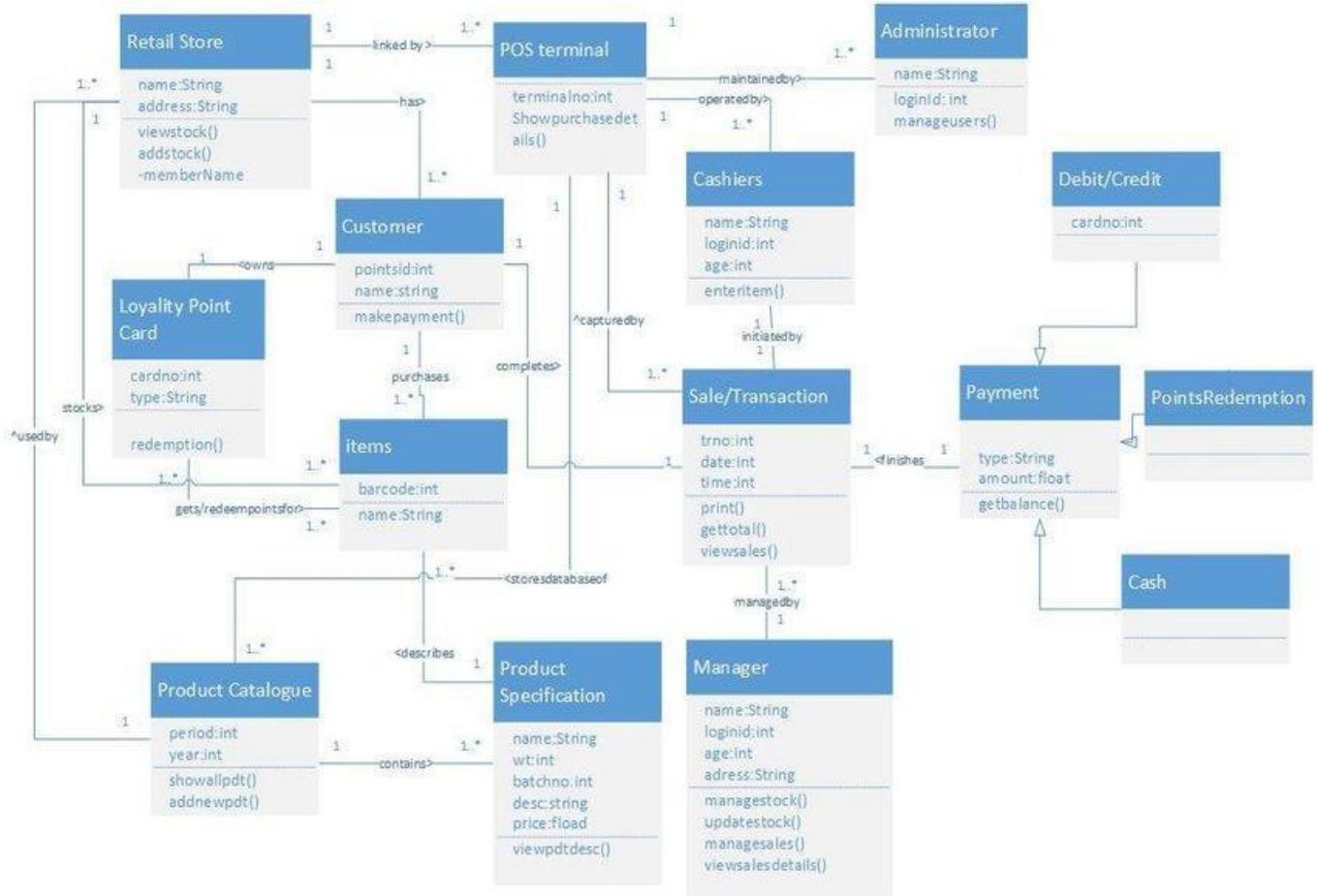


Figure 2. 3: Class diagram for Sales Module

2.6 Software Requirements

For installing the system, we mainly required the following software, installed on the hosting system.

2.6.1 Web Server

- Apache (XAMPP Stack v 3.2.3)

2.6.2 Database Language:

- MySQL

2.6.3 Server Side Language

- PHP

2.6.4 Design

HTML, CSS, XML, JS and Bootstrap library.

2.7 Software Platform

In this platform the tools are used fully open sources. For designing this project –

- HTML, CSS, XML, JS and Bootstrap library are used.
- Apache web server is used as web server.
- PHP is used for database connecting codes.
- MySQL is used as database server.

2.7.1 HTML

HTML (Hypertext Mark-up Language) is the set of mark-up symbols or codes inserted in a file intended for display on a World Wide Web browser page. The mark-up tells the Web browser how to display a Web page's words and images for the user. Each individual mark-up code is referred to as an element (but many people also refer to it as a tag). Some elements come in pairs that indicate when some display effect is to begin and when it is to end.

2.7.2 CSS

A cascading style sheet (CSS) is a Web page derived from multiple sources with a defined order of precedence where the definitions of any style element conflict. The Cascading Style Sheet, level 1 recommendation from the World Wide Web Consortium, which is implemented in the latest versions of the Netscape and Microsoft Web browsers, specifies the possible style sheets or statements that may determine how a given element is presented in a Web page. CSS gives more control over the appearance of a Web page to the page creator than to the browser designer or the viewer. With CSS, the sources of style definition for a given document element are in this order of precedence.

2.7.3 XML

Extensible Markup Language (XML) is a markup language that defines a set of rules for encoding documents in a format that is both human-readable and machine-readable. XML is widely used in a Service-oriented architecture (SOA). Disparate systems communicate with each other by exchanging XML messages. The message exchange format is standardised as an XML schema (XSD). This is also referred to as the canonical schema. XML has come into common use for the interchange of data over the Internet.

2.7.4 JavaScript (JS)

JavaScript (JS) is a programming language that conforms to the ECMA Script specification. JavaScript is high-level, often just-in-time compiled, and multi-paradigm. It has curly-bracket syntax, dynamic typing, prototype-based object-orientation, and first-class functions.

Alongside HTML and CSS, JavaScript is one of the core technologies of the World Wide Web. JavaScript enables interactive web pages and is an essential part of web applications. The vast majority of websites use it for client-side page behaviour and all major web browsers have a dedicated JavaScript engine to execute it.

2.7.5 Bootstrap

Bootstrap is a free and open-source CSS framework directed at responsive, mobile-first front-end web development. It contains CSS- and (optionally) JavaScript-based design templates for typography, forms, buttons, navigation, and other interface components.

2.7.6 Apache Web Server (XAMPP)

Apache is a freely available Web server that is distributed under an open source license. Version 2.0 runs on most UNIX-based operating systems (such as LINUX, Digital UNIX, and AIX), on other UNIX/POSIX-derived systems (such as Rhapsody, BeOS, and BS2000/OSD), on amigos and on Windows 2000. According to a Net craft Web server survey 60% of all Web sites on the Internet are using Apache (62% including Apache derivatives), making Apache more widely used than all other Web servers combined. Apache is open-source software. The name Apache was chosen from respect for the Native American Indian tribe of Apache, well-known for their superior skills in warfare strategy and their inexhaustible endurance. It also makes a cute pun on a patchy web server a server made from a series of patches but this was not its origin. The group of developers who released this new software soon started to call themselves the Apache Group.

2.7.7 PHP

PHP is an alternative to Microsoft's Active Server Page (ASP) technology. As with ASP, the PHP script is embedded within a Web page along with its HTML. Before the page is sent to a user that has requested it, the Web server calls PHP to interpret and perform the operations called for in the PHP script. An HTML page that includes a PHP script is typically given a file name suffix of php .php3," or ".phtml". Like ASP, PHP can be thought of as dynamic HTML pages, since content will vary based on the results of interpreting the script.

2.7.8 Validation Phase

Software validation checks that the software product satisfies or fits the intended use (high-level checking), i.e., the software meets the user requirements, not as specification artefacts or as needs of

those who will operate the software only; but, as the needs of all the stakeholders (such as users, operators, administrators, managers, investors, etc.). There are two ways to perform software validation: internal and external. During internal software validation it is assumed that the goals of the stakeholders were correctly understood and that they were expressed in the requirement artefacts precise and comprehensively. If the software meets the requirement specification, it has been internally validated.

Chapter 3: Database Implementation

3.1 Introduction

Database design is the process of producing a detailed data model of a database. This logical data model contains all the needed logical and physical design choices and physical storage parameters needed to generate a design in a Data Definition Language, which can then be used to create a database. A fully attributed data model contains detailed attributes for each entity.

The term database design can be used to describe many different parts of the design of an overall database system. Principally, and most correctly, it can be thought of as the logical design of the base data structures used to store the data. In the relational model these are the tables and views. In an object database the entities and relationships map directly to object classes and named relationships. However, the term database design could also be used to apply to the overall process of designing, not just the base data structures, but also the forms and queries used as part of the overall database application within the database management system. The process of doing database design generally consists of a number of steps which will be carried out by the database designer. Usually, the designer must determine the relationships between the different data elements. Superimpose a logical structure upon the data on the basis of these relationships .In the following section a detailed database structure of the “Integrated Accounts and Inventory Management System” is elaborated with all the details.

3.2 Database Interface

3.2.1 User Information

Description: This table contains the users' information. Users are authenticated against these information. Users are assigned to stores and have roles.

admin_id *	is_role *	admin_name *	inactive *	display_name *	admin_email *	admin_pass *	account_id *	admin_store_id *	admin_prefs	admin_sec
4 0	Roman	0	Roman	roman3040@gmail.com	799557d6c850ee995d631f7102edde4b:65	0	0	0 a:7:{s:4:"role";s:1:"0";s:12:"def_store_id";s:1...	26:4,49:4	
5 0	zahid	0	Zahid Ahmed		04dc2feb88ce7ec1bbdd5f27fc7a:93	0	0	0 a:7:{s:4:"role";s:1:"0";s:12:"def_store_id";s:1...	26:2,49:2	
6 0	arif	0	arif	arifbd55@gmail.com	0ed034bfd587966f4ee151afe9c08f:99	0	0	0 a:7:{s:4:"role";s:1:"0";s:12:"def_store_id";s:1...	26:2,49:2	
8 0	ANIS	0	Anis	anisuzzaman998@gmail.com	6dec0332d5b719eb551761ae6d838c0:d0	0	0	0 a:7:{s:4:"role";s:1:"0";s:12:"def_store_id";s:1...	26:2,49:1	
9 0	Admin	0	Admin	admin@cloudcarebd.com	0fcc43fdf5822fa0edea6eca07ca7b0:e9	0	0	0 a:7:{s:4:"role";s:1:"0";s:12:"def_store_id";s:1...	26:4,49:4	
10 1	Administrator	0				0	0	0 a:6:{s:12:"def_store_id";s:1:"0";s:13:"def_ca...	26:4,49:4	
11 1	Manager	0				0	0	0 a:6:{s:12:"def_store_id";s:1:"0";s:13:"def_ca...	26:4,49:4	
12 1	Financial-Admin	0				0	0	0 a:6:{s:12:"def_store_id";s:1:"0";s:13:"def_ca...	26:0,49:0	
13 1	Sales	0				0	0	0 a:6:{s:12:"def_store_id";s:1:"0";s:13:"def_ca...	26:4,49:0	
14 0	Masuf	0	Masuf	masuf.nuruddin@gmail.com	1a0b1409570a983d0570c7985db7b9e4:4f	0	0	0 a:7:{s:4:"role";s:2:"11";s:12:"def_store_id";s:....	26:4,49:4	

Figure 3. 1: Users Information Table

3.2.2 Customer and Vendor Information

Description: This table will contain the Customer and Vendor information.

address_id *	ref_id *	type *	primary_name *	contact *	address1 *	address2 *	city_town *	state_province *	postal_code *	country_code *	telephone1	telephone2
16	16	cm	Toma Electric		Shop#95, Shundorbon Square	Fulbaria, Gulistan	Dhaka	Dhaka	1100	BGD	01731963305	209588181
17	17	cm	Shuruchi Electric		Chowrasta		Thakurgaon	Thakurgaon	5100	BGD	01712586241	
18	18	cm	A B Electronics		Tetulia Road		Thakurgaon	Thakurgaon	5100	BGD	017163696	
19	19	cm	Razzak Electronics		12, Merina Market (MA Khan Lane)		Bogra	Bogra	5800	BGD	01712685338	017159711
20	20	cm	Chanchal Electric		Alm Mansion, Thana Road		Bogra	Bogra	5800	BGD	01712128540	011972915
21	21	cm	Kakon Electronics		Star Manton, Shahebazar		Rajshahi	Rajshahi	6000	BGD	01817385282	
22	22	cm	Shaha Traders		Main Road		Naogaon	Naogaon	6500	BGD	01711842701	074162827
23	23	cm	Mitu Electric and Sanitary		Sadar Road,Teen Matha, Panchbibi		Joyporhat	Joyporhat	5910	BGD	01716764790	05717526
24	24	cm	New Gift Center		Titumir Bazar, C/A		Faridpur	Faridpur	7800	BGD	01718453976	016738836
25	25	cm	Response Electric		1,Haque Super Market, A Hamid Rd		Pabna	Pabna	6600	BGD	01711013612	073151409
26	26	cm	Al Jarif Electronics		Butterfly Goli, Al munsur Market		Pabna	Pabna	6600	BGD	01721591700	0119408885
27	27	cm	Alam Cycle Store		Ullalpara Bazar		Sirajgonj	Sirajgonj	6760	BGD	01740549493	
28	28	vm	Maa Trading		Mohammadpur		Dhaka	Dhaka	1207	BGD		
29	29	vm	Sheba Engineering		Hazaribag		Dhaka	Dhaka	1204	BGD		
30	30	vm	GREEN TRADE CORPORATION		Goran		Dhaka	Dhaka	1219	BGD		
31	31	vm	Gazi Fan Factory		Keraniganz		Dhaka	Dhaka	1310	BGD		
32	32	em	Taher Sarker		Dhaka		Dhaka	Dhaka	1217	BGD	01777758261	
33	33	cm	Hannan Watch & Radio House		Veramara		kustia	kulna	7040	BGD	01712-834909	
34	34	cm	Reliable Electronics		36, Rajoniganda Super Market	Cantonment, Dhaka	Dhaka	Dhaka	1206	BGD	01813-382737	

Figure 3. 2: Customers & Vendors Information Table

3.2.3 Products Information

Description: This table contains the products details information. This information will help to add new products and delete old products.

The screenshot shows a database viewer window for the 'pmscspcsproject.inventory' table. The table has 21 rows of data. The columns are: id, sku, inactive, inventory_type, inv_cat_id, description_short, description_purchase, description_sales, image_with_path, account_sales_income, account_inventory_wage, account_cost_of_sales, and item_taxable. The data includes various product names like 'Classic 56'', 'Special 56'', 'Standard 56'', etc., along with their descriptions and financial details.

Figure 3. 3: Products Information Table

3.2.4 Journal Main

Description: This table contains the orders summary information as well as General journal and voucher summary information.

The screenshot shows a database viewer window for the 'pmscspcsproject.journal_main' table. The table has 20 rows of data. The columns are: id, period, journal_id, post_date, store_id, description, closed, closed_date, printed, freight, discount, shipper_code, terms, sales_tax, and tax_auths. The data represents various journal entries with their descriptions, dates, and financial details.

Figure 3. 4: Journal Main Table

3.2.5 Journal item

Description: This table contains the orders details information as well as General journal and voucher details information.

	id*	ref_id*	item_cnt*	so_po_item_ref_id	gl_type*	reconciled*	sku	qty*	description	debit_amount	credit_amount	gl_account*	taxable*	full_price*	serialize*	serial
	1	1	1	{null}	ttl	0	UN-56	205	Unique 56"	258300	0	1200	0	1260	0	
	2	1	0	{null}	ttl	0	{null}	0	Purchase/Receive-Total	0	258300	2000	0	0	0	
	3	2	1	0	por	0	SMT-56	170	Smart 56"	187000	0	1200	0	1200	0	
	4	2	2	0	por	0	ECO-56	105	Eco 56"	115500	0	1200	0	1220	0	
	5	2	0	{null}	ttl	0	{null}	0	Purchase/Receive-Total	0	302500	2000	0	0	0	
	6	3	1	0	por	0	SMT-56	50	Smart 56"	55000	0	1200	0	1200	0	
	7	3	0	{null}	ttl	0	{null}	0	Purchase/Receive-Total	0	55000	2000	0	0	0	
	8	4	1	0	por	0	SMT-56	215	Smart 56"	236500	0	1200	0	1200	0	
	9	4	2	0	por	0	UN-56	47	Unique 56"	59220	0	1200	0	1260	0	
	10	4	0	{null}	ttl	0	{null}	0	Purchase/Receive-Total	0	295720	2000	0	0	0	
	11	5	1	0	por	0	SMT-56	75	Smart 56"	82500	0	1200	0	1200	0	
	12	5	0	{null}	ttl	0	{null}	0	Purchase/Receive-Total	0	82500	2000	0	0	0	
	13	6	1	0	por	0	SMT-56	233	Smart 56"	256300	0	1200	0	1200	0	
	14	6	0	{null}	ttl	0	{null}	0	Purchase/Receive-Total	0	256300	2000	0	0	0	
	15	7	1	0	por	0	SMT-56	100	Smart 56"	110000	0	1200	0	1200	0	
	16	7	0	{null}	ttl	0	{null}	0	Purchase/Receive-Total	0	110000	2000	0	0	0	
	17	8	1	0	por	0	SMT-56	318	Smart 56"	349800	0	1200	0	1200	0	
	18	8	0	{null}	ttl	0	{null}	0	Purchase/Receive-Total	0	349800	2000	0	0	0	
	19	9	1	0	por	0	SMT-56	150	Smart 56"	165000	0	1200	0	1200	0	
	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	

Figure 3. 5: Journal Item Table

3.2.6 Chart of Accounts

Description: This table contains the Chart of Accounts information.

	id*	description*	heading_only*	primary_acct_id	account_type*	account_inactive*
	1000	Petty Cash	0		0	0
	1005	Cash Collection	0		0	0
	1006	Cash Payment Account	0		0	0
	1020	Checking Account	1		0	0
	1021	Islami Bank	0		0	0
	1022	Pubali Bank	0		0	0
	1023	Dutch Bangla Bank	0		0	0
	1024	United Commercial Bank	0		0	0
	1025	Brac Bank	0		0	0
	1026	City Bank	0		0	0
	1027	Bank Asia	0		0	0
	1028	Jamuna Bank	0		0	0
	1029	IFIC Bank	0		0	0
	1030	Al Arafah Islami Bank	0		0	0
	1031	UTTARA Bank	0		0	0
	1032	Dhaka Bank	0		0	0
	1033	SKY Trade AL Arafah Islami Bank	0		0	0
	1034	NRB BANK	0		0	0
	1000	Taxation Clearing Account	n		n	n

Figure 3. 6: Chart of Accounts

Chapter 4: Design User Interface

4.1 User Interface

4.1.1 Login Page

Figure 4. 1: Login page

The screenshot shows a 'User Login' dialog box. It has two input fields: one for 'Admin' with a user icon and another for a password with a lock icon. Below the fields are 'LOGIN' and 'Resend Password' buttons.

Description: login page is used to authenticate users.

4.1.2 Home Page with Dashboard

The screenshot shows the 'Integrated Accounts & Inventory Management System' home page. The top navigation bar includes links for Home, Customers, Vendors, Inventory, Banking, General Ledger, Employees, Tools, Company, and Log Out. The main area features a dashboard with several sections:

- Today's Sales:** No Results Found!
- Open Purchase Orders:** No Results Found!
- Open Sales Orders:** No Results Found!
- Favorite Reports:**

 - Open Invoices:**

24598 - Orni Electric	14,750.00
24597 - Hasi Electric	12,500.00
24596 - Makia Electric	25,000.00
24595 - Uzzel Electric	12,500.00
24594 - SEMA Electric	25,000.00
24593 - SR Electric	12,500.00
24592 - New Dhaka Electric	31,250.00
24591 - Khandaker Advertising	2,500.00
24607 - SEMA Electric	13,500.00
24606 - S S ELECTRIC	27,000.00
 - Today's Audit Log:**

Admin-->User Login -> Admin-->	0.00
Admin-->User Logoff -> Admin-->	0.00
Admin-->User admin (Update)-->Masuf	0.00
Admin-->User admin (Add)-->Masuf	0.00
Admin-->Contacts-Update-Branchees-->WRHS1	0.00
Admin-->Contacts-Add-Branchees-->WRHS1	0.00
Admin-->User admin (Update)-->Sales	0.00
Admin-->User admin (Add)-->Financial-Admin	0.00
Admin-->User admin (Update)-->Manager	0.00
Admin-->User admin (Add)-->Manager	0.00
Admin-->User admin (Add)-->Administrator	0.00
Admin-->User Login -> Admin-->	0.00
 - My Financial Summary:**

Cash	16,666,223.00
Receivables	-5,476,551.98
Inventory	-268,784.00
Other Assets	60,000.00
Current Assets	10,980,887.02
Property & Equipment	11,700.00
Total Assets	10,992,587.02
Current Liabilities	2,344,932.00
Long Term Liabilities	0.00
Total Liabilities	2,344,932.00
Total Income	47,384,595.00
Cost of Sales	(40,807,149.00)
Gross Profit	6,577,446.00
Expenses	(1,331,196.00)
Net Income	5,246,250.00
Capital	7,965,255.02
Total Liabilities & Capital	10,310,187.02

Figure 4. 2: Home Page with Dashboard

Description: Home page acts as dashboard which contains dashlets.

4.2 General and Administrative Settings Module

4.2.1 General Settings

The screenshot shows the 'GENERAL SETTINGS' section of the system. At the top, there is a navigation bar with tabs: Modules, My Company, Configuration, Email Preferences, Currencies, Company Manager, Tools, Statistics, and php info. The 'My Company' tab is selected. Below the tabs, there are several input fields and dropdown menus for company information:

- My Company**:
 - Company ID: HQ
 - Company Name: Masters Research Project
 - AR Contact: [empty]
 - AP Contact: [empty]
 - Address: Jahangirnagar University, Savar, Dhaka, 1342, Bangladesh
 - Phone Number: 880-2-7791045-51
 - Fax Number: 880-2-7791052
 - Email Address: registrar@juniv.edu
- Note:** Please remember to update the company state or region.
- General Information:** Primary telephone number, Secondary telephone number, Company fax number, General company email address, Company website, and Federal tax ID number.

Figure 4. 3: General Setting page

Description: General Setting page contains different tabs for different types of settings.

4.2.2 Administrative Setting Page

The screenshot shows the 'ERP ADMINISTRATION' section of the system. At the top, there is a navigation bar with tabs: General, Customers, Vendors, Chart of Accounts, Sales Tax Authorities, Purchase Tax Authorities, Sales Tax Rates, Purchase Tax Rates, and Statistics. The 'General' tab is selected. Below the tabs, there are several configuration sections:

- Default GL Accounts**: A list of accounts for receivables, sales transactions, receipts, discounts, freight charges, cash receipts, and credit holding.
- Payment Terms**: Settings for customer credit limit, early payment discounts, and admin approval for orders.
- Account Aging**: Configuration for aging reports and warning periods.
- Preferences**: Options for calculating shipping charges, automatic ID assignment, and displaying customer status.

Figure 4. 4: Administrative Setting Page

Description: Administrative Setting Page contains different tabs for different types of administrative settings.

4.2.3 User Creation Page

The screenshot shows the 'USER INFORMATION - ADMIN' page. The 'General' section contains fields for Username (Admin), Password, Confirm Password, Display Name (Admin), Email (admin@cloudcarebd.com), and Selected Role (None). The 'Profile' section includes Default Store (HQ), Default Cash Account (1021 : Islami Bank), Restrict Entries to this Store? (unchecked), Default Receivables Account (1100 : Accounts Receivable), Restrict Posts to Current Period? (unchecked), and Default Payables Account (2000 : Accounts Payable). The 'Security Settings' section shows privilege levels for various modules. A table below illustrates the permissions assigned to the 'Administrator' role:

	Full	Edit	Add	Read Only	None
Customer Manager	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
CRM	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Project Manager	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Customer Price Sheets	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
New Sales Quo	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Sales Quote Manager	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
New Sales Order	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Sales Order Manager	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
New SalesInvoice	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Sales/Invoice Manager	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
New Customer Credit Memo	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Customer Credit Memo Manager	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
RMA	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Figure 4. 5: User Creation Page

Description: Users can be assigned roles or can be assigned individual privileges from different modules.

4.2.4 Role Creation Page

The screenshot shows the 'ROLE DETAIL INFORMATION - ADMINISTRATOR' page. The 'Profile' section contains fields for Role Title (Administrator), Inactive (unchecked), Default Store (HQ), Default Cash Account (1021 : Islami Bank), Restrict Entries to this Store? (unchecked), Default Receivables Account (1100 : Accounts Receivable), Restrict Posts to Current Period? (unchecked), and Default Payables Account (2000 : Accounts Payable). The 'Security Settings' section shows privilege levels for various modules. A table below illustrates the permissions assigned to the 'Administrator' role:

	Full	Edit	Add	Read Only	None
Customer Manager	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
CRM	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Project Manager	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Customer Price Sheets	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
New Sales Quo	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Sales Quote Manager	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
New Sales Order	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Sales Order Manager	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
New SalesInvoice	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Sales/Invoice Manager	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
New Customer Credit Memo	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Customer Credit Memo Manager	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
RMA	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Figure 4. 6: Edit Account

Description: Different privileges from different modules can be assigned to roles.

4.3 Customer Module

4.3.1 Customer Manager

Customer ID	Name/Company	Address1	City	State	ZipCode	Telephone	Action
A M_Keshorhat	AM Electric	Keshorhat Bazer	Rajshai	Rajshai	6230	017159-523639	
AB_ELEC	A B Electronics	Tetulia Road	Thakurgaon	Thakurgaon	5100	017163696	
ABDULMALEK	Abdul Malek	Pagia	Narayangonj	Narayangonj	1400		
ABIRENT	ABIR ENTERPRISE	Munshirhat	Comilla	Comilla	3550	01861172168	
ABULELEC	Abul Electric	Section Mor	Dhaka	Dhaka	1209	01921465715	
ADIBA	Adiba Electric	Uttara	Dhaka	Dhaka	1230	01913627562	
ADNAMELE	Adnan Electric	Gausia	Narayangonj	Narayangonj	1460		
AFRIN_ELE	Afrin Electric	Sonargaon	Narayangang	Narayangang	1440	01715228618	
AHD_ELEC	Ahd Electric	Koddarmor	Sirajgonj	Sirajgonj	6740	01776658753	
AHSAN_ELE	Ahsan Electric	Barishal	Barishal	Barishal	8200	01715866946	
AJMERI	Ajmeri Electronics	Shere Bangla Road	Syedpur	Syedpur	5310	01556320580	
AJMERIELE	Ajmeri Electric	Sonargaon	Narayangang	Narayangang	1440	01706319560	
AK_ELE	A K Electric	Kalabagan Bazer	Comilla	Comilla	3551	01875825354	
AKASH_ELE	Akash Electric	Mochmoli Bazar Bellta, Bagmara	Rajshahi	Rajshahi	6000	01717954562	
AKBER_SHA	Akber Sha Traders (Shahid)	Chittagong Sader	Chittagong	Chittagong	4000	01818996329	
AKHI_ELE	Akhi Electric	Enayetur	Sirajgonj	Sirajgonj	6751	01716729547	

Figure 4. 7: Item List Product

Description: View/Edit/Delete existing customer or proceed to add new customer.

4.3.2 New Customer

Figure 4. 8: Order Details Page

Description: New Customers, their contacts information, Shipping address and billing address are entered here.

4.3.3 Sales Invoice Manager

The screenshot shows a table titled "SALES/INVOICE MANAGER" displaying 17 sales invoices. The columns are: Journal Record ID, Date, Invoice #, Customer Name, Reference, Paid, Amount, Carrier, and Action. The data includes various customers like Orni Electric, Hasi Electric, Makka Electric, Uzzal Electric, SEMA Electric, SR Electric, New Dhaka Electric, Khandaker Adverting, SEMA Electric, S S ELECTRIC, Rowman Electronic, Gausia Electric, Biddut Bitan, Shapla Electric, Rahi Electric, Sample, and Khandaker Adverting. The total amount for all invoices is 14,750.00.

Figure 4. 9: Payment Methods Page

Description: View/Edit/Delete existing Sales invoice or proceed to add new Sales Invoice.

4.3.4 Sales/Invoice

The screenshot shows the "SALES/INVOICE" page. It includes fields for Customer ID (ABIRENT), Ship to (ABIR ENTERPRISE, Comilla, 3550), Date (13/08/2020), and Invoice # (13082020). The page also displays a table of products with columns: PO Number, SO Number, Store ID, Sales Rep, Terms (Due), Ship By Date, A/R Account, Item, SO Bal, Quantity, SKU, Description, GL Account, Unit Price, Tax Rate, and Amount. The total amount for the products is 67,500.00. Other sections include Discount GL Account (4900 - Sales Discounts), Freight GL Account (4300 - Other Income), and various discount and tax input fields.

Figure 4. 10: Product Category page

Description: New Sales/Invoice is recorded here.

4.3.5 Sales Quote

Integrated Accounts & Inventory Management System

Company Name : Masters Research Project

Home Customers Vendors Inventory Banking General Ledger Employees Tools Company Log Out

SALES QUOTE

Customer ID: ABDULMALEK
Bill to: Abdul Malek, Narayangonj, 1400 ✓
Abdul Malek * Add/Update
Copy →
Pagla *
Narayangonj * Naray 1400 *
Bangladesh

Ship to: Abdul Malek, Narayangonj, 1400 ✓
Abdul Malek * Add/Update
Drop Ship
Pagla *
Narayangonj * Naray 1400 *
Bangladesh

Date: 13/08/2020
Quote Number:
Close

PO Number	Store ID	Sales Rep	Terms (Due)	Expiration Date	A/R Account
	HQ	Iram Hossain	Net 30	13/08/2020	1100 : Accounts Receivable
1	100.00		ECO-56	4000	1,350.00 <input checked="" type="checkbox"/> None <input type="checkbox"/>
2			Search	4000	0.00 <input checked="" type="checkbox"/> None <input type="checkbox"/>

Subtotal: 135,000.00
Discount GL Account: 4900 : Sales Discounts
Freight GL Account: 4300 : Other Income
Select file to attach:
Browse... No file selected.

Figure 4. 11: Sales Quote page

Description: New Sales Quote is recorded here.

4.3.6 Sales Order

Sales Order

localhost/pmscsproject/index.php?module=phreebooks&page=orders&jID=10#

Integrated Accounts & Inventory Management System

Company Name : Masters Research Project

Home Customers Vendors Inventory Banking General Ledger Employees Tools Company Log Out

SALES ORDER

Customer ID: ABIRENT
Bill to: ABIR ENTERPRISE, Comilla, 3550 ✓
ABIR ENTERPRISE * Add/Update
Copy →
Munshirhat *
Comilla * Comil 3550 *
Bangladesh
01861172168

Ship to: ABIR ENTERPRISE, Comilla, 3550 ✓
ABIR ENTERPRISE * Add/Update
Drop Ship
Munshirhat *
Comilla * Comil 3550 *
Bangladesh
01861172168

Date: 13/08/2020
SO Number:
Close

PO Number	Store ID	Sales Rep	Terms (Due)	Ship By Date	A/R Account
	HQ	OFFICE	Net 30	13/08/2020	1100 : Accounts Receivable
1	10.00		ECO-56	4000	1,350.00 <input checked="" type="checkbox"/> None <input type="checkbox"/>
2	10.00		GL-56	4000	1,000.00 <input checked="" type="checkbox"/> None <input type="checkbox"/>
3			Search	4000	0.00 <input checked="" type="checkbox"/> None <input type="checkbox"/>

Subtotal: 29,500.00
Discount GL Account: 4900 : Sales Discounts
Freight GL Account: 4300 : Other Income
Select file to attach:
Browse... No file selected.

Figure 4. 12: Sales Order page

Description: New Sales Order is recorded here.

4.3.7 Customer Credit Memo Manager

Customer Credit Memo Manager		localhost/pmscsproject/index.php?module=phreebooks&page=status&jID=13&list=1		Company Name : Masters Research Project				
Integrated Accounts & Inventory Management System								
Home Customers Vendors Inventory Banking General Ledger Employees Tools Company Log Out								
		Accounting Period: Period 35 : 01/08/2020 - 31/08/2020						
		Search:						
CUSTOMER CREDIT MEMO MANAGER								
Store ID : HQ								
Displaying 1 to 12 (of 12) Customer Credit Memo								
Page 1 of 1								
▲ journal Record ID	▲ Date	▲ Credit Memo #	▲ Customer Name	▲ Reference	▲ Paid	▲ Amount	Action	
7052	09/08/2020	CM5019	Hasi Electric	DEPOSITIBBL		79,000.00		
7050	09/08/2020	CM5018	Rowmari Electronic	DEPOSITIBBL		13,500.00		
7048	09/08/2020	CM5017	SR Electric	DEPOSITASIA		39,500.00		
7046	09/08/2020	CM5016	New Dhaka Electric	DEPOSITUTRA		51,500.00		
7044	09/08/2020	CM5015	SEMA Electric	DEPOSITIBBL		25,000.00		
7042	09/08/2020	CM5014	Khandaker Adverting	DEPOSITCASH		2.00		
7039	09/08/2020	CM5013	Uzzal Electric	DEPOSITUTRA		12,500.00		
7037	09/08/2020	CM5012	Makka Electric	DEPOSITASIA		25,000.00		
7035	09/08/2020	CM5011	Omni Electric	DEPOSITPBL		21,000.00		
7033	08/08/2020	CM5010	Retail Sales	DEPOSITCASH		700.00		
7031	06/08/2020	CM5009	Biddut Bitan	DEPOSITPBL		36,200.00		
7029	04/08/2020	CM5008	Gausia Electric	DEPOSITUCB		67,000.00		
Displaying 1 to 12 (of 12) Customer Credit Memo						Page 1 of 1		

Figure 4. 13: Customer Credit Memo Manager Page

Description: View/Edit/Delete existing credit memo or proceed to add new credit memo.

4.3.8 Customer Credit Memo

Customer Credit Memo

localhost/pmscproject/index.php?module=phreebooks&page=orders&jID=13

Integrated Accounts & Inventory Management System

Company Name : Masters Research Project

Home Customers Vendors Inventory Banking General Ledger Employees Tools Company Log Out

CUSTOMER CREDIT MEMO

Customer ID: AK_ELE

Bill to: A K Electric, Comilla, 3551 Add/Update Drop Ship

A K Electric Add/Update

Kalabagan Bazer

Comilla Comill 3551 Drop Ship

Bangladesh Comilla 3551

01875822354 01875822354

Date: 13/08/2020 Credit Memo #:

Ship to: A K Electric, Comilla, 3551 Add/Update Drop Ship

A K Electric Add/Update

Kalabagan Bazer

Comilla Comill 3551 Drop Ship

Bangladesh Comilla 3551

01875822354 01875822354

Reference #		Store ID	Sales Rep	A/R Account					
		OFFICE		1100 : Accounts Receivable					
Item	Shipped	Returned	SKU	Description	GL Account	Unit Price	Tax Rate	Amount	
1	5	1		GL-56	Glory 56"	4000	1,600.00	None	1,600.00
2	10	3		SMT-56	Smart 56"	4000	1,350.00	None	4,050.00
3				Search		4000	1,350.00	None	0.00

Freight GL Account: 4300 : Other Income Subtotal: 5,650.00

Select file to attach: Estimate Carrier Service Freight 0.00

Browse... No file selected.

Sales Tax: 0.00 Invoice Total: 5,650.00

Figure 4. 14: Customer Credit Memo Page

Description: New Customer credit memo is recorded here.

4.4 Vendor Module

4.4.1 Vendor creation

The screenshot shows the 'New Vendor' page. At the top, there's a navigation bar with links like Home, Customers, Vendors, Inventory, Banking, General Ledger, Employees, Tools, Company, and Log Out. The main area has tabs for General, Contacts, History, Address Book, and Notes. The General tab is selected. Under 'Contact Information', there are fields for Vendor ID, Purchase Rep ID, Inactive status, First Name, Middle Name, Last Name, Purchase GL Account (4000 : Sales Income), Account Number, Default Price Sheet, Federal EIN, Default Sales Tax (Product Default), and Payment Terms (Net 30). Below that is the 'Main Mailing Address' section with fields for Name/Company, Attention, Address1, Address2, City, State, ZipCode, Telephone, Alt Telephone, Fax, Mobile Phone, Email, Website, and Country (Bangladesh). The 'Attachments' section allows users to browse and upload files.

Figure 4. 15: New Vendor Page

Description: New Vendor/Supplier is recorded here.

4.4.2 Request for Quote

The screenshot shows the 'Request for Quote' page. At the top, there's a navigation bar with links like Home, Customers, Vendors, Inventory, Banking, General Ledger, Employees, Tools, Company, and Log Out. The main area has tabs for General, Contacts, History, Address Book, and Notes. The General tab is selected. The 'REQUEST FOR QUOTE' section includes fields for Vendor ID, Remit to (Name/Company, Attention, Address1, Address2, City, State, ZipCode, Country), Ship to (Masters Research Project, AP Contact, Drop Ship, Jahangirnagar University, Savar, Dhaka, 1342, Bangladesh, 880-2-7791045-51, registrar@juniv.edu), Date (13/08/2020), RFQ Number, and Close button. Below this is a table for entering quote details: Reference #, Store ID, Buyer, Terms (Due), Expiration Date, A/P Account (2000 : Accounts Payable), Item, Quantity, Received, SKU, Description, GT Account (1200), Unit Price, Tax Rate, and Amount. There's also a Freight GL Account (6800 : Freight Expense) and a file attachment section. At the bottom, there are buttons for Estimate, Carrier (Please Select...), Service, Freight, Purchase Tax, and Invoice Total.

Figure 4. 16: request for Quote Page

Description: New Vendor/Supplier is recorded here.

4.4.3 Purchase Order

PURCHASE ORDER

Vendor ID:

Remit to:

Name/Company: <input type="text"/>	<input type="checkbox"/> Add/Update
Attention: <input type="text"/>	<input type="button" value="Copy..."/>
Address1: <input type="text"/>	*
Address2: <input type="text"/>	
City: <input type="text"/>	*
State: <input type="text"/>	*
Zip/Code: <input type="text"/>	*
Bangladesh	
Telephone: <input type="text"/>	Email: <input type="text"/>

Ship to:

Masters Research Project	<input type="checkbox"/> Add/Update
AP Contact: <input type="text"/>	<input type="checkbox"/> Drop Ship
Jahangirnagar University	*
Savar	*
Chakka	*
1342	*
Bangladesh	
880-2-7791045-51	registrar@jnu.edu

Date: 13/08/2020

PO Number:

Close:

Reference # Store ID Buyer Terms (Due) Expiration Date A/P Account

Item	Quantity	Received	SKU	Description	GL Account	Unit Price	Tax Rate	Amount
1						1200		0.00
Freight GL Account: <input type="text"/> 8800 - Freight Expense								
Subtotal: <input type="text"/> 0.00								
Estimate Carrier: <input type="text"/> Please Select ... Service: <input checked="" type="checkbox"/> Freight: <input type="text"/> 0.00								
Purchase Tax: <input type="text"/> 0.00								
Invoice Total: <input type="text"/> 0.00								

Select file to attach:
Browse... No file selected.

Figure 4. 17: Purchase Order Page

Description: New Purchase Order is recorded here.

4.4.4 Purchase/Receive Manager

PURCHASE/RECEIVE MANAGER

Store ID: HQ

Displaying 1 to 14 (of 14) Purchase/Receive

Journal Record ID	Date	Invoice #	Vendor Name	Reference	Paid	Amount	Action
6983	28/07/2020	927	Alina Metal			17,250.00	<input type="button"/> <input type="button"/> <input type="button"/>
6980	26/07/2020	950	Ayesha Electrical Industries			213,000.00	<input type="button"/> <input type="button"/> <input type="button"/>
6984	25/07/2020	915	Alina Metal			38,380.00	<input type="button"/> <input type="button"/> <input type="button"/>
6947	23/07/2020	1419	Alina Metal			50,590.00	<input type="button"/> <input type="button"/> <input type="button"/>
6945	22/07/2020	909	Alina Metal			92,000.00	<input type="button"/> <input type="button"/> <input type="button"/>
6944	21/07/2020	942	Ayesha Electrical Industries			74,550.00	<input type="button"/> <input type="button"/> <input type="button"/>
6933	19/07/2020	941	Ayesha Electrical Industries			74,550.00	<input type="button"/> <input type="button"/> <input type="button"/>
6914	18/07/2020	940	Ayesha Electrical Industries			106,500.00	<input type="button"/> <input type="button"/> <input type="button"/>
6896	15/07/2020	1586	Alina Metal			55,200.00	<input type="button"/> <input type="button"/> <input type="button"/>
6897	15/07/2020	1329	AL Modina Electric			53,000.00	<input type="button"/> <input type="button"/> <input type="button"/>
6870	12/07/2020	1381	Alina Metal			138,950.00	<input type="button"/> <input type="button"/> <input type="button"/>
6869	09/07/2020	1370	Alina Metal			97,750.00	<input type="button"/> <input type="button"/> <input type="button"/>
6868	07/07/2020	1360	Alina Metal			31,040.00	<input type="button"/> <input type="button"/> <input type="button"/>
6866	04/07/2020	1585/04-07-2020	Alina Metal			62,100.00	<input type="button"/> <input type="button"/> <input type="button"/>

Displaying 1 to 14 (of 14) Purchase/Receive

Accounting Period: Period 34: 01/07/2020 - 31/07/2020

Search:

Page 1 of 1

Figure 4. 18: Purchase/Receive Manager Page

Description: View/Edit/Delete existing purchase/receive or proceed to add new purchase/receive.

4.4.5 Purchase/Receive

PURCHASE/RECEIVE

Vendor ID: []

Remit to:

Ship to:

Date: [12/08/2020] Drop Ship

Invoice #: [] Waiting for invoice

PO Number: [] Store ID: [] Buyer: [] Terms (Due): [None] Net 30

A/P Account: [2000 : Accounts Payable]

Item	PO Bal	Received	SKU	Description	GL Account	Unit Price	Tax Rate	Amount
[]						1200		0.00

Freight GL Account: [6800 : Freight Expense] Subtotal: [0.00]
 Estimate Please Select ... Service: [] Freight: [0.00]
 Purchase Tax: [0.00] Invoice Total: [0.00]

Select file to attach:
 No file selected.

Figure 4. 19: Purchase/Receive Page

Description: New purchase/receive is recorded here.

4.4.6 Vendor Credit Memo

VENDOR CREDIT MEMO

Vendor ID: []

Remit to:

Ship to:

Date: [13/08/2020] Drop Ship

Credit Memo #: [] Waiting for invoice

Reference #: [] Store ID: [] Buyer: [] Terms (Due): [None] Net 30

A/P Account: [2000 : Accounts Payable]

Item	Received	Returned	SKU	Description	GL Account	Unit Price	Tax Rate	Amount
[]						1200		0.00

Freight GL Account: [6800 : Freight Expense] Subtotal: [0.00]
 Estimate Please Select ... Service: [] Freight: [0.00]
 Purchase Tax: [0.00] Invoice Total: [0.00]

Select file to attach:
 No file selected.

Figure 4. 20: Vendor Credit Memo Page

Description: New Vendor Credit Memo is recorded here.

4.5 Inventory Module

4.5.1 Inventory Manager

Integrated Accounts & Inventory Management System

Company Name : Masters Research Project

Home Customers Vendors Inventory Banking General Ledger Employees Tools Company Log Out

Search:

INVENTORY MANAGER

Field: Comparison: Value:
inactive [Equal To:] No

Displaying 1 to 13 (of 13) Items

SKU	Inactive	Description	Qty on Hand	Qty on Sales Order	Qty Allocated	Qty on Order	Action
CL-48		Classic 48"	0	0	0	0	[Edit] [Delete] [Print] [Email]
CL-56		Classic 56"	15	0	0	0	[Edit] [Delete] [Print] [Email]
ECO-56		Eco 56"	477	0	0	0	[Edit] [Delete] [Print] [Email]
GL-56		Glory 56"	41	0	0	0	[Edit] [Delete] [Print] [Email]
NET-16		Net 16"	0	0	0	0	[Edit] [Delete] [Print] [Email]
SMT-36		Smart 36"	-2	0	0	0	[Edit] [Delete] [Print] [Email]
SMT-56		Smart 56"	-396	0	0	0	[Edit] [Delete] [Print] [Email]
STR-9-FX		Stormy 9" Fixed	-256	0	0	0	[Edit] [Delete] [Print] [Email]
STR-9-LX		Stormy 9" Luxury	-71	0	0	0	[Edit] [Delete] [Print] [Email]
STR-9-MV		Stormy 9" Movable	0	0	0	0	[Edit] [Delete] [Print] [Email]
UN-48		Unique 48"	0	0	0	0	[Edit] [Delete] [Print] [Email]
UN-56		Unique 56"	11	0	0	0	[Edit] [Delete] [Print] [Email]
ZZZZ		Zero non stock item		0	0	0	[Edit] [Delete] [Print] [Email]

Displaying 1 to 13 (of 13) Items

Page 1 of 1

Figure 4. 21: Inventory Manager Page

Description: View/Edit/Delete/Rename existing Stock Keeper's Unit (SKU) or proceed to add new SKU.

4.5.2 Inventory Item

Home Customers Vendors Inventory Banking General Ledger Employees Tools Company Log Out

INVENTORY - SKU# CL-56 (CLASSIC 56")

System History

SKU: CL-56 Inactive:

Short Description: Classic 56"

Reorder Level: 0.00

Reorder Quantity: 0.00

Lead Time (days): 1

Inventory Category: CLASSIC

Customer Details

Sales Description:

Full Price: 2,700.00 2,700.00

Margin: 25.19% 25.19%

Full Price with Tax: 2,700.00 2700

Retail Markup: 1.34 1.34

Default Sales Tax: None

Default Price Sheet: None

Vendor Details

Preferred Vendor: Fantech Engineering

Purchase Description:

Item Cost: 2,020.00

Package Quantity: 1.00

Default Purchase Tax: None

Default Price Sheet: None

Item Details

Inventory Type: Stock Item

UPC Code:

Cost Method: FIFO

Sales/Income Account: 4000 : Sales Income

Inventory/Wage Account: 1200 : Inventory

Cost of Sales Account: 5000 : Cost of Sales

Store ID Qty in Stock

HQ 15

Warehouse 1 0

Attachments

Select file to attach: No file selected.

Relative Image Path:

File Name:

Action:

Figure 4. 22: Inventory Item add Page

Description: New Inventory Item or SKU is recorded here.

4.5.3 Inventory Adjustment

The screenshot shows the 'Inventory Adjustments' page. At the top, there are fields for 'Store ID' (HQ), 'Reason for Adjustment' (Capacitor problem), 'Post Date' (13/08/2020), and 'Adjustment Account' (5990 - Inventory Adjustments). Below these are search and reference fields. A table lists an adjustment for SKU ECO-56, showing an adjustment quantity of 477 and a balance of 472. A note at the bottom states: 'Note: For negative quantities, the unit price will be calculated by the system.'

SKU	Qty in Stock	Adj Qty	Item Cost	Balance	Description
ECO-56	477	-5	472	Eco 56"	

Figure 4. 23: Inventory Adjustment Page

Description: Inventory Adjustment is recorded here.

4.5.4 Inventory Transfer

The screenshot shows the 'Transfer Inventory' page. It includes fields for 'Transfer From Store ID' (HQ), 'To Store ID' (WRHS1), 'Post Date' (13/08/2020), and 'Reason for Transfer' (Warehouse Transfer). A table lists a transfer for SKU ECO-56, with a quantity of 200 and a balance of 277.

Quantity	Qty in Stock	Balance	SKU	Description
200	477	277	ECO-56	Eco 56"

Figure 4. 24: Inventory Adjustment Page

Description: Inventory Transfer is recorded here.

4.6 Banking Module

4.6.1 Customer Receipt

The screenshot shows the 'Customer Receipt' page. At the top, there are fields for 'Customer ID' (BIDDUU_BIT), 'Receive From' (Biddu Bitan, Bheramara, 000), and 'Deposit Ticket ID' (DP20200813). Below these are fields for 'Date' (13/08/2020), 'Store ID' (HQ), 'Reference', 'Sales Rep' (None), 'Cash Account' (1005 : Cash Collection), and 'Discount Account' (4900 : Sales Discounts). The total amount is listed as 13,500.00. To the right is a 'Payment Method' section with dropdowns for 'Check/Money Order' and 'Reference Number'. At the bottom, there is a table with columns: Invoice #, Due Date, Amount Due, Notes, Discount, Amt Rcvd, and Pay. Two rows are shown: CM5009 (Due 05/09/2020, Amount Due -36,200.00, Notes DEPOSIT:PBL, Discount 0.00, Amt Rcvd 13,500.00, Pay checked) and 24803 (Due 07/09/2020, Amount Due 13,500.00, Notes, Discount 0.00, Amt Rcvd 13,500.00, Pay checked).

Figure 4. 25: Customer Receipt Page

Description: Customer Receipt against invoices are recorded here.

4.6.2 Customer Deposit

The screenshot shows the 'Customer Deposits' page. At the top, there are fields for 'Customer ID' (AK_ELE), 'Bill to' (A K Electric, Comilla, 3551), and 'Deposit Ticket ID' (DP20200813). Below these are fields for 'Date' (13/08/2020), 'Reference', 'Cash Account' (1021 : Islami Bank), and 'Total' (50,000.00). To the right is a 'Payment Method' section with dropdowns for 'Check/Money Order' and 'Reference Number'. At the bottom, there is a table with columns: Description, GL Account, and Amt Rcvd. One row is shown: Description (2400 : Customer Deposits), GL Account (2400 : Customer Deposits), and Amt Rcvd (50,000.00).

Figure 4. 26: Customer Deposit Page

Description: Customer Deposits are recorded here.

4.6.3 Customer Refund

CUSTOMER REFUND

Customer ID:	ADIBA	Payment Ref #:	797	Balance Before Payments:	14,234,410.00	
Pay To:	Adiba Electric, Dhaka, 1230	Date:	13/08/2020	Balance After Payments:	14,233,410.00	
Adiba Electric		Store ID:	HQ			
Uttara		Reference:				
Dhaka	Dhaka, 1230	Buyer:	None			
Bangladesh		Cash Account:	1022 : Pubali Bank			
		Discount Account:	2000 : Accounts Payable			
		Total:	1,000.00			
CM3658	08/02/2019	60,000.00	DEPOSIT:IBBL	0.00	1,000.00	<input checked="" type="checkbox"/>
22884	14/02/2019	-59,000.00				<input type="checkbox"/>
CM4720	06/02/2020	219,300.00	DEPOSIT:IBBL			<input type="checkbox"/>
24276	04/03/2020	-141,800.00				<input type="checkbox"/>
24502	30/06/2020	-77,500.00				<input type="checkbox"/>

Figure 4. 27: Customer Refund Page

Description: Customer Refund is recorded here.

4.6.4 Vendor Payment

VENDOR PAYMENT

Vendor ID:	ALMODINA	Payment Ref #:	797	Balance Before Payments:	14,234,410.00	
Pay To:	AL Modina Electric, Dhaka, 1100	Date:	13/08/2020	Balance After Payments:	14,185,410.00	
AL Modina Electric		Store ID:	HQ			
14B/1, Taj Electric Market		Reference:				
Dhaka	Dhaka, 1100	Buyer:	None			
Bangladesh		Cash Account:	1022 : Pubali Bank			
	<th>Discount Account:</th> <td>2000 : Accounts Payable</td> <td></td> <td></td>	Discount Account:	2000 : Accounts Payable			
	<th>Total:</th> <td>49,000.00</td> <td></td> <td></td>	Total:	49,000.00			
1222	18/12/2018	49,000.00		0.00	49,000.00	<input checked="" type="checkbox"/>
1225	22/12/2018	34,300.00				<input type="checkbox"/>
1239	16/01/2019	49,500.00				<input type="checkbox"/>
1244	19/01/2019	49,500.00				<input type="checkbox"/>
1253	23/01/2019	59,400.00				<input type="checkbox"/>
1246	21/01/2019	49,500.00				<input type="checkbox"/>
1263	04/02/2019	50,000.00				<input type="checkbox"/>
VCM1298	08/01/2019	-200,000.00	DEPOSIT:IBY06299957			<input type="checkbox"/>
VCM1299	26/01/2019	-50,000.00	DEPOSIT:IBY06299971			<input type="checkbox"/>
VCM1302	09/02/2019	-50,000.00	DEPOSIT:IBY06299977			<input type="checkbox"/>
1287	20/02/2019	50,000.00				<input type="checkbox"/>
1270	12/02/2019	50,000.00				<input type="checkbox"/>
VCM1317	19/02/2019	-100,000.00	DEPOSIT:IBY06299991			<input type="checkbox"/>

Figure 4. 28: Customer Refund Page

Description: Vendor Payment is recorded here.

4.6.5 Vendor Deposit

VENDOR DEPOSITS

Vendor ID: AMPRINTERS
Remit to: A.M. Printers, Dhaka, 1100
A.M. Printers
5/7, Zindabazar, Nayabazar
Dhaka, Bangladesh

Payment Ref # 797
Date 13/08/2020
Reference
Cash Account 1022 : Pubali Bank
Total 50,000.00

Balance Before Payments 14,234,410.00
Balance After Payments 14,184,410.00

Description	GL Account	Amt Paid
	1450 : Vendor Deposit	50,000.00

Figure 4. 29: Vendor Deposit Page

Description: Vendor Deposit is recorded here.

4.6.6 Vendor Deposit

VENDOR REFUND

Vendor ID: AYESHA_ELECTRICAL
Receive From: Ayesha Electrical Industries, Dhaka, 1204
Ayesha Electrical Industries
372/5/1, Shahadat Hossain Road,
West Jursin, Shyampur
Dhaka, Bangladesh

Deposit Ticket ID DP20200813
Date 13/08/2020
Store ID HQ
Reference
Sales Rep None
Cash Account 1022 : Pubali Bank
Discount Account 4900 : Sales Discounts
Total -106,500.00

Payment Method
Check/Money Order
Reference Number

Invoice #	Due Date	Amount Due	Notes	Discount	Amt Rcvd	Pay
940	17/08/2020	-106,500.00		0.00	-106,500.00	<input checked="" type="checkbox"/>
941	18/08/2020	-74,550.00				<input type="checkbox"/>
VCM1691	19/08/2020	100,000.00	DEPOSIT:IBZ07768198			<input type="checkbox"/>
942	20/08/2020	-74,550.00				<input type="checkbox"/>
VCM1693	25/08/2020	100,000.00	DEPOSIT:IBZ07768200			<input type="checkbox"/>
950	25/08/2020	-213,000.00				<input type="checkbox"/>
958	08/09/2020	-106,500.00				<input type="checkbox"/>

Figure 4. 30: Vendor Refund Page

Description: Vendor Refund is recorded here.

4.6.7 Bank Account Reconcile

ACCOUNT RECONCILIATION

Cash Account 1022 : Pubali Bank
Accounting Period: Period 35 : 01/08/2020 - 31/08/2020

Reference	Date	Deposit/Credit	Check/Payment	Source	Clear	Details
DP20181117	08/11/2018	1,192,500.00		Customer Deposits	<input type="checkbox"/>	Details
DP20181118	15/11/2018	200,000.00		Chanchal Electric	<input type="checkbox"/>	Details
DP20181125	25/11/2018	671,500.00		Customer Deposits	<input type="checkbox"/>	Details
DP20181129	28/11/2018	200,000.00		Chanchal Electric	<input type="checkbox"/>	Details
DP20181205	04/12/2018	800,000.00		Customer Deposits	<input type="checkbox"/>	Details
DP20181208	06/12/2018	200,000.00		Chanchal Electric	<input type="checkbox"/>	Details

Figure 4. 31: Bank Account Reconcile Page

Description: Bank Account Reconcile is recorded here.

4.6.8 Bank Account Register

The screenshot shows a web-based accounting system interface titled "Bank Account Register". The URL is "localhost/pmscsproject/index.php?module=phreebooks&page=register". The page title is "Integrated Accounts & Inventory Management System" and the company name is "Masters Research Project". The main content area is titled "ACCOUNT REGISTER MONTHLY" and displays a table of transactions for Cash Account 1022_Pubali Bank. The table includes columns for Date, Reference, Type, Description, Deposit, Payment, and Balance. The transactions show various deposits from different entities like Khan & Sons, Molla Traders, Japan Ele, Shirupa Electric, and Sobuj Electric, along with their respective amounts and dates. The final balance is 12,501.910.00. A "Print Account Register" button is located at the bottom of the table.

Date	Reference	Type	Description	Deposit	Payment	Balance
01/10/2019	DP20191003	Deposit	Khan & Sons	5,000.00		11,741.110.00
20/10/2019	DP20191103	Deposit	Molla Traders	222,500.00		11,968.610.00
20/10/2019	DP20191103	Deposit	Japan Ele	192,000.00		12,160.610.00
22/10/2019	DP20191114	Deposit	Japan Ele	60,800.00		12,221.410.00
23/10/2019	DP20191114	Deposit	Shirupa Electric	40,500.00		12,281.910.00
31/10/2019	DP20191118	Deposit	Sobuj Electric	240,000.00		12,501.910.00
			Ending Balance			12,501.910.00

Figure 4. 32: Bank Account Register Page

Description: Bank Account Register to check transactions.

4.7 General Ledger Module

4.7.1 General Journal Entry

The screenshot shows a web-based accounting system interface titled "General Journal Entry". The URL is "localhost/pmscsproject/index.php?module=phreebooks&page=journal". The page title is "Integrated Accounts & Inventory Management System" and the company name is "Masters Research Project". The main content area is titled "GENERAL JOURNAL ENTRY" and displays a form for entering a general journal entry. The form includes fields for Reference (4458865), Post Date (13/08/2020), Auto Complete (checked), Store ID (HQ), GL Account (1000 - Petty Cash), Description (Entertainment), Debit Amount (4,500.00), Credit Amount (4,500.00), and a note "Account will be decreased". Another line item is shown for 6005 - Entertainment (Office) with a debit amount of 4,500.00 and a note "Account will be increased". The totals for both debit and credit amounts are 4,500.00. At the bottom, there is a file attachment section with a "Browse..." button and a message "No file selected.".

Figure 4. 33: General Journal Entry Page

Description: General Journal Entry is recorded here.

4.7.2 Debit Voucher Entry

The screenshot shows the 'DEBIT VOUCHER' entry screen. At the top, there are fields for Reference (76755), Post Date (13/08/2020), and Store ID (HQ). The main area contains two rows of transaction details:

GL Account	Description	Debit Amount	Credit Amount
1000 : Petty Cash	Entertainment	3.000.00	
6005 : Entertainment (Office)	Entertainment	3.000.00	

Below the table, there are summary fields: Totals (3.000.00 debit, 3.000.00 credit), Out of Balance (0.00), and a note indicating 'Account will be decreased' for the debit row and 'Account will be increased' for the credit row.

Figure 4. 34: Debit Voucher Entry Page

Description: Debit Voucher Entry is recorded here.

4.7.3 Credit Voucher Entry

The screenshot shows the 'CREDIT VOUCHER' entry screen. At the top, there are fields for Reference (464747), Post Date (13/08/2020), and Store ID (HQ). The main area contains two rows of transaction details:

GL Account	Description	Debit Amount	Credit Amount
1022 : Public Bank	Sales Income	50.000.00	
4000 : Sales Income	Sales Income		50.000.00

Below the table, there are summary fields: Totals (50.000.00 debit, 50.000.00 credit), Out of Balance (0.00), and a note indicating 'Account will be increased' for both rows.

Figure 4. 35: Credit Voucher Entry Page

Description: Credit Voucher Entry is recorded here.

4.7.4 GL Administrative Tools and Utilities

The screenshot shows a web-based application interface for managing administrative tools and utilities. At the top, there's a navigation bar with links for Home, Customers, Vendors, Inventory, Banking, General Ledger, Employees, Tools, Company, and Log Out. The company name is listed as 'Masters Research Project'. Below the navigation is a toolbar with a back arrow, forward arrow, and a question mark icon.

The main content area is titled 'ADMINISTRATIVE TOOLS AND UTILITIES' and contains a section for 'Accounting Periods and Fiscal Years'. It displays the following information:

- Current Accounting Period is: 35
- Fiscal period calendar dates can be modified here. Please note that fiscal year dates cannot be changed for any period up to and including the last general journal entry in the system.
- A table showing accounting periods from 25 to 35, with their corresponding start and end dates. The fiscal year is set to 2020.
- Buttons for managing fiscal years: Change Current Accounting Period, Update Fiscal Year Changes, and Generate Next Fiscal Year.

Period	Start Date	End Date
25	01/10/2019	31/10/2019
26	01/11/2019	30/11/2019
27	01/12/2019	31/12/2019
28	01/01/2020	31/01/2020
29	01/02/2020	29/02/2020
30	01/03/2020	31/03/2020
31	01/04/2020	30/04/2020
32	01/05/2020	31/05/2020
33	01/06/2020	30/06/2020
34	01/07/2020	31/07/2020
35	01/08/2020	31/08/2020

Figure 4. 36: GL Administrative Tools and Utilities Page

Description: Generate new fiscal year, update fiscal year changes, change current accounting period, Re-post Journal Entries, Re-post Inventory Owed, Validate and Repair General Ledger Account Balances etc.

4.8: Reports module

Report module is very robust. A lot of control has been given to the users. They can create a report from the scratch by using the web interface. It is highly customizable.

4.8.1 Report Generation

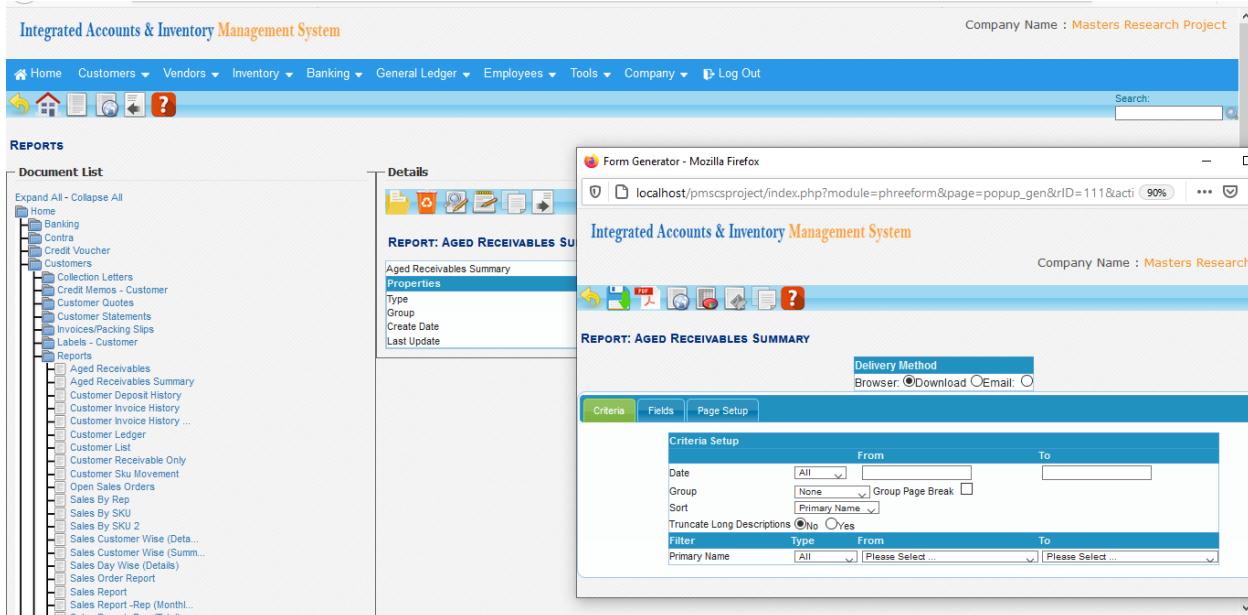


Figure 4. 37: Built in Report generation tool

Description: User can build and generate customized report using this tool.

4.8.2 Report – Aged receivable summary

Masters Research Project Aged Receivables Summary Report Generated 13/08/2020				
Customer	Customer ID	Location	Telephone	Total
AK Electric	AK_ELE	Comilla		21,580.00
Abdul Malek	ABDULMALEK	Narayangonj		
ABIR ENTERPRISE	ABIRENT	Comilla	01861172168	13,500.00
Adiba Electric	ADIBA	Dhaka		-1,000.00
Ahsan Electric	AHSAN_ELE	Banishal	01715866946	-100.00
Akash Electric	AKASH_ELE	Rajshahi	01717954562	7,300.00
Akber Sha Traders (Shahid)	AKBER_SHA	Chittagong		-91,550.00
Akhi Electric	AKHI_ELE	Sirajgonj	01716729547	18,500.00
Alota Electric	AKOTA_Rajshai	Rajshai		-17,500.00
Aksa Electric	AKSHA_ELEC	Dhaka		
Al Amin Electric	ALAMIN	Dhaka	01913383649	
AL Amin Electric	AL_AMIN	Dinajpur		-1,000.00
Al Amin Light House	AL_AMIN_LIGHT	Chandpur		-8,800.00
Al Haj Electric	ALHAJ	Gazipur		
Al Haj Electric	ALL_HAJ	Bogra		-200.00
AL Hejal Electric	AL_HEHAL	Kustia	01716078774	150.00
Al Jarif Electronics	AL_JARIF	Patna		-780.00
Al Madina Electric	ALMADINA_ELE	Chandpur		
AL Mukit Electronics	AL_MUKIT	Dhaka	01819944560	-9,500.00
Al Nur Electric	ALNUR_ELE	Chandpur		
Alif Mim Electric	ALIF_MIM	Rajshahi	01759523639	
Altab Electric	ALTAB	Dhaka	01827179742	100.00
AM Electric	AM_Keshorhat	Rajshai	017159-523639	
Amrit Electric	AMITIELE	Dhaka	01922662948	
Apon Electric	Apon_Mirpur13	Dhaka		
Arafat Electric	ARAFATELE	Narayangonj		
Arif Electrics	ARIF_ELEC	Pirojpur	01716669964	
Asha Electric	ASHA_ELECTRIC	Moulvibazar		
Asha Electric	ASHA_ELE	Gaibandha	01792989700	15,000.00

Figure 4. 38: Report – Aged receivable summary

4.8.3 Report – Aged receivable

Masters Research Project Aged Receivables Report Generated 13/08/2020										
Report Filters: Grouped by: Customer Name, Sorted by: Post Date;		Customer	Telephone	Customer ID	Post Date	PO Number	Invoice No	Invoice Total	Payed Amount	Due Payment
AK Electric		AK_ELE		AK_ELE	23/02/2019	DEPOSIT:	CM3798	-14,000.00	0.00	-14,000.00
AK Electric	01875825354	AK_ELE		AK_ELE	25/03/2019		23207	39,690.00	0.00	39,690.00
AK Electric		AK_ELE		AK_ELE	30/03/2019	DEPOSIT:cash	CM3924	-10,000.00	0.00	-10,000.00
AK Electric	01875825354	AK_ELE		AK_ELE	30/03/2019		23234	6,240.00	0.00	6,240.00
AK Electric		AK_ELE		AK_ELE	09/05/2019	DEPOSIT:cash	CM4014	-10,000.00	0.00	-10,000.00
AK Electric		AK_ELE		AK_ELE	18/05/2019	DEPOSIT:cash	CM4044	-10,000.00	0.00	-10,000.00
AK Electric	01875825354	AK_ELE		AK_ELE	25/05/2019		23518	21,750.00	0.00	21,750.00
AK Electric		AK_ELE		AK_ELE	03/06/2019	DEPOSIT:cash	CM4128	-10,000.00	0.00	-10,000.00
AK Electric	01875825354	AK_ELE		AK_ELE	17/07/2019		23686	13,700.00	0.00	13,700.00
AK Electric	01875825354	AK_ELE		AK_ELE	19/07/2019		23696	12,700.00	0.00	12,700.00
AK Electric		AK_ELE		AK_ELE	28/07/2019	DEPOSIT:cash	CM4283	-10,000.00	0.00	-10,000.00
AK Electric		AK_ELE		AK_ELE	08/08/2019	DEPOSIT:cash	CM4322	-10,000.00	0.00	-10,000.00
AK Electric		AK_ELE		AK_ELE	18/08/2019	DEPOSIT:cash	CM4317	-10,000.00	0.00	-10,000.00
AK Electric	01875825354	AK_ELE		AK_ELE	18/08/2019		23782	21,500.00	0.00	21,500.00
AK Electric		AK_ELE		AK_ELE	26/10/2019	DEPOSIT:cash	CM4514	-10,000.00	0.00	-10,000.00
Group Total For: A K Electric								21,580.00	0.00	21,580.00

Figure 4. 39: Report – Aged receivable

4.8.4 Report – Customer Invoice History (Complex)

Masters Research Project Customer Invoice History (Complex) Report Generated 13/08/2020											
Report Filters: Grouped by: Customer Name; Sorted by: Post Date; Filters: and Customer = Babul Electric.		Customer	Sub Customer	Telephone	Customer ID	Post Date	PO Number	Invoice No	Invoice Total	Payed Amount	Due Payment
Babul Electric				01711135706	BABUL_ELE	22/01/2019		22918	128,000.00	0.00	128,000.00
Babul Electric				01711466286	BABULNORAIL	09/03/2019		23208	33,000.00	0.00	33,000.00
Babul Electric				01711466286	BABULNORAIL	25/03/2019		23209	52,800.00	0.00	52,800.00
Babul Electric				01711466286	BABULNORAIL	27/06/2019		23637	11,250.00	0.00	11,250.00
Babul Electric				01711135706	BABUL_ELE	29/06/2019		23645	40,500.00	0.00	40,500.00
Babul Electric				01711135706	BABUL_ELE	25/07/2019		23721	162,000.00	0.00	162,000.00
Babul Electric				01711135706	BABUL_ELE	07/08/2019		23767	67,500.00	0.00	67,500.00
Babul Electric				01711466286	BABULNORAIL	26/11/2019		24013	128,000.00	0.00	128,000.00
Babul Electric				01711466286	BABULNORAIL	29/12/2019		24162	59,000.00	0.00	59,000.00
Babul Electric				01711466286	BABULNORAIL	09/02/2020		24285	12,800.00	0.00	12,800.00
Babul Electric				01711135706	BABUL_ELE	22/02/2020		24326	65,000.00	0.00	65,000.00
Babul Electric				01711135706	BABUL_ELE	11/03/2020		24395	65,000.00	0.00	65,000.00
Babul Electric				01711466286	BABULNORAIL	07/05/2020		24453	60,000.00	0.00	60,000.00
Babul Electric				01711466286	BABULNORAIL	14/05/2020		24472	67,500.00	0.00	67,500.00
Group Total For: Babul Electric									952,350.00	0.00	952,350.00
Report Total For: Customer Invoice History (Complex)									952,350.00	0.00	952,350.00

Figure 4. 40: Report – Customer Invoice History (Complex)

Masters Research Project

Sales Report Summary (Y)

Report Generated 13/08/2020

Report Filters Sorted by: Customer, Filters: Year = 2019;

Customer	CL-56	GL-56	SMT-56	SMT-36	UN-56	NET-16	STR-9-FX	STR-9-LX	ECO-56	Total Qty	Total Sales	Credit / Return	Total Paid	Discount	Total Receivable
A K Electric - Comilla	10	10	40	12	0	12	0	5	0	89	115,580.00		84,000.00		21,580.00
Abdul Malek - Narayangonj	0	0	30	0	10	0	0	0	0	40	53,900.00		53,900.00		
ABIR ENTERPRISE - Comilla	0	20	30	0	0	0	0	0	0	50	72,500.00		49,000.00		13,500.00
Adiba Electric - Dhaka	0	0	0	50	0	0	0	0	0	50	59,000.00		60,000.00		-1,000.00
Ahsan Electric - Barishal	10	0	80	50	20	0	0	0	0	160	215,900.00		216,000.00		-100.00
Akber Sha Traders (Shahid) - Chittagong	120	300	3230	150	385	0	207	0	0	4392	5,810,130.00	75,130.00	5,515,000.00		-91,550.00
Al Amin Electric - Dhaka	10	0	20	5	20	0	0	0	0	55	85,000.00		85,000.00		
Al Amin Light House - Chandpur	0	0	150	15	0	0	0	0	0	165	215,500.00		212,500.00		-8,800.00
Al Hajj Electric - Gazipur	0	0	5	0	5	0	5	0	0	15	17,350.00		17,350.00		
Al Jarif Electronics - Pabna	0	0	70	19	0	0	0	0	0	89	113,420.00		113,500.00		-780.00
AL Mukit Electronics - Dhaka	0	0	70	10	0	0	0	0	0	80	104,500.00		114,000.00		-9,500.00
Altab Electric - Dhaka	2	0	55	0	15	0	0	0	0	72	99,400.00		99,400.00		100.00
Amiti Electric - Dhaka	0	0	25	5	0	0	0	0	0	30	39,100.00	100.00	39,000.00		
Arafat Electric - Narayangonj	0	0	100	0	0	0	0	0	0	100	126,000.00		126,000.00		
Anif Electrics - Pirojpur	20	0	100	100	30	0	0	0	0	250	323,000.00		323,000.00		
Asha Electric - Gaibandha	0	0	0	0	0	0	20	0	0	20	15,000.00				15,000.00
Asia Electric - Faridpur	0	50	100	50	0	0	0	0	0	200	260,500.00		260,500.00		
Azam Electric - Rajshahi	0	0	1	39	2	0	0	0	0	42	50,400.00	400.00	50,000.00		
Babul Electric - Gazipur	0	0	300	0	0	0	0	0	0	300	398,000.00		402,500.00		-4,500.00
Babul Electric - Norail	0	0	65	0	0	0	15	0	0	80	97,050.00		94,250.00		4,100.00
Rhai Rhai Electric - Comilla	3	30	14	5	6	0	5	0	0	83	93,583.00		93,583.00		

Above are some example reports. Any report can be exported to pdf, json, xml, xlsx etc format.

Chapter 5: Implementation, Conclusion and Future Work

5.1 Source Code:

It is quite impossible to put all the codes in this document. For that few examples have been added here.

5.1.1 template_index.php

```
// Path: /includes/template_index.php
//
if ($custom_html) { // load the template only as the rest of the html will be generated by the template
    if (is_file($template_path)) { require($template_path); } else die('No template file. Looking for: ' . $template_path);
} else {
?>
<!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0 Transitional//EN"
"http://www.w3.org/TR/xhtml1/DTD/xhtml1-transitional.dtd">
<html <?php echo HTML_PARAMS; ?>>
<head>
<!-- module: <?php echo $module; ?> - page: <?php echo $page; ?> -->
<meta http-equiv="Content-Type" content="text/html; charset=<?php echo CHARSET; ?>" />
<?php if ($force_reset_cache) { header("Cache-Control: no-cache, must-revalidate"); header("Expires: " . date('D, j M \2\0\0\0 G:i:s T')); } ?>
<title><?php echo PAGE_TITLE; ?></title>
<link rel="shortcut icon" type="image/ico" href="favicon.ico" />

<link href="https://fonts.googleapis.com/css?family=roboto:300,400,700" rel="stylesheet">
<link href="https://fonts.googleapis.com/css?family=Roboto+Condensed:400,700" rel="stylesheet">

<link rel="stylesheet" type="text/css" href="<?php echo DIR_WS_THEMES.'css/'.MY_COLORS.'/bootstrap/css/bootstrap.min.css'; ?>" />
<!--<link rel="stylesheet" href="https://maxcdn.bootstrapcdn.com/bootstrap/3.3.7/css/bootstrap.min.css" integrity="sha384-BVYiiSIFeK1dGmJRAkycuHAHRg32OmUcww7on3RYdg4Va+PmSTsz/K68vbdEjh4u" crossorigin="anonymous"> -->

<!-- Optional theme-->
<!--
<link rel="stylesheet" href="https://maxcdn.bootstrapcdn.com/bootstrap-theme/3.3.7/css/bootstrap-theme.min.css" integrity="sha384-rHyoN1iRsVXV4nD0JutlnGaslCJuC7uwjduW9SVrLvRYooPp2bWYgmgJQIXwl/Sp" crossorigin="anonymous"> -->
<!--Font Awsome -->

<script src="https://use.fontawesome.com/ab3b696ea0.js"></script>

<link rel="stylesheet" type="text/css" href="<?php echo DIR_WS_THEMES.'css/'.MY_COLORS.'/stylesheet.css'; ?>" />

<link rel="stylesheet" type="text/css" href="<?php echo DIR_WS_THEMES.'css/'.MY_COLORS.'/jquery_datatables.css'; ?>" />
```

```

<link rel="stylesheet" type="text/css" href="<?php echo DIR_WS_THEMES.'css/'.MY_COLORS.'/jquery-ui.css';?>" />
<script type="text/javascript">
var module      = '<?php echo $module; ?>';
var pbBrowser   = (document.all) ? 'IE' : 'FF';
var text_search = '<?php echo TEXT_SEARCH; ?>';
var date_format = '<?php echo DATE_FORMAT; ?>';
var date_delimiter = '<?php echo DATE_DELIMITER; ?>';
var inactive_text_color = '#cccccc';
var form_submitted = false;
// Variables for script generated combo boxes
var icon_path    = '<?php echo DIR_WS_ICONS; ?>';
var combo_image_on = '<?php echo DIR_WS_ICONS . '16x16/phreebooks/pull_down_active.gif'; ?>';
var combo_image_off = '<?php echo DIR_WS_ICONS . '16x16/phreebooks/pull_down_inactive.gif'; ?>';
<?php if (is_object($currencies)) { // will not be defined unless logged in and db defined ?>
var decimal_places = '<?php echo $currencies->currencies[DEFAULT_CURRENCY]['decimal_places']; ?>';
var decimal_precise = '<?php echo $currencies->currencies[DEFAULT_CURRENCY]['decimal_precise']; ?>';
var decimal_point = "<?php echo $currencies->currencies[DEFAULT_CURRENCY]['decimal_point']; ?>"; //
leave " for ' separator
var thousands_point = "<?php echo $currencies->currencies[DEFAULT_CURRENCY]['thousands_point']; ?>";
var formatted_zero = "<?php echo $currencies->format(0); ?>";
<?php } ?>
</script>
<script type="text/javascript" src="includes/jquery-1.6.2.min.js"></script>
<script type="text/javascript" src="includes/jquery-ui-1.8.16.custom.min.js"></script>
<script type="text/javascript" src="includes/jquery.dataTables.min.js"></script>
<!--<script type="text/javascript" src="<?php echo DIR_WS_THEMES.'css/'.MY_COLORS.'/bootstrap/js/bootstrap.min.js'; ?>"></script> -->
<!--<script type="text/javascript" src="https://www.google.com/jsapi"></script> -->
<script type="text/javascript" src="includes/common.js"></script>
<!-- Latest compiled and minified JavaScript -->
<!--<script src="https://maxcdn.bootstrapcdn.com/bootstrap/3.3.7/js/bootstrap.min.js"
integrity="sha384-Tc5IQib027qvyjSMfHjOMaLkfuWVxUPnPnCJA7l2mCWNIpG9mGCD8wGNicPD7Txa"
crossorigin="anonymous"></script> -->
<?php
require_once(DIR_FS_ADMIN . DIR_WS_THEMES . '/config.php');
// load the jquery and javascript translations
if (file_exists($js_i18n = 'modules/phreedom/custom/language/' . $_SESSION['language'] . '/jquery_i18n.js')) {
} elseif(file_exists($js_i18n = 'modules/phreedom/language/' . $_SESSION['language'] . '/jquery_i18n.js')) {
} else $js_i18n = 'modules/phreedom/language/en_us/jquery_i18n.js';
echo' <script type="text/javascript" src="'.$js_i18n.'"></script>' . "\n";
// load the javascript specific, required
$js_include_path = DIR_FS_WORKING . 'pages/' . $page . '/js_include.php';
if(file_exists($js_include_path)) { require_once($js_include_path); }
else die('No js_include file, looking for the file: ' . $js_include_path);
// load the custom javascript if present
$js_include_path = DIR_FS_WORKING . 'custom/pages/' . $page . '/extra_js.php';
if(file_exists($js_include_path)) { require_once($js_include_path); }
if (SESSION_AUTO_REFRESH == '1') echo
<script type="text/javascript">addLoadEvent(refreshSessionClock);</script>' . chr(10);
?>
<script type="text/javascript">addLoadEvent(init);</script>
</head>
<body background="images/bg.jpg">
<!--<img src='images/erp_logo.png'><br />-->

```

```

<?php
// if (isset($_SESSION['company'])) {
//     echo "<img style='height:25px; margin-top:10px' src='images/erp_logo.png'><br />";
//     echo "<span style='font-size:14px' class='company_name_text'>&ampnbsp&ampnbspCompany Name :</span><span style='font-size:14px' class='company_name_header'>".COMPANY_NAME."</span>";
//} else {
// echo "<div class='login-logo'><img src='images/erp_logo.png'><br /></div>";
//}
//?>

<?php
if (isset($_SESSION['company'])) {
?>
<div class="container-fluid">
<div class="row">
<div class="col-md-6">
    <br />
</div>
<div class="col-md-6 text-right" style="padding-top:10px">
    <span style="font-size:14px" class="company_name_text">&ampnbsp&ampnbspCompany Name :</span>
    <span style="font-size:14px" class="company_name_header"> ?php echo COMPANY_NAME; ?>
</span>
    </div>
</div>
</div>
<?php
} else{
    echo "<div class='login-logo'><img src='images/erp_logo_ju.png'><br /></div>";
}
?>

<br />
<script type="text/javascript" src="modules/phreedom/includes/wz_tooltip/wz_tooltip.js"></script>
<script type="text/javascript" src="modules/phreedom/includes/wz_tooltip/tip_balloon.js"></script>
<div id="please_wait"><p><?php echo html_icon('phreebooks/please_wait.gif', TEXT_PLEASE_WAIT, 'large'); ?></p></div>

<!-- Menu -->
<?php if ($include_header) { require_once(DIR_FS_ADMIN . DIR_WS_THEMES . '/menu.php'); } else echo "<div>\n?>
<!-- Template -->
<?php if (is_file($template_path)) { require($template_path); } else trigger_error('No template file: ' . $template_path, E_USER_ERROR); ?>
</div>
<!-- Footer -->
<?php if ($include_footer) {
echo "<hr />";
// Hook for custom logo
$image_path = defined('FOOTER_LOGO') ? FOOTER_LOGO : (DIR_WS_ADMIN . 'modules/phreedom/images/erp_logo_pmscs3.png');
?>

```

```

<div style="clear:both;text-align:center;font-size:11px">
<!-- <a href="http://www.cloudcarebd.com" target="_blank"> -->
<?php echo html_image($image_path, TEXT_PHREEDOM_INFO, NULL, '22'); ?></a>
<br />
<?php
    // $footer_info      = COMPANY_NAME.' | '.TEXT_ACCOUNTING_PERIOD.';
    '.CURRENT_ACCOUNTING_PERIOD.' | '.TEXT_PHREEDOM_INFO.' ('MODULE_PHREEDOM_VERSION.')
';

    // $footer_info      = COMPANY_NAME.' | '.TEXT_ACCOUNTING_PERIOD.';
    '.CURRENT_ACCOUNTING_PERIOD.' | '.TEXT_PHREEDOM_INFO;
    $footer_info      = COMPANY_NAME.' | '.TEXT_ACCOUNTING_PERIOD.';
    '.CURRENT_ACCOUNTING_PERIOD;
    //if ($module <> 'phreedom') $footer_info .= '(' . $module . ' ' . constant('MODULE_' . strtoupper($module) .
    '_STATUS') . ')';
    // $footer_info .= '<br />' . TEXT_COPYRIGHT . ' ©' . date('Y') . ' <a href="http://www.cloudcarebd.com"
target=_blank">' . COMPANY_NAME.'</a>';
    $footer_info .= '<br />' . 'Page Execution Time :';
    $footer_info .= ' ' . (int)(1000 * (microtime(true) - PAGE_EXECUTION_START_TIME)) . ' ms || ' .
    $db->count_queries . ' SQLs : ' . (int)($db->total_query_time * 1000).' ms';
    echo $footer_info;
?>
</div>
<?php } // end if include_footer ?>
</body>
</html>
<?php } // end else if (custom_html) ?>
```

5.1.2 common_classes.php

```

// Path: /includes/ common_classes.php

// General functions used across modules. Divided into the following sections:
// Section 1. Class toolbar
// Section 2. Class splitPageResults
// Section 3. Class objectInfo
// Section 4. Class messageStack
// Section 5. Class ctlPanel
// Section 6. Class currencies
// Section 7. Class encryption

***** *****/
// Section 1. Class toolbar
***** *****/
class toolbar {
    public $id      = 0;
    public $search_text  = "";
    public $search_period = CURRENT_ACCOUNTING_PERIOD;
    public $period_strict = true; // if set to true, the 'All' option is included
    public $search_prefix = ";
```

```

public $icon_size = 'large'; // default icon size (choice are small, medium, large)
public $icon_list = array();

function __construct($id = '0') {
    // set up the default toolbar
    $this->id = $id;
    $this->icon_list['cancel'] = array('show' => true, 'icon' => 'actions/edit-undo.png', 'params' => '', 'text' => TEXT_CANCEL, 'order' => 1);
    $this->icon_list['open'] = array('show' => true, 'icon' => 'actions/document-open.png', 'params' => '', 'text' => TEXT_OPEN, 'order' => 2);

    // $this->icon_list['import'] = array('show' => true, 'icon' => 'actions/import_journal.png', 'params' => '', 'text' => TEXT_IMPORT, 'order' => 6);

    $this->icon_list['save'] = array('show' => true, 'icon' => 'devices/media-floppy.png', 'params' => '', 'text' => TEXT_SAVE, 'order' => 3);
    $this->icon_list['delete'] = array('show' => true, 'icon' => 'actions/edit-delete.png', 'params' => '', 'text' => TEXT_DELETE, 'order' => 4);
    $this->icon_list['print'] = array('show' => true, 'icon' => 'phreebooks/pdficon_large.gif', 'params' => '', 'text' => TEXT_PRINT, 'order' => 5);
}

function add_icon($name, $params = "", $order = 98) { // adds some common icons, per request
switch ($name) {
    case 'back':
    case 'previous': $image = 'actions/go-previous.png'; $text = TEXT_BACK; break;
    case 'continue':
    case 'next': $image = 'actions/go-next.png'; $text = TEXT_CONTINUE; break;
    case 'copy': $image = 'actions/edit-copy.png'; $text = TEXT_COPY; break;
    case 'edit': $image = 'actions/edit-find-replace.png'; $text = TEXT_EDIT; break;
    case 'email': $image = 'apps/internet-mail.png'; $text = GEN_EMAIL; break;
    case 'export': $image = 'actions/format-indent-more.png'; $text = TEXT_EXPORT; break;
    case 'export_csv': $image = 'mimetypes/x-office-spreadsheet.png'; $text = TEXT_EXPORT_CSV; break;
    case 'finish': $image = 'actions/document-save.png'; $text = TEXT_FINISH; break;
    case 'import': $image = 'actions/format-indent-less.png'; $text = TEXT_IMPORT; break;
    case 'new': $image = 'actions/document-new.png'; $text = TEXT_NEW; break;
    case 'recur': $image = 'actions/go-jump.png'; $text = TEXT_RECUR; break;
    case 'rename': $image = 'apps/accessories-text-editor.png'; $text = TEXT_RENAME; break;
    case 'payment': $image = 'apps/accessories-calculator.png'; $text = TEXT_PAYMENT; break;
    case 'ship_all': $image = 'mimetypes/package-x-generic.png'; $text = TEXT_SHIP_ALL; break;
    case 'search': $image = 'actions/system-search.png'; $text = TEXT_SEARCH; break;
    case 'update': $image = 'apps/system-software-update.png'; $text = TEXT_UPDATE; break;
    default: $image = 'emblems/emblem-important.png'; $text = $name . ' ICON NOT FOUND';
}
if ($image) $this->icon_list[$name] = array('show' => true, 'icon' => $image, 'params' => $params, 'text' => $text, 'order' => $order);
}

function add_help($index = "", $order = 99) { // adds some common icons, per request
$this->icon_list['help'] = array(
    'show' => true,
    'icon' => 'apps/help-browser.png',
    'params' => 'onclick="window.open(\"'. FILENAME_DEFAULT .'.'. $index .'.'. '.php?module=phreehelp&page=main&idx='.
    '\\",\\\"width\\\"=800,height\\\"=600,resizable\\\"=1,scrollbars\\\"=1,top\\\"=100,left\\\"=100\\\")\"',
    'text' => TEXT_HELP,
}

```

```

'order' => $order,
);
}

function build_toolbar($add_search = false, $add_period = false, $cal_props = false) { // build the main toolbar
global $messageStack;
$output = "";
if ($add_search) $output .= $this->add_search();
if ($add_period) $output .= $this->add_period();
if ($cal_props) $output .= $this->add_date($cal_props);
$output .= '<div id="tb_main_' . $this->id . '" class="ui-state-hover" style="border:0px;">' . "\n";
// Sort the icons by designated order
$sort_arr = array();
foreach($this->icon_list as $unqid => $row) foreach($row as $key => $value) $sort_arr[$key][$unqid] = $value;
array_multisort($sort_arr['order'], SORT_ASC, $this->icon_list);
foreach ($this->icon_list as $id => $icon) {
    if ($icon['show']) $output .= html_icon($icon['icon'], $icon['text'], $this->icon_size, 'id ="tb_icon_' . $id . "' style='cursor:pointer;" . $icon['params']) . "\n";
}
$output .= '</div>' . "\n"; // end of the right justified icons
// display alerts/error messages, if any
$output .= $messageStack->output();
return $output;
}

function add_search() {
if($this->search_text == "") $this->search_text = $_REQUEST['search_text'];
$output = '<div id="tb_search_' . $this->id . '" class="ui-state-hover" style="float:right; border:0px;">' . "\n";
$output .= HEADING_TITLE_SEARCH_DETAIL . '<br />';
$output .= html_input_field('search_text', $this->search_text, $params = 'onkeypress="checkEnter(event);"]');
if ($this->search_text) $output .= '&nbsp;' . html_icon('actions/view-refresh.png', TEXT_RESET, 'small', 'onclick="location.href = \'index.php?\' . gen_get_all_get_params(array(\'search_text\', \'search_period\', \'search_date\', \'so\', \'sf\', \'list\', \'action\')) . \'&reset=1\';" style="cursor:pointer;"');
$output .= '&nbsp;' . html_icon('actions/system-search.png', TEXT_SEARCH, 'small', 'onclick="searchPage(\' . gen_get_all_get_params(array(\'search_text\', \'list\', \'action\')) . \')"' style="cursor:pointer;"');
$output .= '</div>' . "\n";
return $output;
}

function add_period() {
$output = '<div id="tb_period_' . $this->id . '" class="ui-state-hover" style="float:right; border:0px;">' . "\n";
$output .= TEXT_INFO_SEARCH_PERIOD_FILTER . '<br />' . "\n";
$output .= html_pull_down_menu('search_period', gen_get_period_pull_down($this->period_strict), $this->search_period, 'onchange="periodPage(\' . gen_get_all_get_params(array(\'action\', \'list\')) . \')"' );
$output .= '</div>' . "\n";
return $output;
}

function add_date($cal_props) {
$output = '<div id="tb_date_' . $this->id . '" class="ui-state-hover" style="float:right; border:0px;">' . "\n";
$output .= TEXT_DATE . '<br />' . "\n";
$output .= html_calendar_field($cal_props) . "\n";
$output .= '</div>' . "\n";
return $output;
}

```

```

}

***** ****
// Section 2. Class splitPageResults
***** ****
class splitPageResults {
    public $current_page_number = 1;
public $jump_page_displayed = false;
public $max_rows_per_page = MAX_DISPLAY_SEARCH_RESULTS;
public $page_prefix = ",";
public $page_start = 0;
public $total_num_rows = 0;
public $total_num_pages = 1;

function __construct($current_page_number, $query_num_rows) {
    global $db, $messageStack;
    if($query_num_rows == "") {
        $temp = $db->Execute('SELECT FOUND_ROWS() AS found_rows;');
        $query_num_rows = $temp->fields['found_rows'];
    }
    $this->total_num_rows = $query_num_rows;
    $this->current_page_number = max(1, $current_page_number);
    $this->total_num_pages = ceil($this->total_num_rows / $this->max_rows_per_page);
    if ($this->total_num_pages == 0) $this->total_num_pages = 1;
    if ($this->total_num_pages < $this->current_page_number) $this->current_page_number = max(1,
$this->total_num_pages);
}

function display_links($page_name = 'list') {
    $pages_array = array();
    for ($i = 1; $i <= $this->total_num_pages; $i++) $pages_array[] = array('id' => $i, 'text' => $i);
    if ($this->total_num_pages > 1) {
        $display_links = "";
        if ($this->current_page_number > 1) {
            $display_links .= html_icon('actions/media-skip-backward.png', TEXT_GO_FIRST,
'small', 'onclick="location.href = "' . html_href_link(FILENAME_DEFAULT,
gen_get_all_get_params(array('action')) . '&action=go_first', 'SSL') . '" style="cursor:pointer;"');
            $display_links .= html_icon('phreebooks/media-playback-previous.png',
TEXT_GO_PREVIOUS, 'small', 'onclick="location.href = "' . html_href_link(FILENAME_DEFAULT,
gen_get_all_get_params(array('action')) . '&action=go_previous', 'SSL') . '" style="cursor:pointer;"');
        } else {
            $display_links .= html_icon('actions/media-skip-backward.png', 'small', '');
            $display_links .= html_icon('phreebooks/media-playback-previous.png', 'small', '');
        }
        if (!$this->jump_page_displayed) { // only diplay pull down once (the rest are not read by browser)
            $display_links .= sprintf(TEXT_RESULT_PAGE,
html_pull_down_menu($page_name, $pages_array, $this->current_page_number, 'onchange="jumpToPage(" .
gen_get_all_get_params(array('list', 'action')) . '&action=go_page\\")"', $this->total_num_pages));
            $this->jump_page_displayed = true;
        } else {
            $display_links .= sprintf(TEXT_RESULT_PAGE, $this->current_page_number,
$this->total_num_pages);
        }
    }
}

```

```

        if (($this->current_page_number < $this->total_num_pages) && ($this->total_num_pages != 1)) {
            $display_links .= html_icon('actions/media-playback-start.png', TEXT_GO_NEXT,
'small', 'onclick="location.href = \" . html_href_link(FILENAME_DEFAULT,
gen_get_all_get_params(array('action')) . '&action=go_next', 'SSL') . '\" style="cursor:pointer;\"");
            $display_links .= html_icon('actions/media-skip-forward.png', TEXT_GO_LAST,
'small', 'onclick="location.href = \" . html_href_link(FILENAME_DEFAULT,
gen_get_all_get_params(array('action')) . '&action=go_last', 'SSL') . '\" style="cursor:pointer;\"");
        } else {
            $display_links .= html_icon('actions/media-playback-start.png', 'small', '');
            $display_links .= html_icon('actions/media-skip-forward.png', 'small', '');
        }
    } else {
        $display_links = sprintf(TEXT_RESULT_PAGE, $this->total_num_pages, $this->total_num_pages);
    }
    return $display_links;
}

function display_ajax($page_name = 'list', $id = '') {
    $display_links = '';
    $pages_array = array();
    for ($i = 1; $i <= $this->total_num_pages; $i++) $pages_array[] = array('id' => $i, 'text' => $i);
    if ($this->total_num_pages > 1) {
        if ($this->current_page_number > 1) {
            $display_links .= html_icon('actions/media-skip-backward.png', TEXT_GO_FIRST,
'small', 'onclick="tabPage(\" . $id . '\', \'go_first\')" style="cursor:pointer;\"");
            $display_links .= html_icon('phreebooks/media-playback-previous.png',
TEXT_GO_PREVIOUS, 'small', 'onclick="tabPage(\" . $id . '\', \'go_previous\')" style="cursor:pointer;\"");
        } else {
            $display_links .= html_icon('actions/media-skip-backward.png', 'small', '');
            $display_links .= html_icon('phreebooks/media-playback-previous.png', 'small', '');
        }
        if (!$this->jump_page_displayed) { // only display pull down once (the rest are not read by browser)
            $display_links = sprintf(TEXT_RESULT_PAGE,
html_pull_down_menu($page_name, $pages_array, $this->current_page_number, 'onchange="tabPage(\" . $id .
'\', \'go_page\')\"'), $this->total_num_pages);
            $this->jump_page_displayed = true;
        } else {
            $display_links = sprintf(TEXT_RESULT_PAGE, $this->current_page_number,
$this->total_num_pages);
        }
        if (($this->current_page_number < $this->total_num_pages) && ($this->total_num_pages != 1)) {
            $display_links .= html_icon('actions/media-playback-start.png', TEXT_GO_NEXT,
'small', 'onclick="tabPage(\" . $id . '\', \'go_next\')" style="cursor:pointer;\"");
            $display_links .= html_icon('actions/media-skip-forward.png', TEXT_GO_LAST,
'small', 'onclick="tabPage(\" . $id . '\', \'go_last\')" style="cursor:pointer;\"");
        } else {
            $display_links .= html_icon('actions/media-playback-start.png', 'small', '');
            $display_links .= html_icon('actions/media-skip-forward.png', 'small', '');
        }
    } else {
        $display_links = sprintf(TEXT_RESULT_PAGE, $this->total_num_pages, $this->total_num_pages);
        $display_links .= html_hidden_field($page_name, '1');
    }
    return $display_links;
}

```

```

function display_count($text_output){
    if ($text_output == " " || !is_string($text_output)) $text_output = TEXT_DISPLAY_NUMBER .
TEXT_ITEMS;
    $to_num = ($this->max_rows_per_page * $this->current_page_number);
    if ($to_num > $this->total_num_rows) $to_num = $this->total_num_rows;
    $from_num = ($this->max_rows_per_page * ($this->current_page_number - 1));
    if ($to_num == 0) {
        $from_num = 0;
    } else {
        $from_num++;
    }
    return sprintf($text_output, $from_num, $to_num, $this->total_num_rows);
}

//************************************************************************
// Section 3. Class objectInfo
//************************************************************************
class objectInfo {
    function __construct($object_array = array()) {
        if (is_array($object_array)) {
            reset($object_array);
            while (list($key, $value) = each($object_array)) $this->$key = db_prepare_input($value);
        }
    }
}

//************************************************************************
// Section 4. Class messageStack
//************************************************************************
class messageStack {
    public $debug_info      = NULL;

    function add($message, $type = 'error') {
        if ($type == 'error') {
            $_SESSION['messageToStack'][] = array('type' => $type, 'params' => 'class="ui-state-error"', 'text' =>
html_icon('emblems/emblem-unreadable.png', TEXT_ERROR) . '&nbsp;' . $message);
        } elseif ($type == 'success') {
            if (!HIDE_SUCCESS_MESSAGES) $_SESSION['messageToStack'][] = array('type' => $type, 'params' =>
'class="ui-state-active"', 'text' => html_icon('emotes/face-smile.png', TEXT_SUCCESS) . '&nbsp;' .
$message);
        } elseif ($type == 'caution' || $type == 'warning') {
            $_SESSION['messageToStack'][] = array('type' => $type, 'params' => 'class="ui-state-highlight"', 'text' =>
html_icon('emblems/emblem-important.png', TEXT_CAUTION) . '&nbsp;' . $message);
        } else {
            $_SESSION['messageToStack'][] = array('type' => $type, 'params' => 'class="ui-state-error"', 'text' =>
$message);
        }
        $this->debug("\n On screen displaying '$type' message = $message file = $file line = $line");
        return true;
    }
}

```

```

function reset() {
    unset($_SESSION['messageToStack']);
}

/**
 * this function will be replaced by the add function.
 * @todo = Remove
 */

function add_session($message, $type = 'error') {
    trigger_error('messageStack->add_session will be removed', E_USER_DEPRECATED);
    if ($type == 'error') {
        $_SESSION['messageToStack'][] = array('type' => $type, 'params' => 'class="ui-state-error"', 'text' =>
html_icon('emblems/emblem-unreadable.png', TEXT_ERROR) . '&nbsp;' . $message);
    } elseif ($type == 'success') {
        if (!HIDE_SUCCESS_MESSAGES) $_SESSION['messageToStack'][] = array('type' => $type, 'params' => 'class="ui-state-active"', 'text' => html_icon('emotes/face-smile.png', TEXT_SUCCESS) . '&nbsp;' . $message);
    } elseif ($type == 'caution' || $type == 'warning') {
        $_SESSION['messageToStack'][] = array('type' => $type, 'params' => 'class="ui-state-highlight"', 'text' => html_icon('emblems/emblem-important.png', TEXT_CAUTION) . '&nbsp;' . $message);
    } else {
        $_SESSION['messageToStack'][] = array('type' => $type, 'params' => 'class="ui-state-error"', 'text' => $message);
    }
    $this->debug("\n On screen displaying '$type' message = $message file = $file line = $line");
}

function output() {
    $output = NULL;
    if (!isset($_SESSION['messageToStack'])) return "";
    $output .= '<table style="border-collapse:collapse;width:100%">' . chr(10);
    foreach ($_SESSION['messageToStack'] as $value) {
        $output .= '<tr><td ' . $value['params'] . ' style="width:100%">' . $value['text'] . '</td></tr>' .
chr(10);
    }
    $output .= '</table>' . chr(10);
    $this->reset();
    return $output;
}

function debug_header() {
    $this->debug_info .= "Trace information for debug purposes. Phreedom release " .
MODULE_PHREEDOM_VERSION . ", generated " . date('Y-m-d H:i:s') . ".\n";
    $this->debug_info .= "\nGET Vars = " . arr2string($_GET);
    $this->debug_info .= "\nPOST Vars = " . arr2string($_POST);
    $this->debug_info .= "\nREQUEST Vars = " . arr2string($_REQUEST);
    $this->debug_info .= "\nSESSION Vars = " . arr2string($_SESSION);
}

function debug($txt) {
    global $db;
    if (substr($txt, 0, 1) == "\n") {
//echo "\nTime: " . (int)(1000 * (microtime(true) - PAGE_EXECUTION_START_TIME)) . " ms, " .
$db->count_queries . " SQLs " . (int)($db->total_query_time * 1000)." ms => " . substr($txt, 1) . '<br>';

```

```

    $this->debug_info .= "\nTime: " . (int)(1000 * (microtime(true) - PAGE_EXECUTION_START_TIME))
. " ms, " . $db->count_queries . " SQLs " . (int)($db->total_query_time * 1000)." ms => ";
    $this->debug_info .= substr($txt, 1);
} else {
    $this->debug_info = $txt;
}
}

function write_debug() {
    global $db;
    if (strlen($this->debug_info) < 1) return;
    $this->debug_info .= "\n\nPage trace stats: Execution Time: " . (int)(1000 * (microtime(true) - PAGE_EXECUTION_START_TIME)) . " ms, " . $db->count_queries . " queries taking " . (int)($db->total_query_time * 1000)." ms";
    $filename = DIR_FS_MY_FILES . 'trace.txt';
    if (!$handle = fopen($filename, 'w')) return $this->add("Cannot open file ($filename)", "error");
    if (fwrite($handle, $this->debug_info) === false) return $this->add("Cannot write to file ($filename)", "error");
    fclose($handle);
    $this->debug_info = NULL;
    $this->add("Successfully created trace.txt file.", "success");
}
}

// Section 5. Class ctlPanel
*****// Section 5. Class ctlPanel*****
*****// Section 5. Class ctlPanel*****

class ctl_panel {
public $dashboard_id      = "";
public $default_num_rows   = 20;
public $description        = "";
public $max_length          = 20;
public $menu_id             = 'index';
public $module_id           = "";
public $params               = "";
public $security_id         = "";
public $title                = "";
public $version              = 1;
public $valid_user           = false;
public $size_params           = 0;
public $default_params        = array();

    function __construct() {
        if      ($this->security_id      <> "")      )      $this->valid_user      =
($_SESSION['admin_security'][$this->security_id] > 0)? true : false;
        else $this->valid_user = true;
    }

    function pre_install($odd, $my_profile){
        if(!$this->valid_user) return false;
        $output = '<tr class="'.($odd?'odd':'even').'"><td align="center">';
        $checked = (in_array($this->dashboard_id, $my_profile)) ? ' selected' : '';
        $output .= html_checkbox_field($this->dashboard_id, '1', $checked, "", $parameters = "");
        $output .= '</td><td>' . $this->title . '</td><td>' . $this->description . '</td></tr>';
    }
}

```

```

        return $output;
    }

    function Install($column_id = 1, $row_id = 0) {
        global $db;
        if (!$row_id) $row_id = $this->get_next_row();
        // $this->params['num_rows'] = $this->default_num_rows; // defaults to unlimited rows
        $result = $db->Execute("insert into ". TABLE_USERS_PROFILES . " set
            user_id = " . $_SESSION['admin_id'] . ",
            menu_id = " . $this->menu_id . ",
            module_id = " . $this->module_id . ",
            dashboard_id = " . $this->dashboard_id . ",
            column_id = " . $column_id . ",
            row_id = " . $row_id . ",
            params = " . serialize($this->default_params) . """);
    }

    function Remove() {
        global $db;
        $result = $db->Execute("delete from ". TABLE_USERS_PROFILES . "
            where user_id = " . $_SESSION['admin_id'] . " and menu_id = " . $this->menu_id . " and dashboard_id
            = " . $this->dashboard_id . """);
    }

    function Update() {
        global $db;
        $db->Execute("update ". TABLE_USERS_PROFILES . " set params = " .
        serialize($this->params) . "
            where user_id = " . $_SESSION['admin_id'] . " and menu_id = " . $this->menu_id . "
            and dashboard_id = " . $this->dashboard_id . "");
    }

    function build_div($title, $contents, $controls) {
        if (!$this->valid_user) return false;
        $output = '';
        if ($this->version < 3.5 || ! $this->version) $output .= 'update dashboard ' . $this->title . '<br/>';
        $output .= '<!-- start: ' . $this->dashboard_id . '-->' . chr(10);
        $output .= '<div id="" . $this->dashboard_id . " style="position:relative;">' . chr(10);
        $output .= '<table class="ui-widget" style="border-collapse:collapse;width:100%">' . chr(10);
        $output .= '<thead class="ui-widget-header">' . chr(10);
        $output .= '<tr>' . chr(10);
        // heading text
        $output .= '<td style="width:90%">' . $this->title . '&nbsp;</td>' . chr(10);
        // edit/cancel image (text)
        $output .= '<td>' . chr(10);
        $output .= ' <div id="" . $this->dashboard_id . '_add"><a href="javascript:void(0)" onclick ="return
        box_edit("' . $this->dashboard_id . '");">';
        $output .= html_icon('categories/preferences-system.png', TEXT_PROPERTIES, $size = 'small', ', '16',
        '16');
        $output .= ' </a></div>' . chr(10);
        $output .= ' <div id="" . $this->dashboard_id . '_can" style="display:none"><a href="javascript:void(0)"
        onclick ="return box_cancel("' . $this->dashboard_id . '");">';
        $output .= html_icon('status/dialog-error.png', TEXT_CANCEL, $size = 'small', ', '16', '16');
        $output .= '</a></div>' . chr(10);
        $output .= '</td>' . chr(10);
        // minimize/maximize image
    }
}

```

```

$output .= '<td>' . chr(10);
$output .= '<a href="javascript:void(0)" id="" . $this->dashboard_id . '_min" onclick="this.blur(); return
min_box(\" . $this->dashboard_id . \")">' . chr(10);
$output .= html_icon('actions/list-remove.png', TEXT_COLLAPSE, $size = 'small', " '16', '16",
$this->dashboard_id . '_exp');
$output .= '</a></td>' . chr(10);
// delete image
$output .= '<td>' . chr(10);
$output .= '<a href="javascript:void(0)" id="" . $this->dashboard_id . '_del" onclick="return del_box(\" .
$this->dashboard_id . \")">' . chr(10);
$output .= html_icon('emblems/emblem-unreadable.png', TEXT_REMOVE, $size = 'small');
$output .= '</a>' . chr(10);
$output .= '</td></tr>' . chr(10);
$output .= '</thead>' . chr(10);
// properties contents
$output .= '<tbody class="ui-widget-content">' . chr(10);
$output .= '<tr id="" . $this->dashboard_id . '_prop" style="display:none"><td colspan="4">' . chr(10);
$output .= html_form($this->dashboard_id . '_frm', FILENAME_DEFAULT,
gen_get_all_get_params(array('action'))) . chr(10);
$output .= $this->build_move_buttons($this->column_id, $this->row_id);
$output .= $controls . chr(10);
$output .= '<input type="hidden" name="dashboard_id" value="" . $this->dashboard_id . "" />' . chr(10);
$output .= '<input type="hidden" name="column_id" value="" . $this->column_id . "" />' . chr(10);
$output .= '<input type="hidden" name="row_id" value="" . $this->row_id . "" />' . chr(10);
$output .= '<input type="hidden" name="action" id="" . $this->dashboard_id . '_action" value="save" />' .
chr(10);
$output .= '</form></td></tr>' . chr(10);
$output .= '<tr id="" . $this->dashboard_id . '_hr" style="display:none"><td colspan="4"><hr
/><td></tr>' . chr(10);
// box contents
$output .= '<tr><td colspan="4">' . chr(10);
$output .= '<div id="" . $this->dashboard_id . '_body">' . chr(10);
$output .= $contents;
$output .= '</div>';
$output .= '</td></tr></tbody></table>' . chr(10);
// finish it up
$output .= '</div>' . chr(10);
$output .= '<!-- end: ' . $this->dashboard_id . ' //--><br />' . chr(10) . chr(10);
return $output;
}

function build_move_buttons($column_id, $row_id) {
$output = '<table style="border-collapse:collapse"><tr>' . chr(10);
// move button - Left
if ($column_id > 1) {
    $output .= '<td>' . chr(10);
    $output .= '<a href="javascript:void(0)" onclick="return move_box(\" . $this->dashboard_id . \' ,
'move_left\'")">' . chr(10);
    $output .= html_icon('actions/go-previous.png', TEXT_MOVE_LEFT, $size = 'small');
    $output .= '</a>' . chr(10);
    $output .= '</td>' . chr(10);
}
// move button - Right
if ($column_id < MAX_CP_COLUMNS) {
    $output .= '<td>' . chr(10);
}

```

```

        $output .= '<a href="javascript:void(0)" onclick="return move_box(\"' . $this->dashboard_id . '\",
\'move_right\')">';
        $output .= html_icon('actions/go-next.png', TEXT_MOVE_RIGHT, $size = 'small');
        $output .= '</a>' . chr(10);
        $output .= '</td>' . chr(10);
    }
    // move button - Up
    if($row_id > 1) {
        $output .= '<td>' . chr(10);
        $output .= '<a href="javascript:void(0)" onclick="return move_box(\"' . $this->dashboard_id . '\',
\'move_up\')">';
        $output .= html_icon('actions/go-up.png', TEXT_MOVE_UP, $size = 'small');
        $output .= '</a>' . chr(10);
        $output .= '</td>' . chr(10);
    }
    // move button - Down
    if($row_id < $this->get_next_row($column_id) - 1) {
        $output .= '<td>' . chr(10);
        $output .= '<a href="javascript:void(0)" onclick="return move_box(\"' . $this->dashboard_id . '\',
\'move_down\')">';
        $output .= html_icon('actions/go-down.png', TEXT_MOVE_DOWN, $size = 'small');
        $output .= '</a>' . chr(10);
        $output .= '</td>' . chr(10);
    }
    $output .= '</tr></table>';
    return $output;
}

function get_next_row($column_id = 1) {
    global $db;
    $result = $db->Execute("select max(row_id) as max_row from " . TABLE_USERS_PROFILES . "
        where user_id = " . $_SESSION['admin_id'] . " and menu_id = " . $this->menu_id . " and column_id =
        " . $column_id);
    return ($result->fields['max_row'] + 1);
}

function Upgrade($params){
    foreach ($this->default_params as $key => $value){
        if(in_array($key, $params, false)){
            $this->params[$key] = $params[$key];
        }else{
            $this->params[$key] = $value;
        }
    }
    $this->Update();
    return $this->params;
}
}

// Section 6. Class currencies
class currencies {
    public $currencies = array();
}

```

```

function __construct() {
    global $db, $messageStack;
    $currencies = $db->Execute("select * from ". TABLE_CURRENCIES);
    while (!$currencies->EOF) {
        $this->currencies[$currencies->fields['code']] = array(
            'title'      => $currencies->fields['title'],
            'symbol_left' => $currencies->fields['symbol_left'],
            'symbol_right' => $currencies->fields['symbol_right'],
            'decimal_point' => $currencies->fields['decimal_point'],
            'thousands_point' => $currencies->fields['thousands_point'],
            'decimal_places' => $currencies->fields['decimal_places'],
            'decimal_precise' => $currencies->fields['decimal_precise'],
            'value'       => $currencies->fields['value'],
        );
        $currencies->MoveNext();
    }
}

if (DEFAULT_CURRENCY == "") { // do not put this in the translation file, it is loaded before the language file is loaded.
    $messageStack->add('You do not have a default currency set, PhreeBooks requires a default currency to operate properly! Please set the default currency in Setup -> Currencies.', 'error');
}
}

// omits the symbol_left and symbol_right (just the formattted number)
function format($number, $calculate_currency_value = true, $currency_type = DEFAULT_CURRENCY, $currency_value = "") {
    if ($calculate_currency_value) {
        $rate = ($currency_value) ? $currency_value : $this->currencies[$currency_type]['value'];
        $format_string = number_format($number * $rate, $this->currencies[$currency_type]['decimal_places'], $this->currencies[$currency_type]['decimal_point'], $this->currencies[$currency_type]['thousands_point']);
    } else {
        $format_string = number_format($number, $this->currencies[$currency_type]['decimal_places'], $this->currencies[$currency_type]['decimal_point'], $this->currencies[$currency_type]['thousands_point']);
    }
    return $format_string;
}

// omits the symbol_left and symbol_right (just the formattted number to the precision number of decimals))
function precise($number, $calculate_currency_value = true, $currency_type = DEFAULT_CURRENCY, $currency_value = "") {
    if ($calculate_currency_value) {
        $rate = ($currency_value) ? $currency_value : $this->currencies[$currency_type]['value'];
        $format_string = number_format($number * $rate, $this->currencies[$currency_type]['decimal_precise'], $this->currencies[$currency_type]['decimal_point'], $this->currencies[$currency_type]['thousands_point']);
    } else {
        $format_string = number_format($number, $this->currencies[$currency_type]['decimal_precise'], $this->currencies[$currency_type]['decimal_point'], $this->currencies[$currency_type]['thousands_point']);
    }
    return $format_string;
}

function format_full($number, $calculate_currency_value = true, $currency_type = DEFAULT_CURRENCY, $currency_value = "", $output_format = PDF_APP) {
    if ($calculate_currency_value) {
        $rate = ($currency_value) ? $currency_value : $this->currencies[$currency_type]['value'];

```

```

$format_number = number_format($number * $rate, $this->currencies[$currency_type]['decimal_places'],
$this->currencies[$currency_type]['decimal_point'], $this->currencies[$currency_type]['thousands_point']);
} else {
    $format_number = number_format($number, $this->currencies[$currency_type]['decimal_places'],
$this->currencies[$currency_type]['decimal_point'], $this->currencies[$currency_type]['thousands_point']);
}
$zero = number_format(0, $this->currencies[$currency_type]['decimal_places']); // to handle -0.00
if ($format_number == '-'.$zero) $format_number = $zero;
$format_string = $this->currencies[$currency_type]['symbol_left'] . ' ' . $format_number . ' ' .
$this->currencies[$currency_type]['symbol_right'];
switch ($output_format) {
case 'FPDF': // assumes default character set
    $format_string = str_replace('&euro;', chr(128), $format_string); // Euro
    break;
default:
}
return $format_string;
}

function get_value($code) {
    return $this->currencies[$code]['value'];
}

function clean_value($number, $currency_type = DEFAULT_CURRENCY) {
// converts the number to standard float format (period as decimal, no thousands separator)
$temp = str_replace($this->currencies[$currency_type]['thousands_point'], " ", trim($number));
$value = str_replace($this->currencies[$currency_type]['decimal_point'], '.', $temp);
$value = preg_replace("/[^0-9.]+/", "", $value);
if ($value == null || $value == "") $value = 0;
return $value;
}

function build_js_currency_arrays() {
$js_codes = 'var js_currency_codes = new Array(';
$js_values = 'var js_currency_values = new Array(';
foreach ($this->currencies as $code => $values) {
    $js_codes .= "" . $code . ",";
    $js_values .= $this->currencies[$code]['value'] . ",";
}
$js_codes = substr($js_codes, 0, -1) . ",";
$js_values = substr($js_values, 0, -1) . ",";
return $js_codes . chr(10) . $js_values . chr(10);
}

*****  

*****  

// Section 7. Class encryption  

*****  

*****  

class encryption {
    private $scramble1      = "";
    private $scramble2      = "";
    public $errors          = array();
    private $adj             = 1.75;
    private $mod             = 3;
}

```

```

function __construct() {
    $this->scramble1 = "#$%&()*+,-./0123456789;:<=>?@ABCDEFGHIJKLMNPQRSTUVWXYZ[]^_`abcdefghijklmnopqrstuvwxyz";
    $this->scramble2 = "f^jAE]okIOzU[2&q1{3`h5w_794p@6s8?BgP>dFV=mD<TcS%Ze|r:IGK/uCy.Jx)HiQ!#$~(;Lt-R}Ma,NvW+Ynb*0X";
    if (strlen($this->scramble1) <> strlen($this->scramble2)) {
        trigger_error(** SCRAMBLE1 is not same length as SCRAMBLE2 **, E_USER_ERROR);
    }
}

function encrypt_cc($params) {
    global $messageStack;
    if (strlen($_SESSION['admin_encrypt']) < 1) {
        $messageStack->add(ACT_NO_KEY_EXISTS,'error');
        return false;
    }
    if ($params['number']) {
        $params['number'] = preg_replace("/[^0-9]/", "", $params['number']);
        $hint = substr($params['number'], 0, 4);
        for ($a = 0; $a < (strlen($params['number']) - 8); $a++) $hint .= '*';
        $hint .= substr($params['number'], -4);
        $payment = array(); // the sequence is important!
        $payment[] = $params['name'];
        $payment[] = $params['number'];
        $payment[] = $params['exp_mon'];
        $payment[] = $params['exp_year'];
        $payment[] = $params['cvv2'];
        if (isset($params['alt1'])) $payment[] = $params['alt1'];
        if (isset($params['alt2'])) $payment[] = $params['alt2'];
        $val = implode('.', $payment).'!';
        if (!$enc_value = $this->encrypt($_SESSION['admin_encrypt'], $val, 128)) {
            $messageStack->add('Encryption error - '. implode('. ', $encrypt->errors), 'error');
            return false;
        }
    }
    if (strlen($params['exp_year']) == 2) $params['exp_year'] = '20' . $params['exp_year'];
    $exp_date = $params['exp_year'].'.'.$params['exp_mon'].'-01';
    return array('hint' => $hint, 'encoded' => $enc_value, 'exp_date' => $exp_date);
}

function decrypt ($key, $source) {
    $this->errors = array();
    $fudgefactor = $this->_convertKey($key);
    if ($this->errors) return;
    if (empty($source)) {
        $this->errors[] = 'No value has been supplied for decryption';
        return;
    }
    $target = null;
    $factor2 = 0;
    for ($i = 0; $i < strlen($source); $i++) {
        $char2 = substr($source, $i, 1);
        $num2 = strpos($this->scramble2, $char2);
        if ($num2 === false) {

```

```

        $this->errors[] = "Source string contains an invalid character ($char2)";
        return;
    }
    $adj    = $this->_applyFudgeFactor($fudgefactor);
    $factor1 = $factor2 + $adj;
    $num1   = $num2 - round($factor1);
    $num1   = $this->_checkRange($num1);
    $factor2 = $factor1 + $num2;
    $char1 = substr($this->scramble1, $num1, 1);
    $target .= $char1;
//echo "char1=$char1, num1=$num1, adj= $adj, factor1= $factor1, num2=$num2, char2=$char2, factor2=
$factor2<br />\n";
}
return rtrim($target);
}

function encrypt ($key, $source, $sourcelen = 0) {
$this->errors = array();
$fudgefactor = $this->_convertKey($key);
if ($this->errors) return;
if (empty($source)) {
    $this->errors[] = 'No value has been supplied for encryption';
    return;
}
while (strlen($source) < $sourcelen) $source .= '';
$target = null;
$factor2 = 0;
for ($i = 0; $i < strlen($source); $i++) {
    $char1 = substr($source, $i, 1);
    $num1 = strpos($this->scramble1, $char1);
    if ($num1 === false) {
        $this->errors[] = "Source string contains an invalid character ($char1)";
        return;
    }
    $adj    = $this->_applyFudgeFactor($fudgefactor);
    $factor1 = $factor2 + $adj;
    $num2   = round($factor1) + $num1;
    $num2   = $this->_checkRange($num2);
    $factor2 = $factor1 + $num2;
    $char2  = substr($this->scramble2, $num2, 1);
    $target .= $char2;
//echo "char1=$char1, num1=$num1, adj= $adj, factor1= $factor1, num2=$num2, char2=$char2, factor2=
$factor2<br />\n";
}
return $target;
}

function getAdjustment () {
return $this->adj;
}

function getModulus () {
return $this->mod;
}

function setAdjustment ($adj) {

```

```

$this->adj = (float)$adj;
}

function setModulus ($mod) {
    $this->mod = (int)abs($mod);
}

function _applyFudgeFactor (&$fudgefactor) {
$fudge = array_shift($fudgefactor);
$fudge = $fudge + $this->adj;
$fudgefactor[] = $fudge;
if (!empty($this->mod)) if ($fudge % $this->mod == 0) $fudge = $fudge * -1;
return $fudge;
}

function _checkRange ($num) {
$num = round($num);
$limit = strlen($this->scramble1);
while ($num >= $limit) $num = $num - $limit;
while ($num < 0) $num = $num + $limit;
return $num;
}

function _convertKey ($key) {
if (empty($key)) {
    $this->errors[] = 'No value has been supplied for the encryption key';
    return;
}
$array[] = strlen($key);
$tot = 0;
for ($i = 0; $i < strlen($key); $i++) {
    $char = substr($key, $i, 1);
    $num = strpos($this->scramble1, $char);
    if ($num === false) {
        $this->errors[] = "Key contains an invalid character ($char)";
        return;
    }
    $array[] = $num;
    $tot = $tot + $num;
}
$array[] = $tot;
return $array;
}

?>
```

Chapter 6: Conclusion

6.1 Summary

Accounts and Inventory Management System can be designed for specific industries or regulatory environments. When choosing an integrated accounting system, companies should define a clear idea of what objectives it needs to accomplish. A few considerations could include what types of financial reports need to be generated, what are long term financial goals, what additional features are required and how many users need access to the system.

Today, companies of all sizes have adopted **Accounts and Inventory Management System**. Large firms might develop customized systems internally; although, such systems are the most expensive and are designed to work with in-house customer service and support.

To achieve maximum benefits, integrating inventory management and accounting software solutions should be real-time, flexible, transparent to users, reconcilable and scalable.

6.2 Future Work

The future plan of this project is to improved design; implementation and documentation in such

a way that the project becomes production ready. I will develop the site more dynamically and the database work as well. There are some limitations in my project. In future I will add the following modules to address these limitations.

- Return merchandise authorization (RMA)
- Budget
- Mobile application of the existing sites.
- More security in the system
- More user friendly system

6.3 Limitations

Without proper maintenance and proper input of data, the system may provide an automatic serial number for each incoming and outgoing goods recording, recording of the quality of goods, cooperation contracts, demand reports of goods and procurement letters in order to avoid redundancy of data and loss of evidence while reporting records.

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