Project Report On

S.B.A.I.M.S.

Shantinath Book Agency Inventory Management System

Guided By

Prof. Komil Vora

Submitted By

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S.B.A.I.M.S.

A PROJECT REPORT

Submitted by

ARJUN PAREKH

DHAWAL SOJITRA

Under the esteemed guidance of

Prof. Komil Vora

In fulfillment for the award of the degree

BACHELOR OF ENGINEERING

In

INFORMATION TECHNOLOGY

V.V.P ENGINEERING COLLEGE, RAJKOT

Gujarat Technological University, Ahmedabad

DECLARATION

I hereby declare that the project entitled S.B.A.I.M.S. submitted in partial fulfillment for the degree of Bachelor of Engineering in Information Technology to Gujarat Technological University, Ahmedabad, is a bonafide record of the project work carried out at V.V.P Engineering College, Rajkot under the supervision of Prof. Komil Vora and that no part of the IDP/UDP has been presented earlier for any degree, diploma, associate ship, fellowship or other similar title of any other university or institution.

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This is to certify that the IDP/UDP entitled "**S.B.A.I.M.S.**" has been carried out by **Arjun Parekh** under my guidance in fulfillment of the degree of Bachelor of Engineering in INFORMATION TECHNOLOGY Engineering 8th Semester of Gujarat Technological University, Ahmadabad during the academic year 2014.

Guide:- **Head of the Department**

Prof. Komil Vora **Dr. Avani Vasant**

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By the great and untiring support of the college, faculties and guides we, the students of B.E. (Bachelor of Engineering) semester 8th at V.V.P. Engineering College-Rajkot, have completed this project. This would never have been possible without the help of our internal guide Professor Mr. Komil Vora and the Head of the Department Dr. Avani Vasant. At last our perseverance and dedication to this project also added to the equation to complete this project.

Abstract

Nowadays there are a lot many fields which have accepted and started using softwares as the softwares make everything easier, faster, accurate and decisive. One such field is medical field which has been using software for maintaining the stock data and generating invoice and maintaining the information about location of medicines in the store. This enables them to locate the medicine rapidly and they don't have to remember anything.

But during the survey of market it was found that the society, or to be specific the middle scale industries or agencies don't have any software available for maintaining data about location, stock of books.

So this project is a web application where it would be made possible to access the software from anywhere the user goes. The name of the web application is Shantinath Book Agency Inventory Management System which is abbreviated as S.B.A.I.M.S. Moreover the user will be able to maintain the data about where (location) the books have been placed in the inventory (repository). This application will ease the addition of new data, invoice and receipt generation and viewing all the details about all the titles of books.

LIST OF TABLES

LIST OF SYMBOLS, ABBREVIATIONS AND NOMENCLATURES

- DBA : Database Administrator
- SQL : Structured Query Language
- S/W : Software
- H/W : Hardware
- OS: Operating System
- DFD: Data Flow Diagram
- IE: Internet Explorer
- HDD: Hard Disk Drive
- FAQs: Frequently Asked Questions
- ER Diagram: Entity Relationship diagram
- GUI: Graphical User Interface
- CSS: Cascading Style Sheet

LIST OF FIGURES

Table of Contents

Chapter 1: Introduction

Thus the main aim of this project is to automate the process of generation of invoices and manage the inventory of the books. This project is being developed for the firm Shantinath Book Agency which deals in supplying books to many retailers and other educational/non-profit institutions. Previous complications which prevailed due to manual calculations can now be successfully removed by the use of this web application. The novelty of this web application is the ability to provide facilities by which the inventory management can be done. Also it allows the user of the client to locate the location of the books.

This documentation contains the summary of the project which is being developed. It consists of purpose of the project, scope of it and the technologies being used.

1.1 Purpose

The project, having some myriad features, is a little challenging and time consuming. Most of the features are customized according to the user requirements. These features help to save time and efforts required from the user.

This project is about a web application which enables the user to manage and maintain the inventory of the books for the firm Shantinath Book Agency and it also enables the user to generate invoices.

The prime purpose of this project is to eliminate the need to maintain the records in a book which is a very tedious task. This procedure of maintaining manually generated invoices is also a very much time consuming task. In that procedure an individual would have to manually write down each and every entries of the titles purchased by the customer. Also it would be very difficult to manually search the old entries or invoices.

1.2 Scope

This web application allows the user to enter the details about the books and the publications with which they are having the business repo. The web application will make the revolting task of locating the books easier with a feature which stores the location of the book and can be repossessed very easily. This being a web application, it makes it stress-free for the user as they can always make changes in the inventory from anywhere. Moreover the web application also allows the user to generate the invoices. Also, it allows the user to view the inventory using the graphs enabling an easier view of the inventory for the user. The home page also has alerts which shows that are below the inventory level. User can set the inventory level for the individual books.

1.3 Technologies to be used

ASP.NET is a web application framework that is highly valued by developers as a powerful tool for creating dynamic web applications, rich web applications and web services. ASP.NET is built on the Common Language Runtime (CLR) that provides an opportunity to developers to write ASP.NET code utilizing any language supported by .NET. Currently there is a huge number of individual developers and software development companies that choose ASP.NET as their preferred web development technology.

ASP.NET significantly reduces the amount of code required for building large and complex applications which can increase overall development speed and reduce development costs. It provides ability of cross platform migration. It provides simplicity making it easy to perform common tasks including configuration and deployment.

ASP.NET ensured high reliability and security due to built-in Windows authentication and per-application configuration. It is regularly updated by Microsoft to meet the most up-to-date technology requirements. It features vast class library enclosing a large number of common functions and ready-to-use custom web-controls that allow creating professional applications with no need to develop from scratch.

Back End: SQL Server 2008 R2 Web Edition

SQL Server is a relational database management system developed by Microsoft. As a database, it is a software product whose primary function is to store and retrieve data as requested by other software applications, be it those on the same computer or those running on another computer across a network (including the Internet). It is faster, more robust and extremely powerful. You can extend its capabilities, and the T-SQL language is the best defined SQL language I have used - both flexible and strong.

1.4 Technology Vindication:

It was insisted by the company to use ASP.NET and SQL Server. The reason why they insisted to use them is the combined advantages of using ASP.NET and SQL Server. Also both of them provide faster execution and robust nature. ASP.NET significantly reduces the amount of code required for building large and complex applications which can increase overall development speed.

Chapter 2: System Analysis

This section gives panoramic view of the study of the current system and why new system was required. It states the problems firm was facing before development of this web application.

2.1 Study of Current System and its Problems

- One reason faced is searching for the books. Searching for one book in the whole shop becomes a hideous task. Also remembering the position of the stack also becomes a difficult task. Imagine the situation when there are multiple orders and the person in charge just keeps on searching for the required books.

- Another problem was that they kept all the data of the books purchased or sold on pages. Now the problem arises as the time passes. There will be stacks of papers containing all the purchase and selling details. So when we want to get the details of the purchase order, we again have to go through the monotonous task of searching the required document.

- The forth problem faced is when they are went to any book fair held out of the state or country and if they want to purchase the books, they won't be able to add the books at that time and later it becomes difficult to add the books to the pages.

- The fifth problem is some of the software available in the market is web application which will not provide book shelf. The others are desktop applications which do not allow us to update the stock when we are on the move. Most of the applications available in market does not support book shelf feature.

- The sixth problem is that most of the softwares available generate invoices of A4. This keeps the remaining paper empty for the smaller bills. Our software gives another option of generating invoices of the specified size.

- The seventh problem is either there was no provision in the softwares for displaying the books that were below the threshold level or the user was not allowed to set the minimum threshold for the individual books.

- The viewing of the inventory also was a cumbersome task when the user wants to get the general idea of the quantity of the books which can be solved by the introduction of the graphs which graphically represents the inventory.

- Moreover, in case of crashes, the whole data is lost but this software has a facility where the user can back up the data on the local drive.

2.2 Requirement of new system

In the web –application, the user can add the books to inventory by entering all the details of the book. So the paper work that was being carried out will be reduced to a great extent by this web-application. Furthermore, there is a facility in the software where user has to enter the shelf number. This use of shelf number makes it easier for the user to locate the book. Another striking feature is the sorting of the inventory where the user can sort the inventory according to the field the user intend to. Moreover, the software being a web application, it can be accessed from any place. User can view the inventory by using the graphs and also can take the backups of the database with few clicks. The threshold level of individual books notifies whenever there is low inventory. Softwares available in market are mostly desktop applications. Invoice generation module facilitates user to generate invoices as well as take a print out of them.

Therefore, by the introduction of the web-application in S.B.A.I.M.S., the process of inventory management and invoice generation will be fully automated with the reduction of the paper work and the work would be made much easier.

Chapter 3: The Overall Description

This section gives the panoramic view of the product and its prerequisites. It explains various functionalities and peculiarities in a perspicuous way.

3.1 Product Perspective

3.1.1 System Interfaces

This project is the web application developed for Shantinath Book Agency. Here we have used ASP.NET (Framework 4) on the front end and at the back end we have used SQL Server 2008 R2 Web Edition as they were insisted by the company.

3.1.2 Interfaces

As this is the web application, the user will need a web browser to access the web application and use the functionalities. The users are required to use chrome and higher versions. Also user has to use Windows XP or the higher versions of the OS.

3.1.3 Hardware Interfaces

Processors: Intel Pentium 4 and higher versions, 1.0GHz minimum
RAM: Minimum 512MB
HDD: 40GB (2GB Free Space Required)

3.1.4 Software Interfaces

Application Development Tools: Visual Studio 2010
Database: SQL Server 2008 R2 Web Edition
Browser: IE 7 or higher, Chrome 18 or higher, Firefox/Nightly, Safari (Windows).
Language used: ASP.NET (Framework 4)

3.1.5 Communications Interfaces

Http protocol is used for the communication between user and the server.

3.1.6 Memory Constraints

There is no memory constraint on the user-side. But, the server must have minimum 512 MB RAM and minimum 2GB HDD.

3.1.7 Site Adaptation Requirements

The customer needs to have the internet enabled device. They should also have installed appropriate version of the web browser. And high speed internet is preferable for storing the values as fast as possible on the database.

3.2 Product Functions

Login: Database administrator can login using this function.

Add to inventory: Used to add new books or new publications to the inventory.

Add Invoice: Used to generate the invoice and also add new customers if there are any.

View Inventory: This is used to view the inventory according to the genre, or the stock or the price.

View Invoice: Allows the user to view the invoices.

View Graphs: Used to view the inventory using the graphs according to author, genre and publication.

Update Book Data: Used to update the book data.

Update Customer Data: Used to update the customer data.

Update Publication Data: Used for updating the publication data.

Change Password: Allows the user to change the login password.

Edit S/W or View S/W: This functionality is only available to the software engineer wherein he can edit the software code. Also he can view it.

3.3 User Characteristics

- User is the database administrator.
- User should have the Basic English knowledge and must be capable of using the web application.
- User should have the technical knowledge about the database and its operations.
- Procurement manager should have basic knowledge of English and should be capable of using the web application.

3.4 Constraints:

General Constraints: As this is a web application, the database administrator cannot use the web application without internet connection and also without the browser.

3.5 Assumptions and Dependencies

- There should be internet connection enabled device to use the web application.
- This web application doesn't allow to generate password of DBA.
- Back link of the web application will be provided on the Shantinath Book Agency's web application.

3.6 Project Feasibility

A feasibility study is undertaken to determine the possibility or probability of either improving the existing system or developing a completely new system. It helps to obtain an overview of the problem and to get rough assessment of whether feasible solution exists. This is essential to avoid committing large resources to a project and then repent on it later. There are two types of feasibility study for our web application:

1. Cost Feasibility
2. Time Feasibility

1. Cost Feasibility:

As the project is developed using open source technology, it is a low budget project. The Business has to pay just for the database facility and uploading the web application on the server. The Business is capable of it.

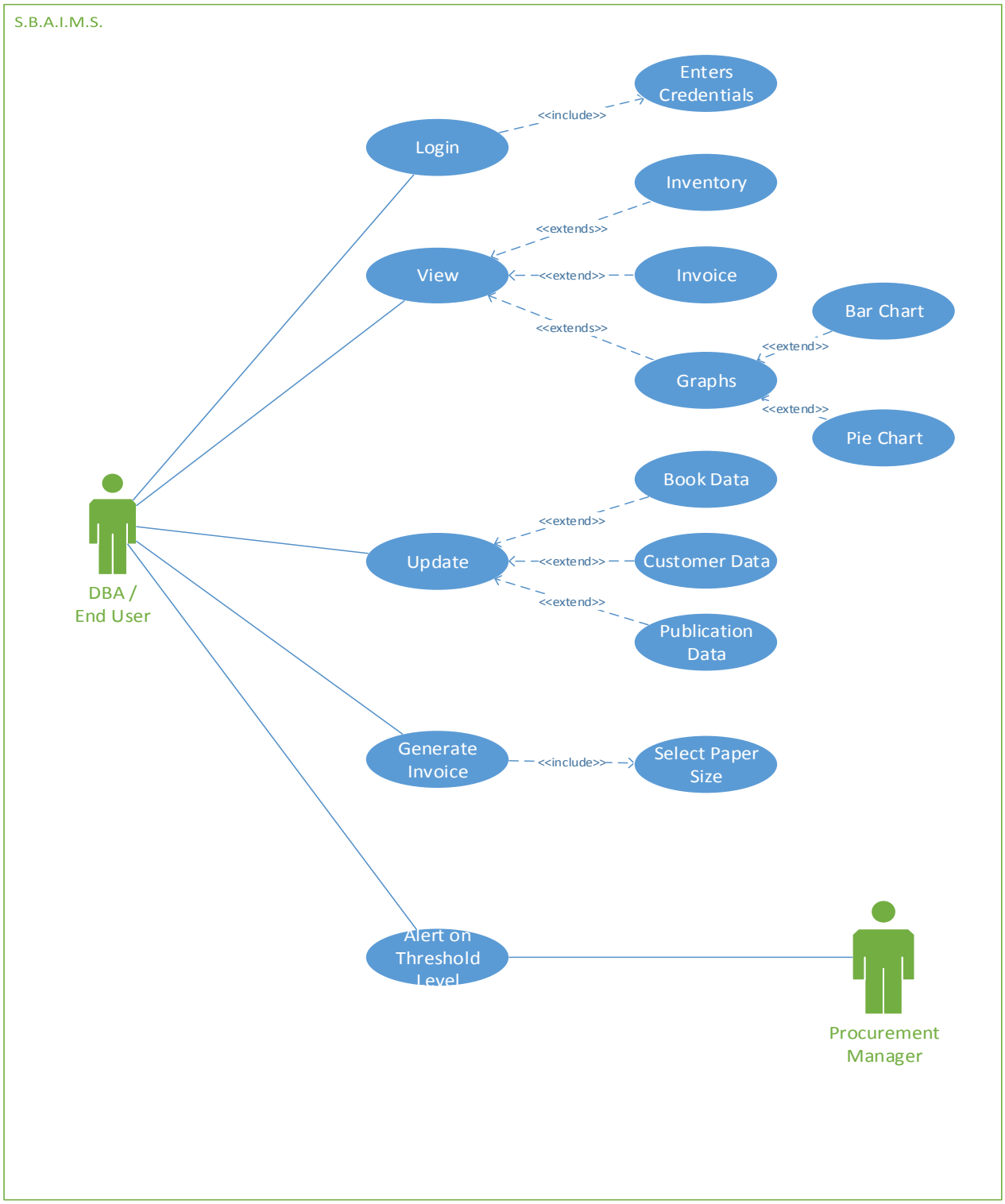
2. Time Feasibility:

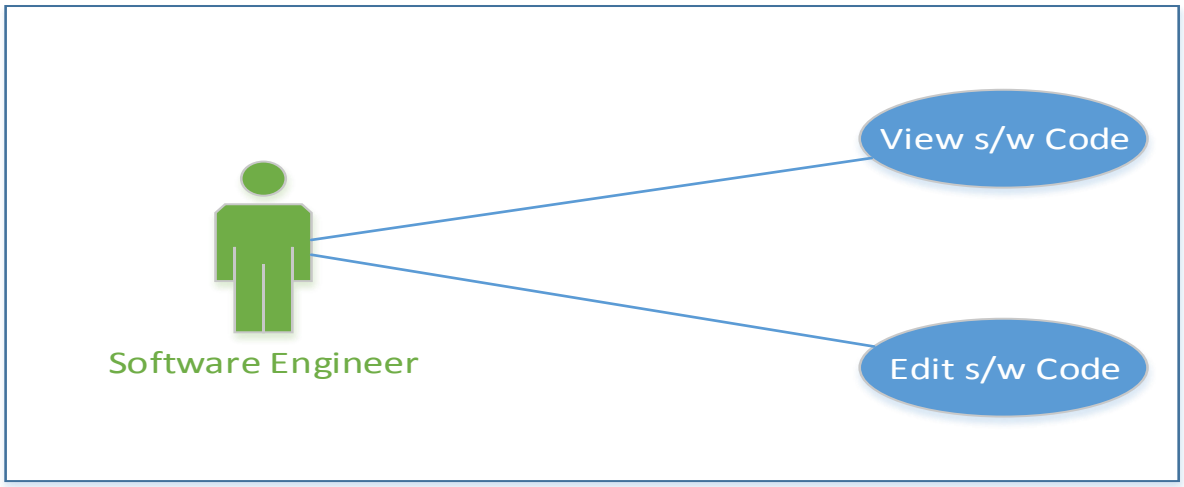
Though the web application has myriad features, it was feasible to develop it in a year.

3.7 Plot of Plan:-

3.7.1 Use Case Diagrams

Fig. 3.1: USE CASE DIAGRAM FOR SYSTEM




View s/w Code
Software Engineer
Edit s/w Code

3.7.2 Data Flow Diagram

FIG: 3.3 LEVEL 0 DFD FOR THE SYSTEM

S.B.A.I.M.S.

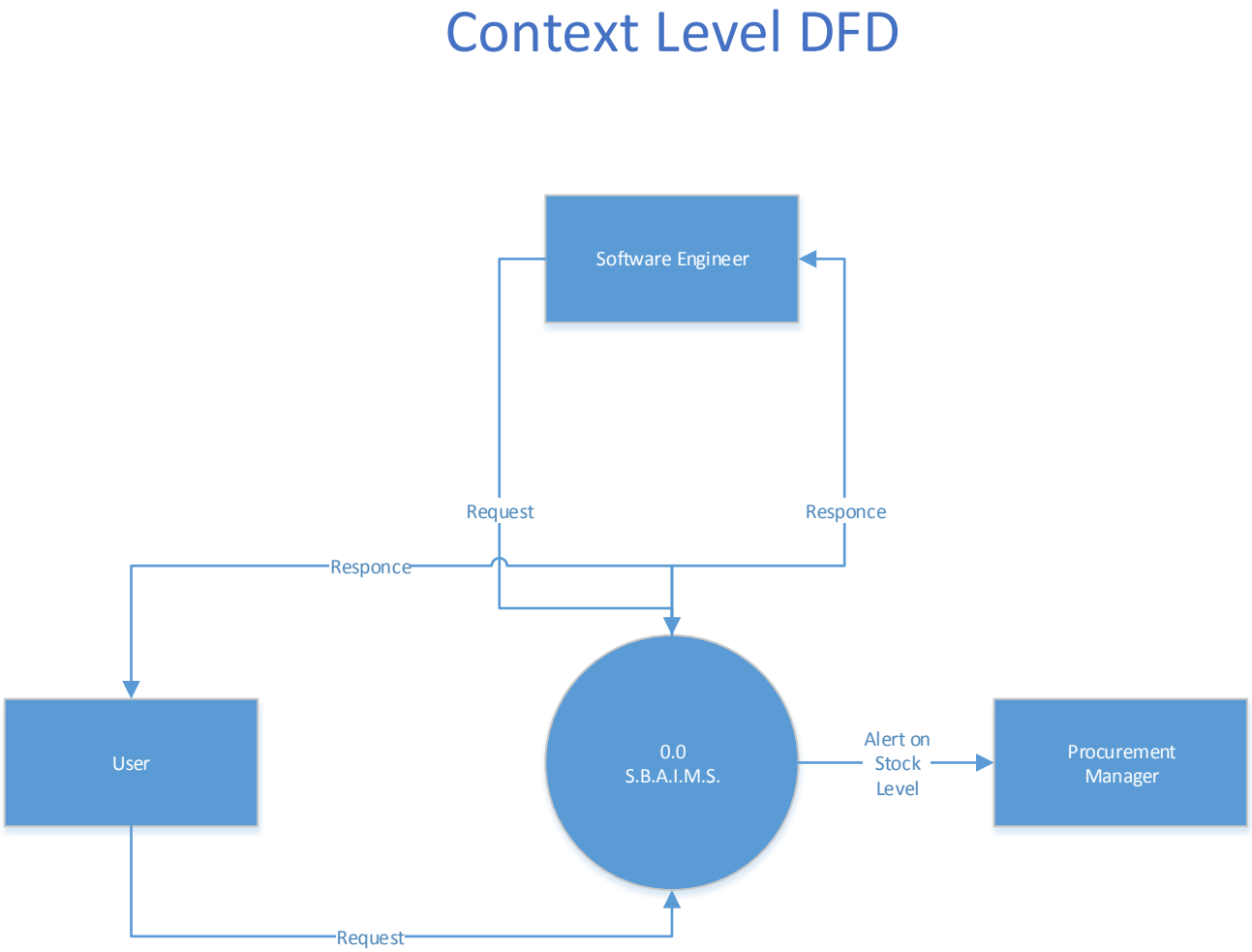
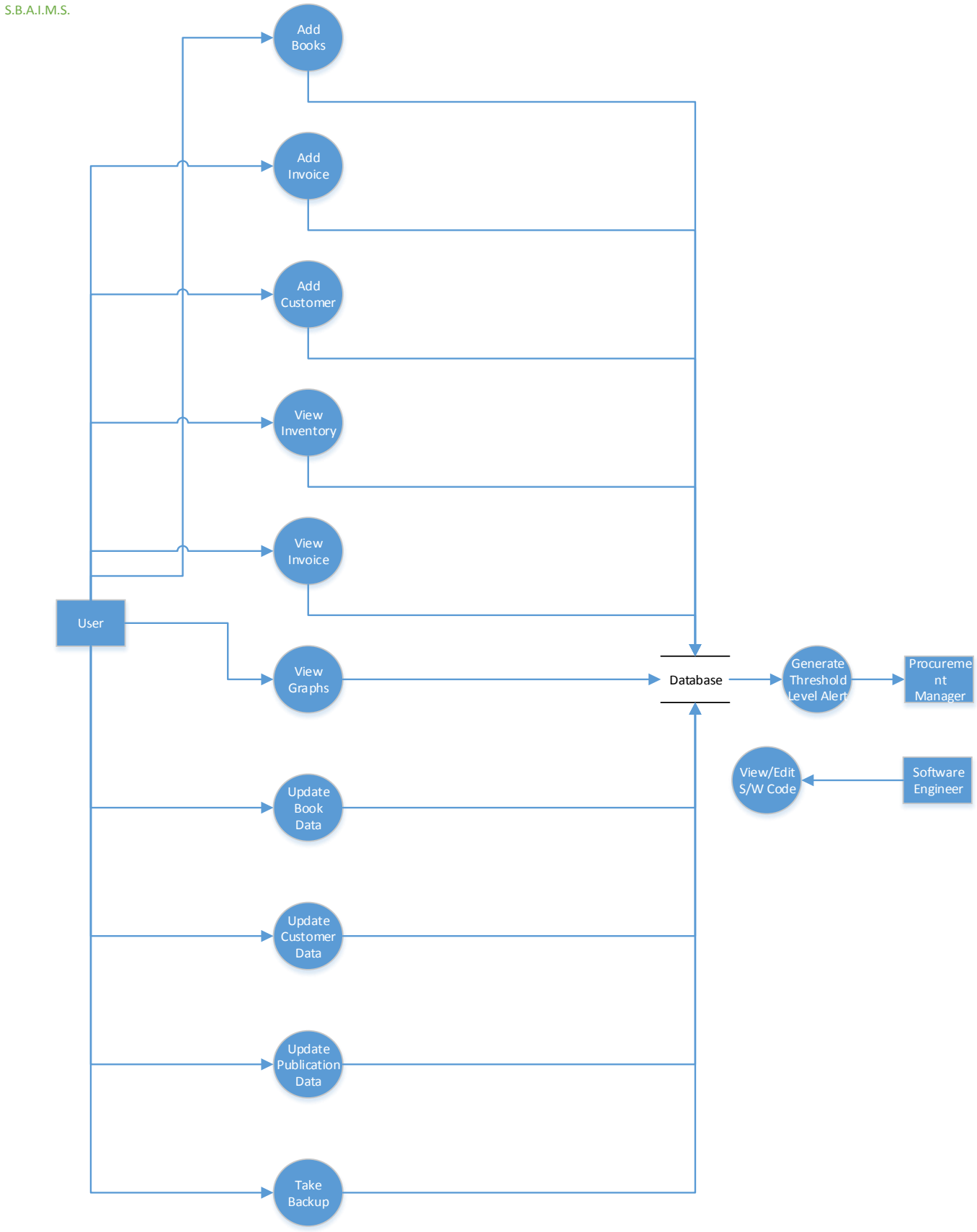
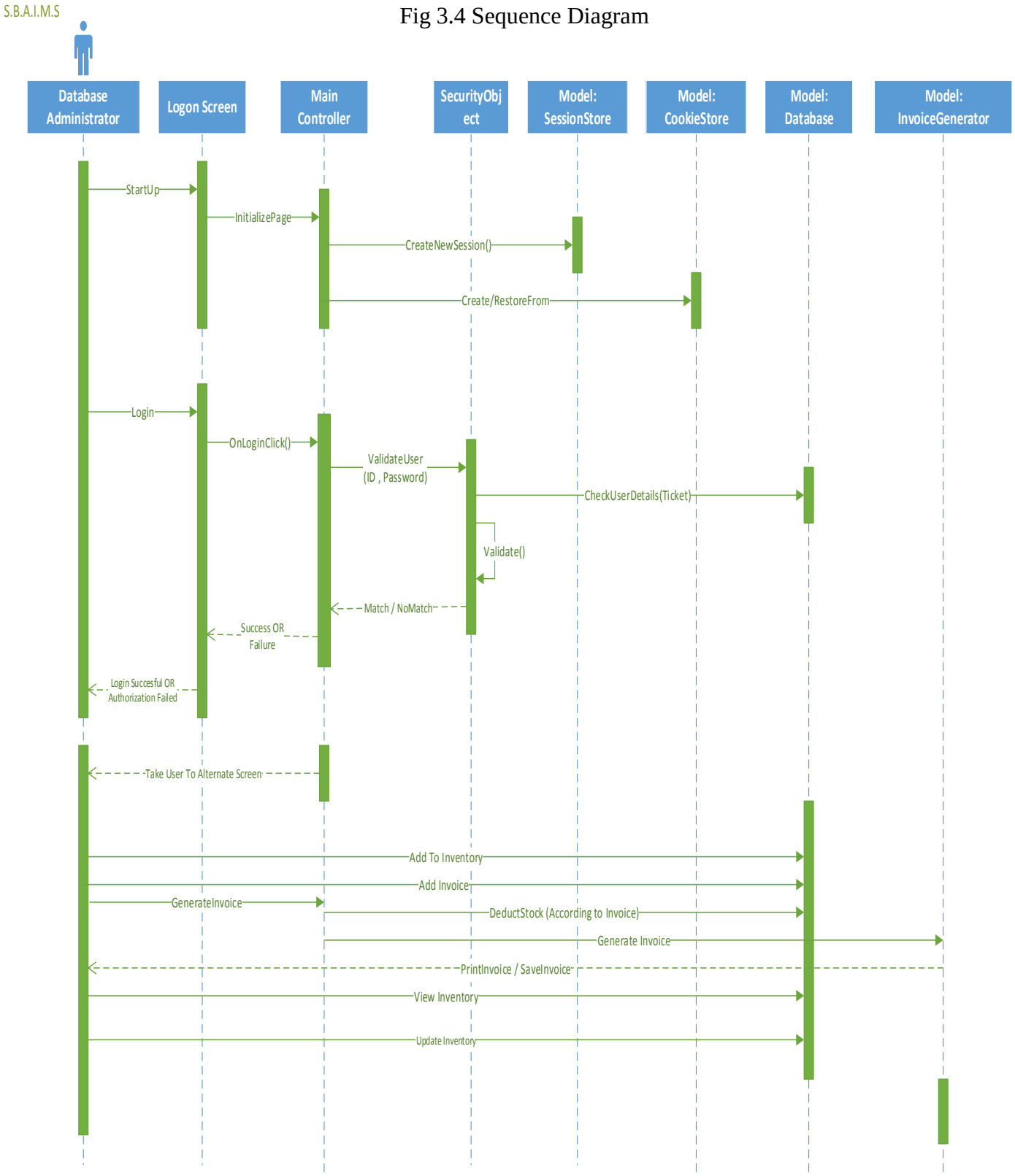


Fig 3.4 Level 1 DFD for the System



3.7.3 Sequence Diagram

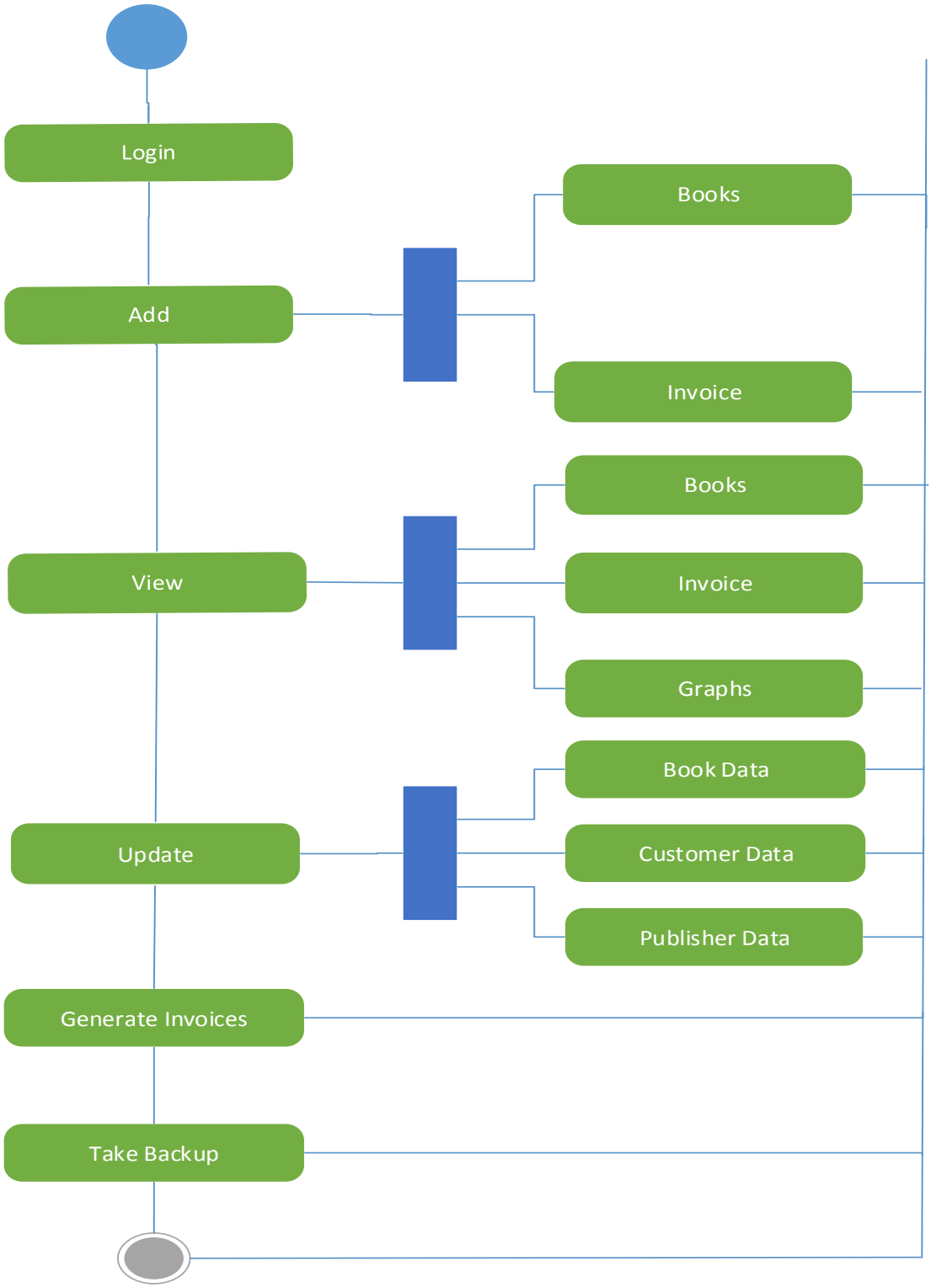
Fig 3.4 Sequence Diagram



3.7.4 Activity Diagram

Fig 3.4 Activity Diagram

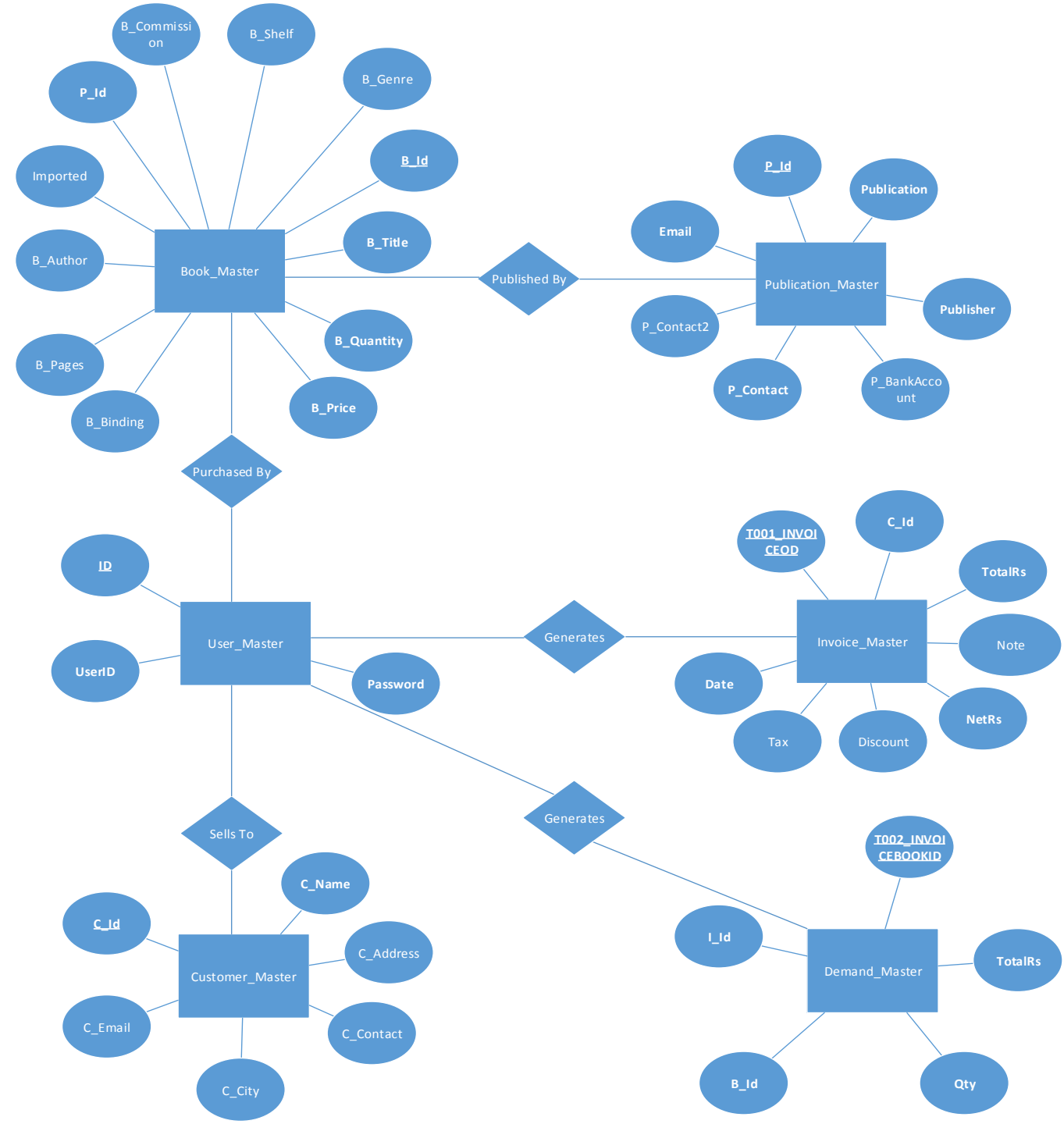
S.B.A.I.M.S.



3.7.5 E.R. Diagram

Fig 3.5: E.R. Diagram

S.B.A.I.M.S.



Chapter 4: Project Planning

4.1 Project Planning and Scheduling

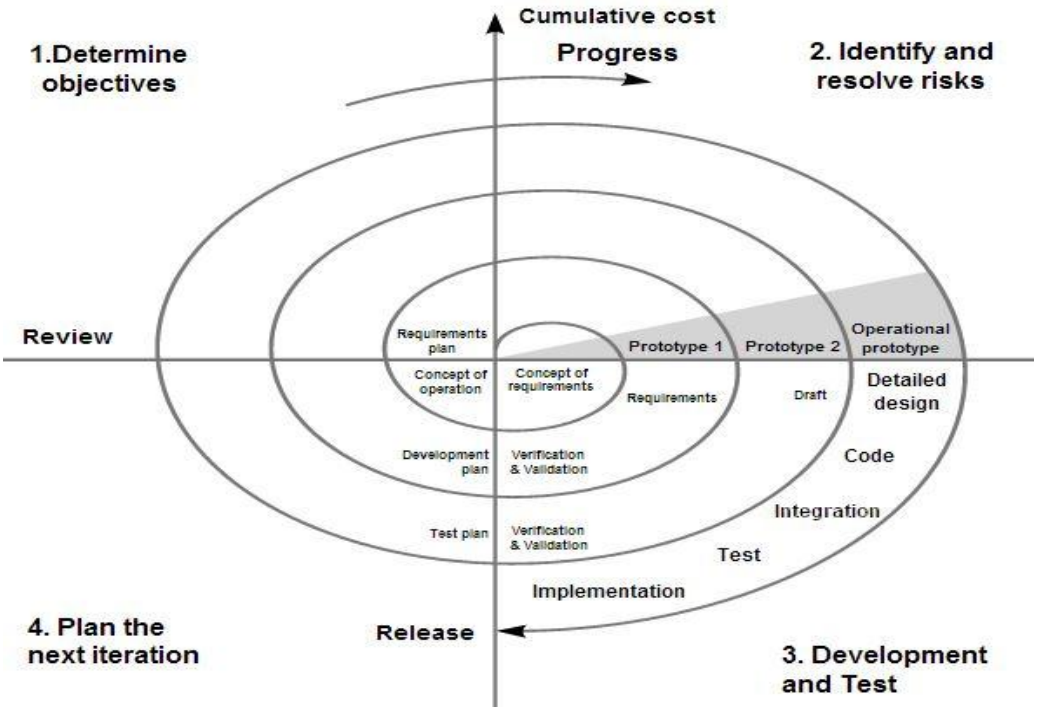
4.1.1 Software Process Model

The spiral model is a risk-driven process model generator for software projects. Based on the unique risk patterns of a given project, the spiral model guides a team to adopt elements of one or more process models, such as incremental, waterfall, or evolutionary prototyping.

To solve actual problems in an industry setting, software engineer or a team of engineers must incorporate a development strategy that encompasses the processes, methods, tool layers and generic phases. This strategy is often referred to as process model or a software engineering paradigm. A process model for software engineering is chosen based on the nature of the project and application, the methods and tools to be used.

Fig. 4.1 Spiral Model for Project Development

The



Spiral model is used most often in large projects (by companies such as IBM Microsoft, Google, Adobe, etc.) and needs constant review to stay on target. For smaller projects, the concept of software development is becoming a viable alternative. Our software development tends to be rather more extreme in their approach than the other software model.

Advantages

- Higher stability of work-loads and better manageability of work-loads.
- Shortened development cycle-time of about 70% to 75%
- Higher utilization of work-load i.e., developing large-scale, software systems with a fixed number of developers.
- Higher flexibility to change of management & development plans.
- Higher quality by earlier feedback from the customers.

Disadvantages

- Our project development methods do not scale. Due to the integrative approach, it is hard for some to understand exactly where the project stands. In a typical environment, upper management wants to know when each phase is completed such as design, code, or test. Thus, due to the various iteration steps, it can be hard to understand if the project is on track.

But still in this case it is not a great deal as the project is not being developed in such highly sophisticated environment. So there won't be a problem of reporting and understanding with the upper management.

4.1.2 Project Plan

In the development of this project, it was first checked if the project is feasible functionally, technically and economically. Then the requirements from the end users were collected and then analyzed. It was also analyzed with similar web applications in patent search to get an exact idea of how to create this web application. Hence all the requirements which were needed to develop the current application were gathered in advance.

4.1.3 Milestones and Deliverables

All project tasks are listed in the left-hand column. The horizontal bars indicate the duration of each task. When multiple bars occur at the same time on the calendar, task concurrency is implied.

No.	Task Name	Start	Finish	Duration
1	System Analysis	18 August	11 September	24 Days
2	Hardware & software requirements	12 September	22 September	10 Days
3	Requirements gathering & specifications	23 September	23 October	30 Days
4	System Design (UML Design)	24 October	23 November	30 Days
5	Coding & GUI Designing	24 November	27 March	123 Days
6	Testing	28 March	17 April	20 Days
7	Project Report	18 April	25 April	7 Days

4.1.4 Roles and Responsibilities

The major project team roles and individuals are as follows:

- Project Managers: Mr. Siddharth Jhala
    - Responsibility: To provide the requirements and need of the project.

- Internal Guide: Asst. Prof. Komil Vora
    - Responsibility: To provide the right direction for the project and conduct the reporting of the project while abiding by the university rules.

- Team Members' roles:
    - Arjun Parekh : Analysis, Form Design, Coding and Database Design.
    - Dhawal Sojitra: Analysis, Form Design, Coding and Testing.

4.2 Project Scheduling

Software Life Cycle Phase	Completion Duration
System Analysis: Problem Definition and Description	3 weeks
Hardware Software Requirements	2 weeks
Constraints/Goals of implementation	1 week
Requirements Gathering	1 week
Requirements Analysis	1 week
Requirements Specification	1 week
System Design: Use Case Diagram	2 days
Sequence Diagram	3 days
Database Modeling and ER diagram	2 days
GUI Form Design	2 weeks
Coding Standard Conversion	1 week
Coding	4 months
Testing and Deployment	3 weeks

4.3 Risk Management

4.3.1 Risk Identification

Risk Identification is a systematic and procedural attempt to specify threats to the project plan. These threats can be of many types as listed below

There are two types of risks: Generic and Product Specific.

One method for identifying risks is to create a risk item checklist. The checklist can be used for identification and focused on some subset of known and predictable risks in the following generic subcategories:

Product Size

Risks associated with the overall size of software to be built or modified. In this case it is the risk associated with the defined web application to be built.

Business Impact

Risks associated with constraints imposed by management or the marketplace. But the web application being developed as the final year project, the marketplace constraints are not too strict.

Customer Characteristics

Risk associated with the sophistication of the customer and the developer's ability to communicate with the customers in the timely manner.

Process Definition

The risk of getting out of the line of definition. In other words risks associated with the degree to which the software process has been defined and is followed by the development organization.

Development Environment

Risks associated with the availability and quality of tools to be used to build the product. But all the quality tools and genuine software applications are provided so this risk is indeed eliminated.

Staff Size and Experience

It is the risk associated with the technical and managerial staff of the firm developing the software. Risks associated with the overall technical and project experience of the software engineer who will do the work.

4.3.2 Risk Analysis

There are different types of risks are as follows:

Performance Risks

The degree of uncertainty that the product will meet its requirements and be fit for its intended use.

Cost Risks

The degree of uncertainty that the project budget will be maintained.

Support Risks

The degree of uncertainty that the resultant software will be easy to correct, adapt, and enhance.

Schedule Risks

The degree of uncertainty that the project schedule will be maintained and the Product will be delivered on the time.

4.3.3 Risk Planning

In this section the strategy to meet the threats is discussed and elaborated

Risk Strategy

The following table explains the ways the risk can be met and managed and kept under control.

Table 4.3 Risk Planning

Risk	**Strategy**
Organizational Financial Problems	Prepare a briefing document for senior management showing how the project is making a very important contribution to the goals of the business
Requirement Problems	Alert customer of potential difficulties and the possibility of delays, investigate buying-in components.
Staff Illness	Reorganize team so that there is more overlap of work and people therefore understand each other‘s jobs.
Defective Components	Replace potentially defective components with bought-in components of known reliability.
Requirement Changes	Derive traceability information to assess requirements change impact, maximize information hiding in the design.
Organizational Restructuring	Prepare a briefing document for senior management showing hoe the project is making a very important contribution to the goals of the business.
Database Performance	Investigate the possibility of buying a higher-performance database.
Underestimated and Development	Investigate buying-in components, investigate the use of the program generator.

4.4 ESTIMATION

4.4.1 Effort Estimation:-

The following table encapsulates the timeline in which the tasks, their estimate time-requirements are documented. The team comprises two members and hence the all the project tasks are divided among these two members and as a result at last their coordinated efforts will result into great project.

The effort estimation is as shown in the table that follows.

Table 4.4: Effort Estimation

Timeline	Member – 1	Member - 2
August – September	Requirement Analysis, Database Design	Scheduling and Planning and SRS documentation
October – November	GUI Designing	Database Implementation
January – March	Designing Layouts and Coding	Advance Coding, Re-engineering features and Validation
April	Testing	Report Preparation

Chapter 5: Database Design

5.1 Database Tables

Book_Master

Table: Book_Master

Name	Data type	Constraints	Default Value	Description
B_Id	int	P.K, Not Null, Unique	-	Unique ID of each Book
B_Title	nvarchar(MAX)	Not Null	-	Title of the Book
B_Author	nvarchar(MAX)	Not Null	-	Name of the Author of the book
B_Quantity	int	Not Null	-	Quantity of the books available
B_Price	int	Not Null	-	Price of the book in Rupees
B_Commission	int	Not Null	-	Commission (Margin) on the title (book).
B_Binding	nvarchar(MAX)		Soft	Type of Binding of the book, like hard, soft, spiral, etc.
B_Pages	int		-	Number of pages in the book
B_Shelf	nvarchar(MAX)	Not Null	-	Shelf no. in which the books are placed.
B_Genre	nvarchar(MAX)	Not Null	-	Genre (Category) of the book

B_Low	int	Not Null	-	Minimum threshold level
Imported	char(10)	Not Null	No	Imported from abroad (Yes/No)
P_Id	int	F.K., Not Null	-	Unique ID of each publication house

Publication_Master

Table: Publication_Master

Name	Datatype	Constraints	Default Value	Description
P_Id	int	P.K., Not Null, Unique	-	Unique ID of each publication house
Publication	nvarchar(MAX)	Not Null, Unique	-	Name of the publication house
Publisher	nvarchar(MAX)	Not Null	-	Name of the owner of the publication house (Publisher)
P_Contact	nvarchar(MAX)	Not Null	-	Mobile no./ Landline of the contact person at the Publication
P_Contact2	nvarchar(MAX)		-	Alternative contact no. of the publication house
P_Email	nvarchar(MAX)	Not Null, Unique	-	Email ID of the publication or publisher.
P_BankAccount	nvarchar(50)		-	Optional. Bank Account No. of the Publisher.

Invoice_Master

Table: Invoice_Master

Name	Datatype	Constraints	Default Value	Description
T001_INVOICEOD	int	P.K., Not Null	-	Invoice ID
C_Id	int	F.K., Not Null	-	Unique ID of customer
Date	date	Not Null	-	The time and date during invoice generation
TotalRs	decimal(18,0)	Not Null	-	Total price of books
Discount	decimal(18,0)		-	Discount on books
Tax	decimal(18,0)		-	Tax on books
NetRs	decimal(18,0)	Not Null	-	Total bill amount
Note	varchar(150)		-	Note if any

Customer_Master

Table: Customer_Master

Name	Datatype	Constraints	Default Value	Description
C_Id	int	P.K., Not Null, Unique	-	Unique ID of each Customer
C_Name	nvarchar(MAX)	Not Null	-	Name of the customer

C_City	nvarchar(MAX)		-	City of the customer (optional).
C_Contact	int		-	Contact no. of the customer
C_Address	nvarchar(MAX)		-	Address of customer
C_Email	nvarchar(MAX)		-	Email of the customer

User_Master

Table: User_Master

Name	Datatype	Constraints	Default Value	Description
ID	int	P.K., Not Null, Unique	Auto Incremented	Unique ID to set Is Identity property true
UserID	nvarchar(MAX)	Not Null, Unique	-	Unique ID of the user/DBA. In this case single user ID as there is only one user.
Password	nvarchr(MAX)	Not Null	-	Password of the user/DBA

Demand_Master

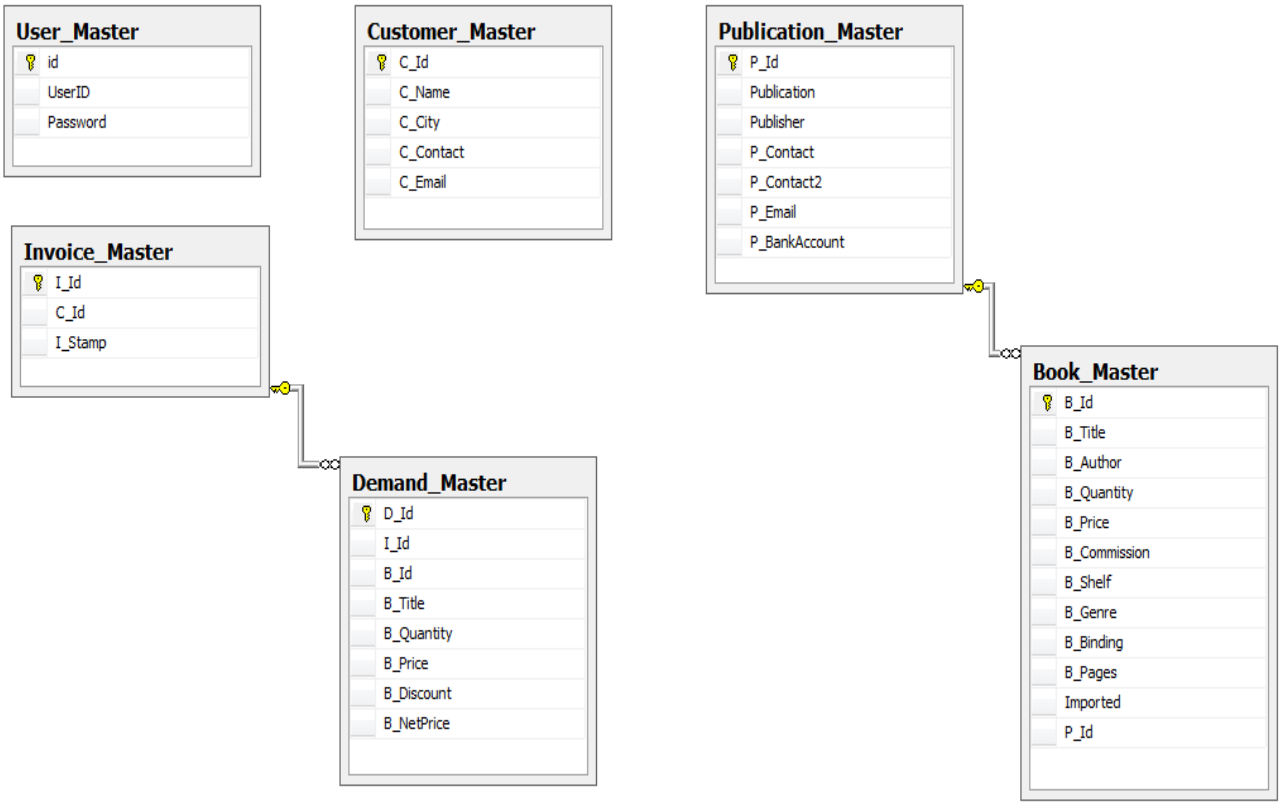
Table: Demand_Master

Name	Datatype	Constraints	Default Value	Description

T002_INVOICEBOOKID	int	P.K., Not Null	-	Invoice ID
B_Id	int	Not Null	-	Unique ID to identify Titles (each book)
Qty	int	Not Null	1	Quantity of each title in the order
TotalRs	decimal(8,2)	Not Null	-	Price of the book
I_Id	int	F.K., Not Null	-	Invoice ID

5.2 Database model diagram

Fig. 5.1 Database Diagram

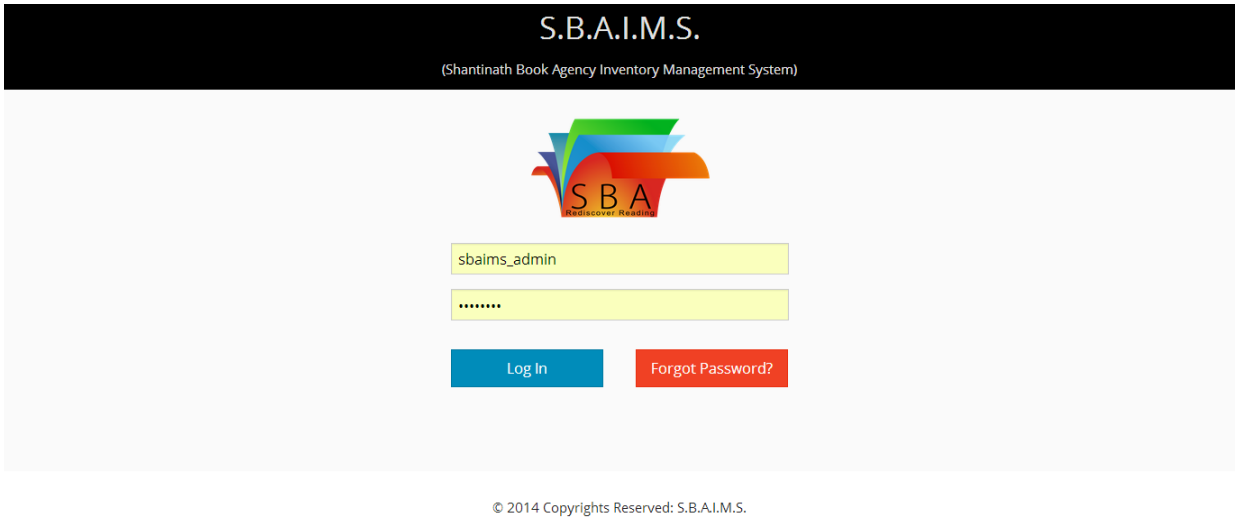


Chapter 6: Implementation

6.1 Forms

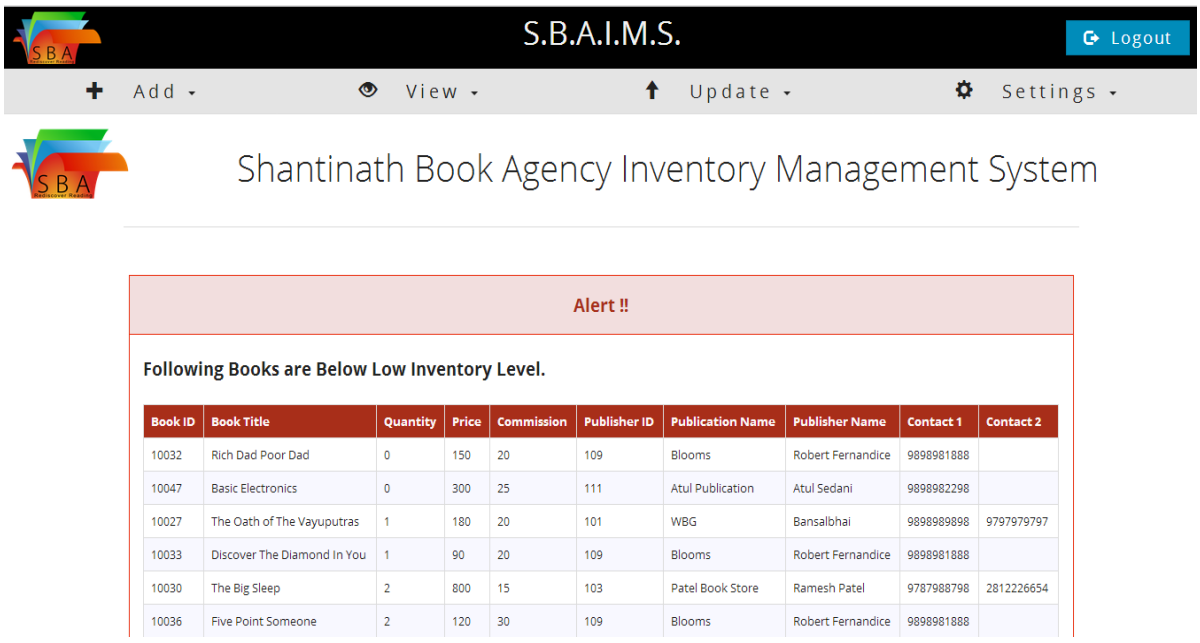
Login Form

Fig 6.1: Login Form



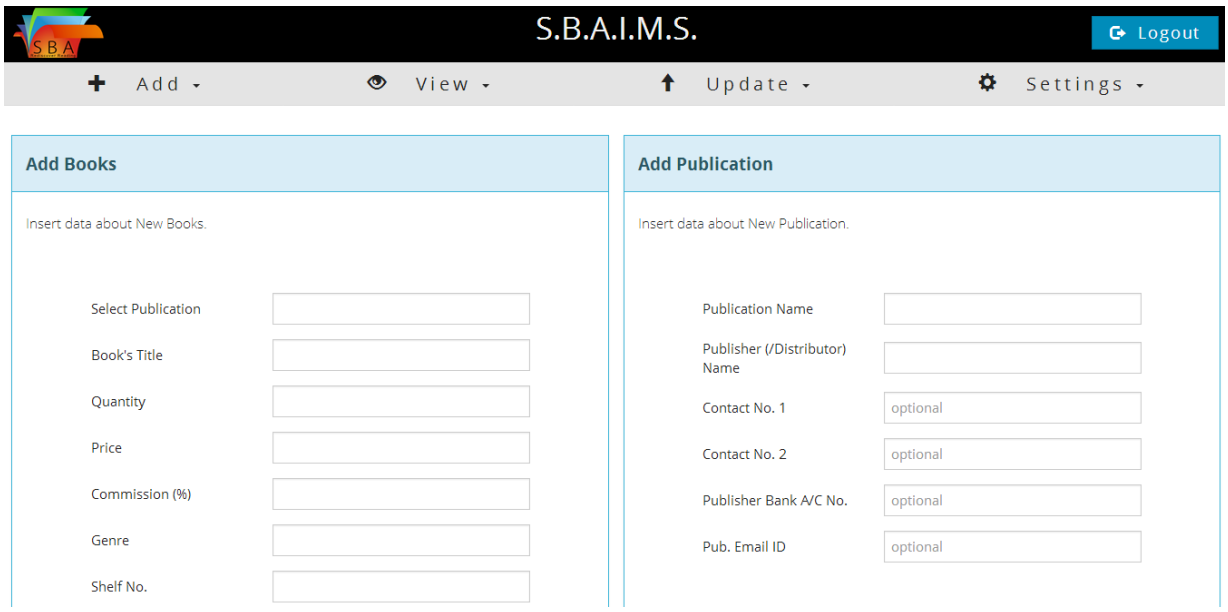
Home page (Alert Page)

Fig 6.2: Home Page (Alert Page)



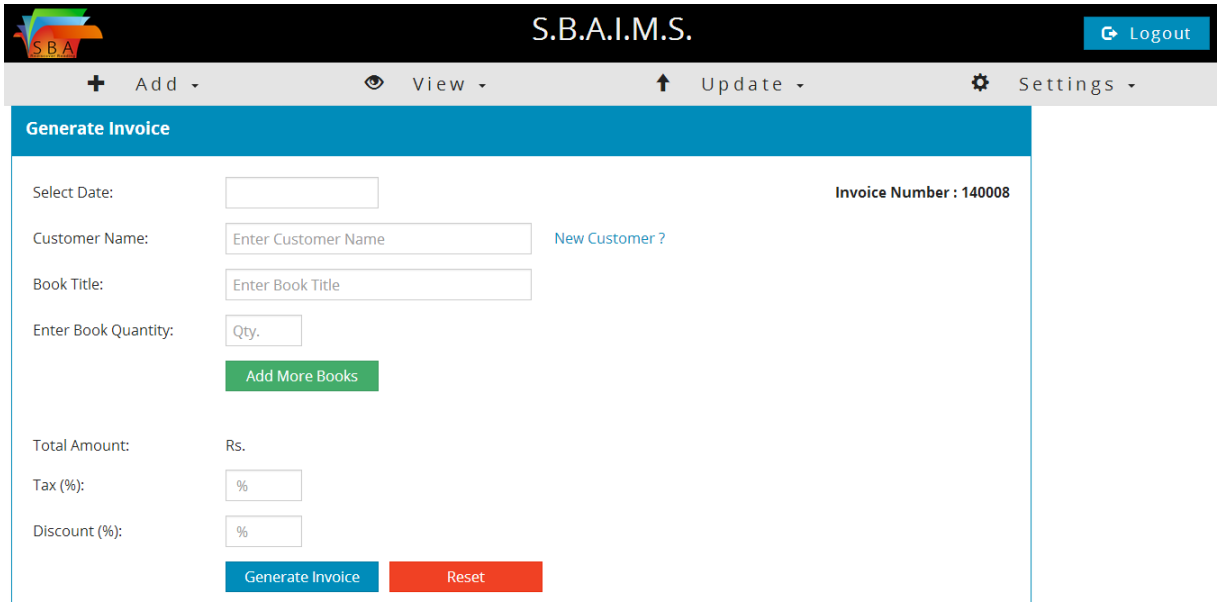
Add Books Form

Fig 6.3: Add Books Form



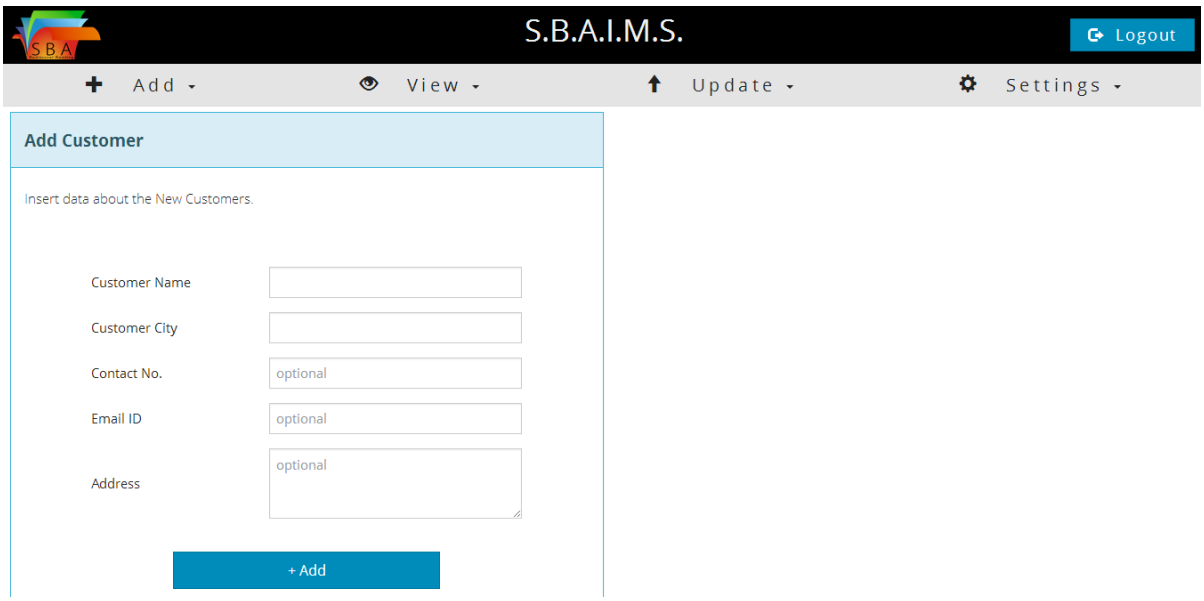
Add Invoice

Fig 6.4: Add Invoice



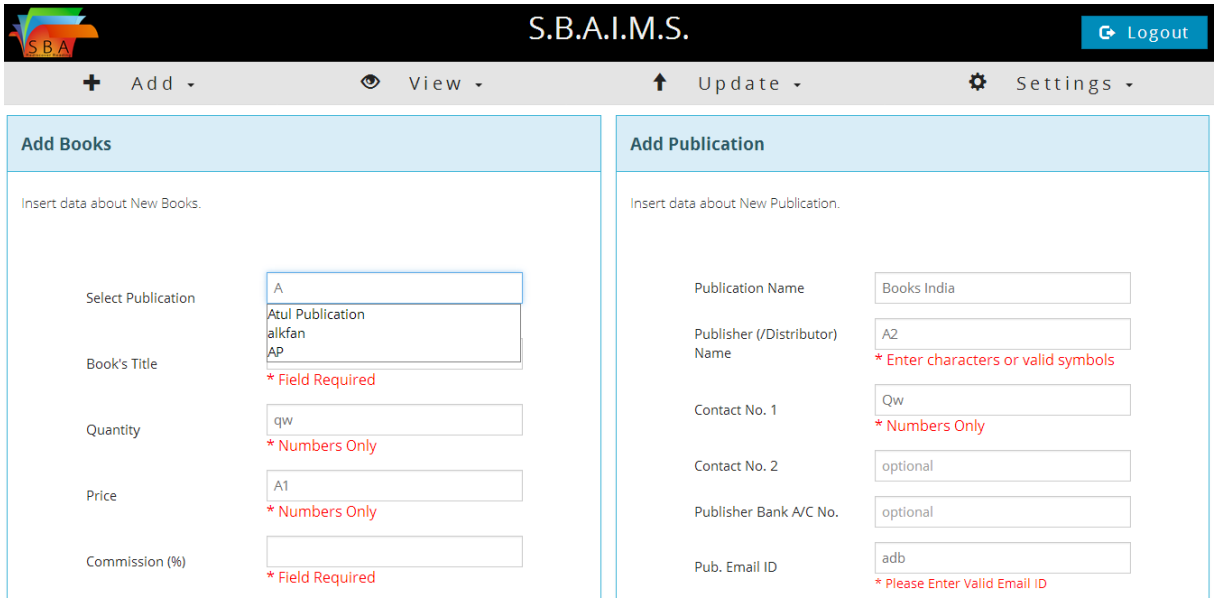
Add Customer Form

Fig 6.5: Add Customer Form



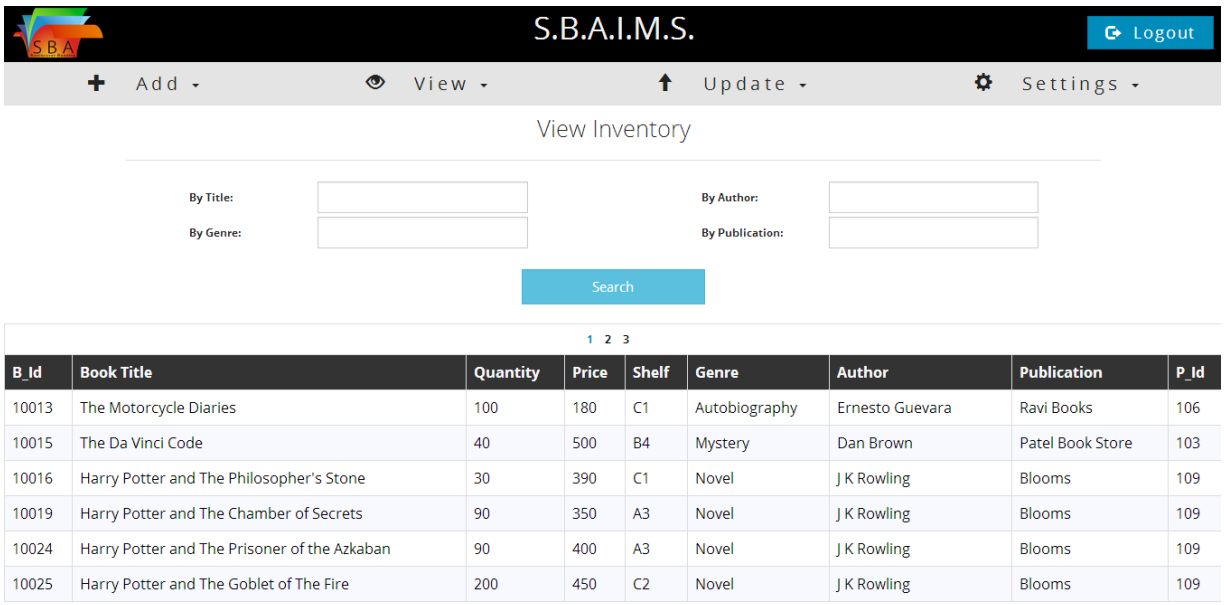
Add Books (Validations)

Fig 6.6: Add Books (Validations)



View Inventory

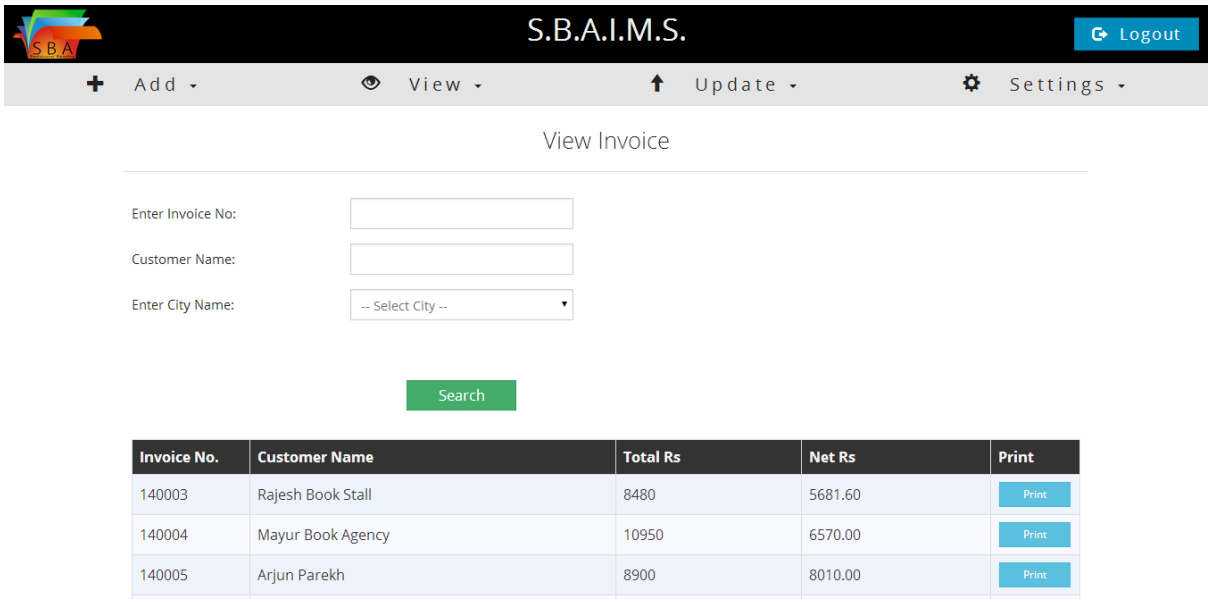
Fig 6.7: View Inventory



B_Id	Book Title	Quantity	Price	Shelf	Genre	Author	Publication	P_Id
10013	The Motorcycle Diaries	100	180	C1	Autobiography	Ernesto Guevara	Ravi Books	106
10015	The Da Vinci Code	40	500	B4	Mystery	Dan Brown	Patel Book Store	103
10016	Harry Potter and The Philosopher's Stone	30	390	C1	Novel	J K Rowling	Blooms	109
10019	Harry Potter and The Chamber of Secrets	90	350	A3	Novel	J K Rowling	Blooms	109
10024	Harry Potter and The Prisoner of the Azkaban	90	400	A3	Novel	J K Rowling	Blooms	109
10025	Harry Potter and The Goblet of The Fire	200	450	C2	Novel	J K Rowling	Blooms	109

View Invoice

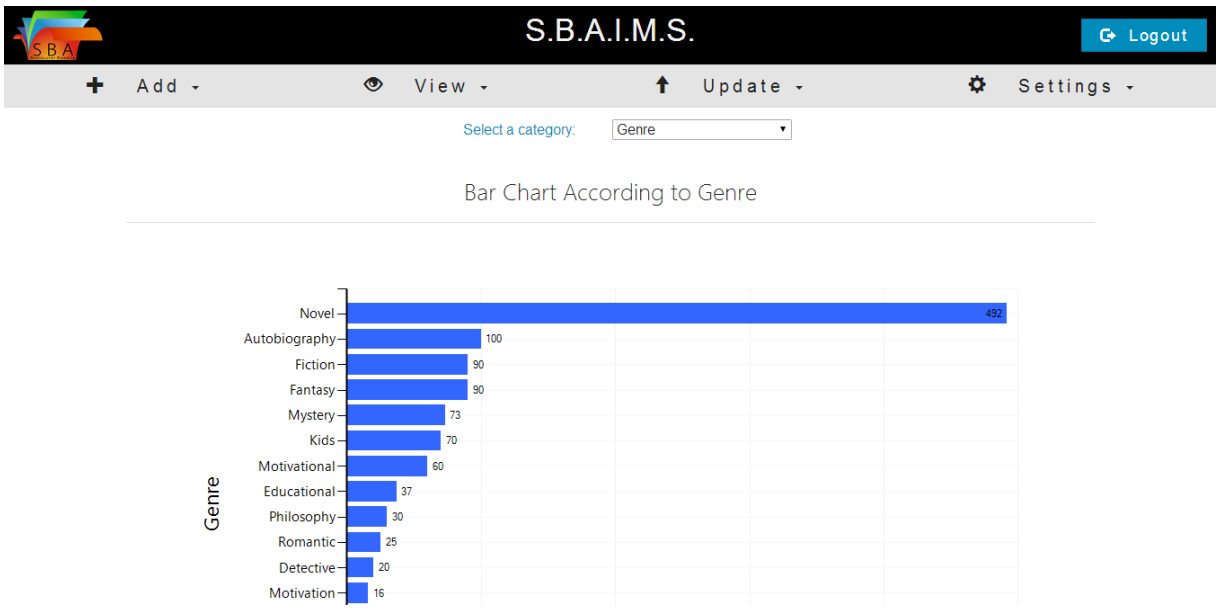
Fig 6.8: View Invoice



Invoice No.	Customer Name	Total Rs	Net Rs	Print
140003	Rajesh Book Stall	8480	5681.60	Print
140004	Mayur Book Agency	10950	6570.00	Print
140005	Arjun Parekh	8900	8010.00	Print

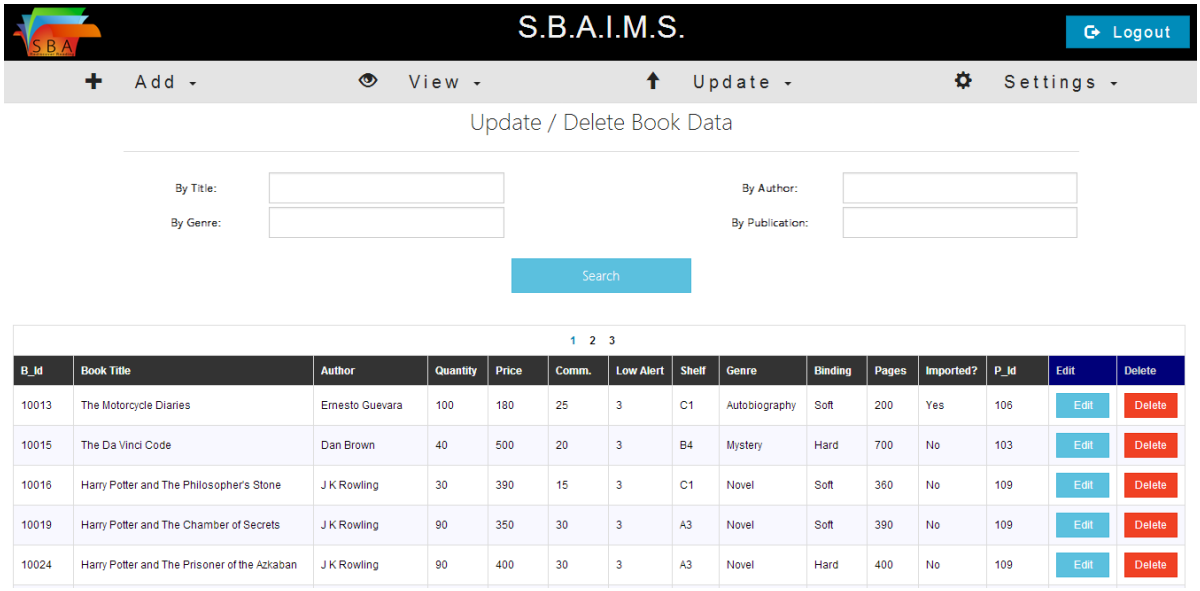
View Graphs

Fig 6.9: View Graphs



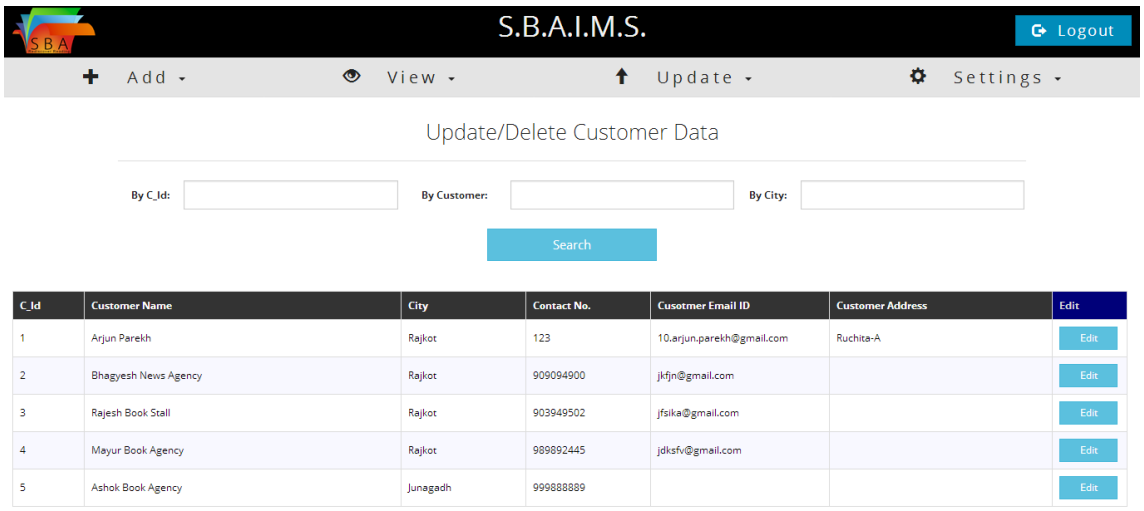
Update Book Data

Fig 6.10: Update Book Data



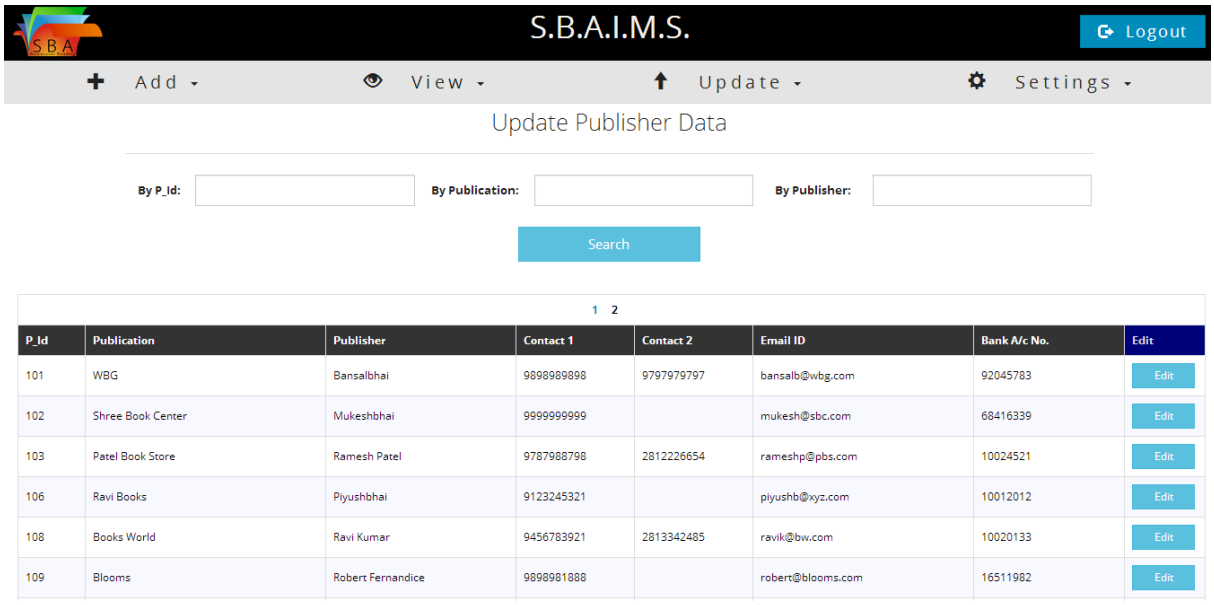
Update Customer Data

Fig 6.11: Update Customer Data



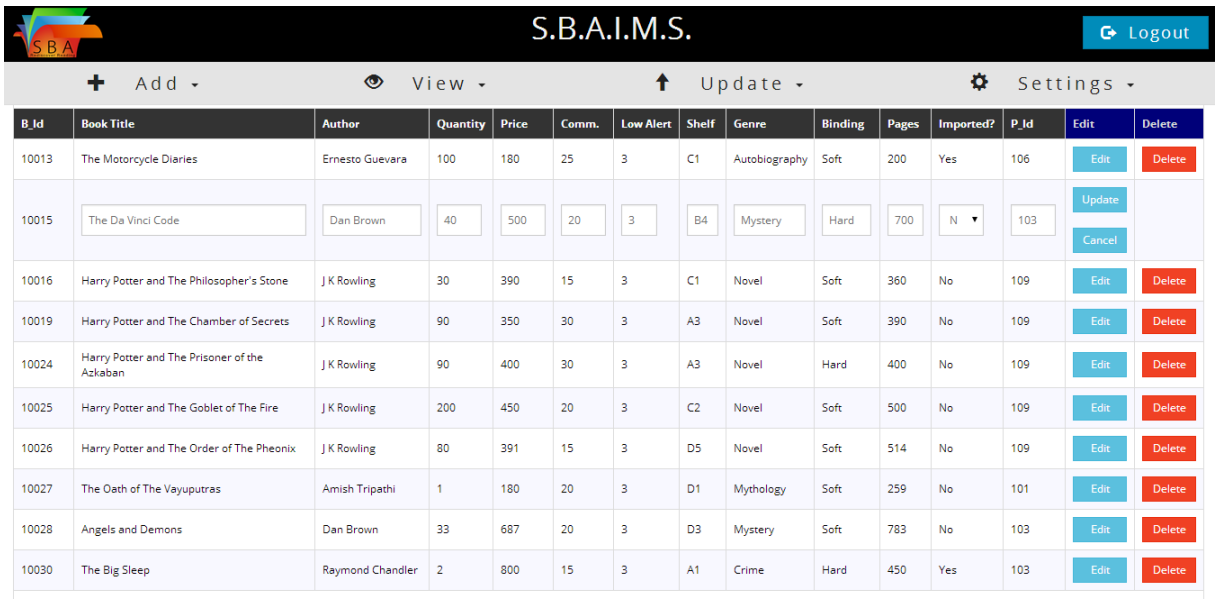
Update Publication Data

Fig 6.12: Update Publication Data



Update Book Data (Text Boxes)

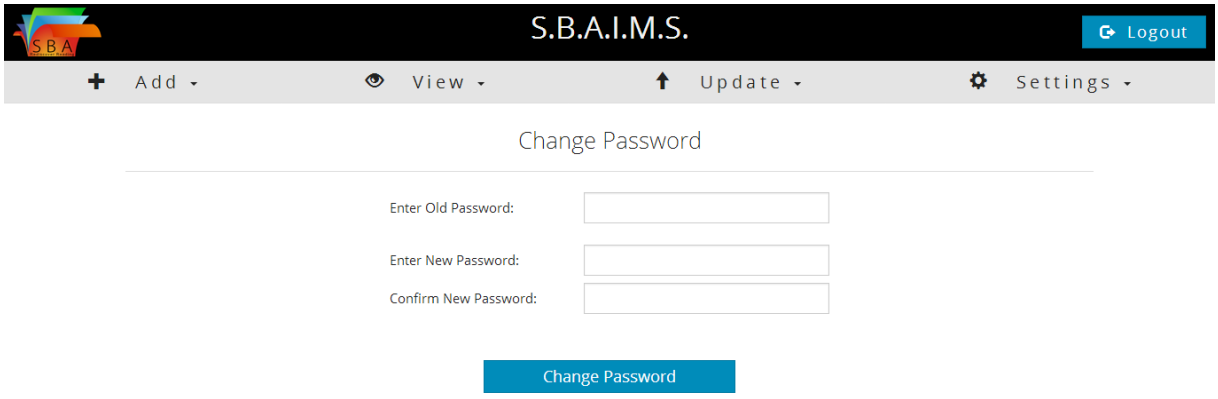
Fig 6.13: Update Book Data (Text Boxes)



B_Id	Book Title	Author	Quantity	Price	Comm.	Low Alert	Shelf	Genre	Binding	Pages	Imported?	P_Id	Edit	Delete
10013	The Motorcycle Diaries	Ernesto Guevara	100	180	25	3	C1	Autobiography	Soft	200	Yes	106	Edit	Delete
10015	The Da Vinci Code	Dan Brown	40	500	20	3	B4	Mystery	Hard	700	N	103	Update / Cancel	
10016	Harry Potter and The Philosopher's Stone	J K Rowling	30	390	15	3	C1	Novel	Soft	360	No	109	Edit	Delete
10019	Harry Potter and The Chamber of Secrets	J K Rowling	90	350	30	3	A3	Novel	Soft	390	No	109	Edit	Delete
10024	Harry Potter and The Prisoner of the Azkaban	J K Rowling	90	400	30	3	A3	Novel	Hard	400	No	109	Edit	Delete
10025	Harry Potter and The Goblet of The Fire	J K Rowling	200	450	20	3	C2	Novel	Soft	500	No	109	Edit	Delete
10026	Harry Potter and The Order of The Pheonix	J K Rowling	80	391	15	3	D5	Novel	Soft	514	No	109	Edit	Delete
10027	The Oath of The Vayuputras	Amish Tripathi	1	180	20	3	D1	Mythology	Soft	259	No	101	Edit	Delete
10028	Angels and Demons	Dan Brown	33	687	20	3	D3	Mystery	Soft	783	No	103	Edit	Delete
10030	The Big Sleep	Raymond Chandler	2	800	15	3	A1	Crime	Hard	450	Yes	103	Edit	Delete

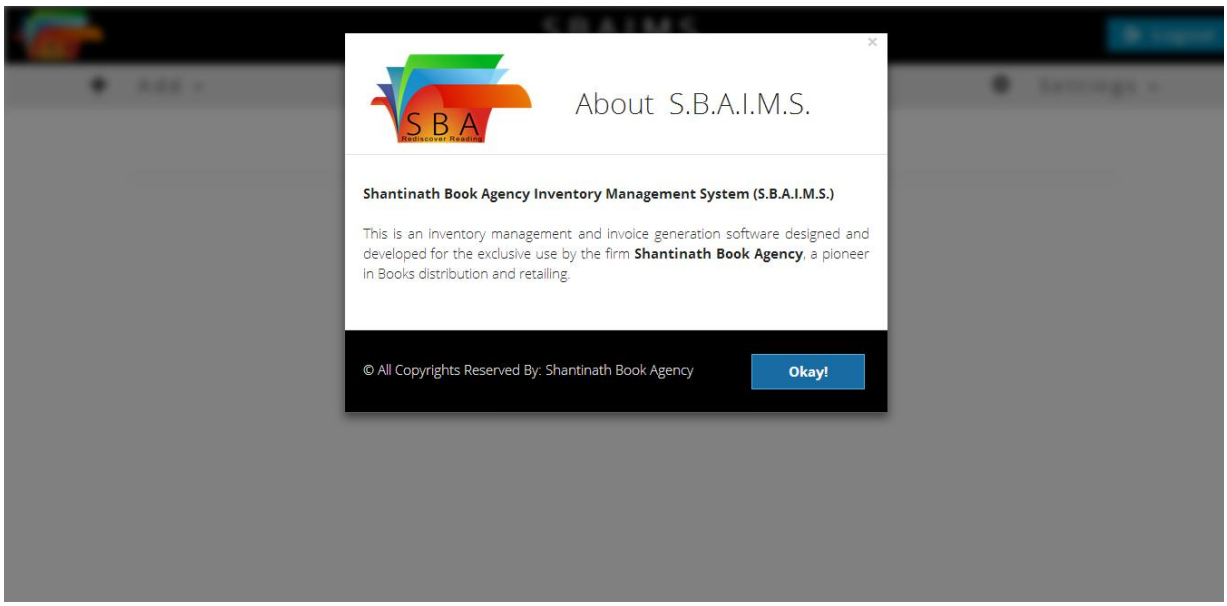
Change Password Form

Fig 6.14: Change Password Form



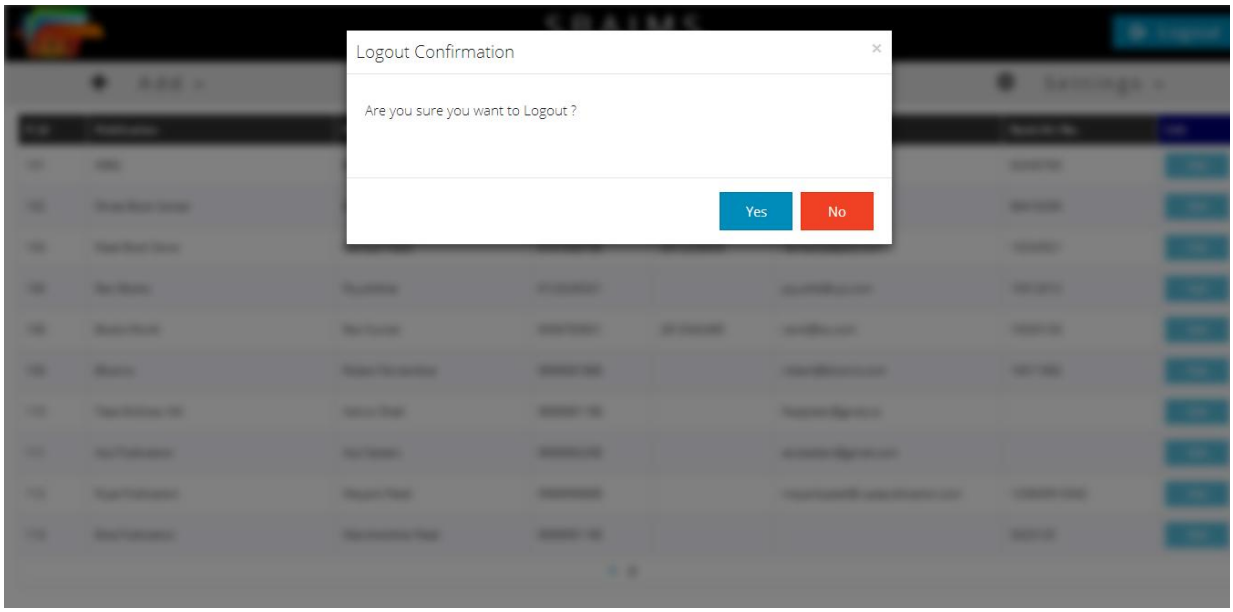
About S.B.A.I.M.S. Modal

Fig 6.15: About S.B.A.I.M.S. Modal



Logout Confirmation Modal

Fig 6.16: Logout Confirmation Modal



Chapter 7: Testing

7.1 Testing Plan

It is said that "a successful test is one that finds a bug" as these bugs degrade the quality of the software. Testing is actually the most important phase of the web application. In this phase the bugs and defects that were present in the web-application were not only found but also resolved and patched later.

These defects were direct as well as logical. The wrong relationships established among the tables of the database are counted as the logical defects while the different kind of exceptions occurring in the application are counted as the direct defects. All these defects were patched.

The development of web-application "S.B.A.I.M.S." involves many myriad features. Errors may occur at the very inception of the process where the objectives may be erroneously or imperfectly specified, as well as in later design and development stages. Because of human inability, to perform and communicate with perfection, software development is accompanied by a quality assurance activity.

With the project completion, we have taken up the activity of testing the individual forms and making sure that the interaction among the forms is smooth and without any glitches. Before beginning to test, a few things should be kept in mind. These are:

1. All tests should be traceable to customer requirements

2. Tests should be planned before the testing begins

3. To be effective, testing should be conducted by an independent third party

Web-Application testing is the process used to help identify the correctness, completeness, security and quality of the developed web-application. With that in mind, testing can never completely establish the correctness of arbitrary web-application.

In other words, testing is criticism or comparison, which is comparing the actual value with an expected one.

7.2 Testing Strategy

The types of testing strategies that we will employ are:

- **Unit Testing**

  Web application modules are normally tested first at the individual component (unit) level. Unit testing (or module testing) is the testing of different units (or modules) of a system in isolation.

- **Integration Testing**

  After testing all the components individually, the components are gradually integrated and tested at each level of integration. That is called integration testing.

- **System Testing**

  Finally the fully integrated web application is tested. That is called system testing.

7.3 Testing Methods

Web application Testing involves executing an implementation of the web application with test data and examining the outputs of the web application and its operational behavior to check its performance.

7.3.1 Statistical testing

Statistical Testing is used to test the program's performance and reliability and to check how it works under operational conditions. These tests are designed to reflect the actual user inputs and their frequency.

The stages involved in the static analysis for this system are follows.

- Control flow analysis
  - Unreachable code
  - Unconditional branches into loops

- Data use analysis

  - Variable used before initialization
  - Variables declared but never used
  - Variables assigned twice but never used between assignments
  - Possible array bound violations
  - Declared variables

- Interface analysis

  - Parameter type mismatches
  - Parameter number mismatches
  - Non-usage of the results of functions
  - Uncalled functions and procedures

7.3.2 Defect testing

Defect Testing is intended to find inconsistencies between a program and its specification. These inconsistencies are usually due to the program faults or defects.

7.3.3 Black-box Testing

In Black-Box Testing or Functional Testing, developers are concern about the output of the module and web application, i.e. whether the web application gives proper output as per the requirements or not. In another words, this testing aims to test a program's behavior against its specifications without making any reference to the internal structure of the program or the algorithms used. Therefore the source code is not needed, and so even purchased modules can be tested. The program just gets a certain input and its functionality is examined by observing the output. This can be done in the following way:

- Input Interface
- Processing
- Output Interface

The tested program gets certain inputs. Then the program does its job and generates a certain output, which is collected by a second interface. This result is then compared to the expected output, which has been determined before the test.

7.3.4 White Box Testing

White Box testing is used as an important primary testing approach. Here code is inspected to see what it performs; tests are designed to exercise the code. Code is tested using code scripts, driver, etc. which are employed to directly interface with and drive the code. The tester can analyze the code and use the knowledge about the structure of a component to derive the test data.

7.3.5 Structural Testing

Developer has done path testing to exercise every independent execution path through a component or program. If every independent path is executed then all statements in the components must have been executed at least once. The structure of our program is also checked.

7.3.6 Integration Testing

After our individual modules, developers test the integrated modules to create a complete system. This integration process involves building the web application and testing the resultant web application for problems that arise from component interactions. Developer has to apply top-down strategy to validate high-level components of a web application before design and implementations have been completed

7.3.7 Performance Testing

Performance testing is designed to test the runtime performance of the web application within the context of the web application. Developers perform this test at module level. Individual modules developers test for the required performance.

7.3.8 Condition Testing

Condition testing is a test case design method that exercises the logical conditions contained in a program module. If the condition is incorrect, then as least one part of the condition is incorrect.

7.3.9 Object Testing

Object testing is to test object as individual components, which are often larger than single function. Here following activities have taken place.

- Testing the individual operations associated with object.
- Testing individual object classes.
- Testing cluster of objects
- Testing object-oriented system.

7.3.10 System testing

Most web applications produced today are modular. System testing is a phase of software testing in which developers see if there are any communications flaws - either not passing information or passing incorrect information among the modules. This testing attempts to discover defects that are properties of the entire system rather than those of its individual components.

7.3.11 Regression testing

A regression test re-runs previous tests against the changed web application to ensure that the changes made in the current web application do not affect the functionality of the

existing web application. Regression testing can be performed either by hand or by software that automates the process. Regression testing can be performed at unit, at module, at system or at project level.

7.4 Test Cases

User Login

Table: Test case for user login

Sr. No.	Required Input	Purpose	Expected Output
1	User Id and Password	Login of the DBA for different operations	Credentials are checked and user is logged in if authenticated.
2	User ID	Give Wrong User ID	User is not logged in and error is displayed
3	Password	Give wrong password	User is not logged in and error is displayed
4	Missing detail	Give missing values	Display error that particular field is missing

Adding new book

Table: Test case for adding new book

Sr. No.	Required Input	Purpose	Expected Output
1	Information like book name, genre, publication name, etc.	To add new book in the inventory	New book is added to the database and the new entry is reflected in the view inventory module of the software

2	Publication that is not present in the database	Generate error asking user to enter valid publication name that is present in the database	User is not allowed to enter the book to database.
3	Wrong detail	Give missing	Validation Error

Adding new publication

Table: Test case for adding new book

Sr. No.	Required Input	Purpose	Expected Output
1	Information like publication name, contact, email, bank account etc.	To add new publication to the inventory	New publication is added to the database and the new entry is reflected in the view module of the software
2	Wrong detail	Give missing	Validation Error

Updating Details

Table: Test case for adding new book

Sr. No.	Required Input	Purpose	Expected Output
1	Wrong detail	Give missing	Validation Error
2	Click on update in the grid view	To update the row	Text box is displayed for

			updating the database
3	Click cancel	To cancel the updating process	Updating is canceled and original values are restored
4	Enter all the details to be updated correctly	To update the inventory	Database is updated and the change is reflected in the view module of the software

Chapter 8: Future Enhancements and Limitations

8.1 Limitations

The Limitation of this system is that when this web application is opened in versions before Internet Explorer 6 or chrome 18, the system is incompatible. We can observe few changes. It runs perfectly in Google chrome, Mozilla.

Low data speed can lead to consumption of too much time and it can also lose the connection.

8.2 Future Enhancements

There is vast scope of future enhancement for this web application. Many distributors of the book still follow the manual way for invoice generation and inventory management. So this project has got vast scope for development in future.

Chapter 9: Conclusion and Discussion

9.1 Conclusion

This web application will really be very helpful to the firm. This web application will reduce the burden of the end-user and the firm to keep physical records. The same web application could be used for various firms also after just a little modifications in the software according to the requirement of the firm. Also this web application lets user see the inventory through the whole new dimension that is through visual layout of the environment.

References

ASP.NET 2.0, Black Book, Dreamtech.

Oriented Modeling and Design with UML second edition by Michael Blaha and James Rambaugh.

Software Engineering K.K. Aggarwal, Yogesh Singh, New Age International Publishers

And Other Internet Sources

Annexure A:
PDE Forms

GTU Innovation Council

Patent Drafting Exercise (PDE)

GIC Patent Drafting Exercise Project Team: 238

FORM 1 **THE PATENTS ACT 1970** **(39 OF 1970)** **&** **THE PATENTS RULES, 2003** **APPLICATION FOR GRANT OF PATENT**	**(FOR OFFICE USE ONLY)** **Application No:** 4611 **Filing Date:** **Amount of Fee paid:** **CBR No:**

1. APPLICANT(S)

ID	Name	Nationality	Address	Mobile No.	Email Address
1	Arjun Parekh	Indian	Flat 102, Ruchita-A, Balmukund Plots, B/h Fire Brigade, Nirmala Convent Road, Rajkot	9974277665	10.arjun.parekh@gmail.com
2	Dhawal Sojitra	Indian	'Bhola', B/H Bus-stand, Lakshman Nagar, Gondal-360311 Gujarat, India.	9979766744	sojitradhawal@gmail.com

2. INVENTOR(S)

ID	Name	Nationality	Address	Mobile No.	Email Address
1	Arjun Parekh	Indian	Flat 102, Ruchita-A, Balmukund Plots, B/h Fire Brigade, Nirmala Convent Road, Rajkot	9974277665	10.arjun.parekh@gmail.com
2	Dhawal Sojitra	Indian	'Bhola', B/H Bus-stand, Lakshman Nagar, Gondal-360311 Gujarat, India.	9979766744	sojitradhawal@gmail.com

3. TITLE OF INVENTION / PROJECT

S.B.A.I.M.S.

4. ADDRESS FOR CORRESPONDENCE OF APPLICANT/AUTHORIZED PATENT AGENT IN INDIA

Name: Arjun Parekh
Address: Flat 102, Ruchita-A, Balmukund Plots, B/h Fire Brigade, Nirmala Convent Road, Rajkot

NOTE: This is just a mock Patent Drafting Exercise (PDE) for semester 8, BE students of GTU. These documents are not to be submitted with any patent office.

Mobile: 9974277665
Email ID: 10.arjun.parekh@gmail.com

5. PRIORITY PARTICULARS OF THE APPLICATION(S) FIELD IN CONVENTION COUNTRY

Country	Application No.	Filing Date	Name of the Applicant	Title of the Invention
N/A	*N/A*	*N/A*	*N/A*	*N/A*

6. PARTICULARS FOR FILING PATENT COOPERATION TREATY (PCT) NATIONAL PHASE APPLICATION

International application number	International filing date as alloted by the receiving office
N/A	*N/A*

7. PARTICULARS FOR FILING DIVISIONAL APPLICATION

Original(First) Application Number	Date of filing of Original (first) application
N/A	*N/A*

8. PARTICULARS FOR FILING PATENT OF ADDITION

Main Application / Patent Number	Date of filing of main application
N/A	*N/A*

9. DECLARATIONS:

(i) Declaration by the inventor(s)

I/We, the above named inventor(s) is/are true & first inventor(s) for this invention and declare that the applicant(s) herein is/are my/our assignee or legal representative.

Date: 02-May-2014

Name	**Sign & Date**
1 Arjun Parekh	_____
2 Dhawal Sojitra	_____

(ii) Declaration by the applicant(s) in the convention country

I/We, the applicant (s) in the convention country declare that the applicant(s) herein is/are my/our assignee or legal representative.

Not Applicable

NOTE: This is just a mock Patent Drafting Exercise (PDE) for semester 8, BE students of GTU. These documents are not to be submitted with any patent office.

(iii) Declaration by the applicant(s)

I/We, the applicant(s) hereby declare(s) that:-

☑ I am/We are in possession of the above mentioned invention.

☑ The provisional specification relating to the invention is filed with this application.

☒ The invention as disclosed in the specification uses the biological material from India and the necessary permission from the competent authority shall be submitted by me/us before the grant of patent to me/us.

☑ There is no lawful ground of objection to the grant of the patent to me/us.

☑ I am/we are the assignee or the legal representative of true & first inventors.

☒ The application or each of the application,particulars of each are given in the para 5 was the first application in the convention country/countries in respect of my/our invention.

☒ I/we claim the priority from the above mentioned applications(s) filed in the convention country/countries & state that no application for protection in respect of invention had been made in a convention country before that date by me/us or by any person from which I/we derived the title.

☒ My/Our application in India is based on international application under Patent Cooperation Treaty (PCT) as mentioned in para 6.

☒ The application is divided out of my/our application(s) particulars of which are given in para 7 and pray that this application may be treated as deemed to have been filed on _____under section 16 of the Act.

☒ The said invention is an improvement in or modification of the invention particulars of which are given in para 8.

10. FOLLOWING ARE THE ATTACHMENTS WITH THE APPLICATION:

- [✓] (a) Provisional specification/Complete specification
- [✘] (b) Complete specification(In confirmation with the international application) / as amended before the international.Preliminary Examination Authority(IPEA),as applicable(2 copies),No.of pages.....No.of claims.....
- [✓] (c) Drawings(In confirmation with the international application)/as amended before the international Preliminary Examination Authority(IPEA),as applicable(2 copies),No.of sheets.....
- [✘] (d) Priority documents
- [✘] (e) Translations of priority documents/specification/international search reports
- [✓] (f) Statement and undertaking on Form 3
- [✘] (g) Power of Authority
- [✘] (h) Declaration of inventorship on Form 5
- [✘] (i) Sequence listing in electronic Form

(j) .....

Fees Rs.XXX in Cash/Cheque/Bank Draft bearing No.XXX Date: XXX on XXX Bank.

I/We hereby declare that to the best of my /our knowledge, information and belief the fact and mtters stated herein are correct and I/We request that a patent may be granted to me/us for the said invention.

Dated this ..... day of ..... 20.....

	Name	**Sign & Date**
1	Arjun Parekh	_____
2	Dhawal Sojitra	_____

To
The Controller of Patent
The Patent Office, at Mumbai.

NOTE: This is just a mock Patent Drafting Exercise (PDE) for semester 8, BE students of GTU. These documents are not to be submitted with any patent office.

FORM 2
THE PATENTS ACT, 1970
(39 OF 1970)
&
THE PATENTS RULES, 2003
PROVISIONAL SPECIFICATION

1. TITLE OF INVENTION / PROJECT

S.B.A.I.M.S.

2. APPLICANT(S)

Arjun Parekh (Indian)
Flat 102, Ruchita-A, Balmukund Plots, B/h Fire Brigade, Nirmala Convent Road, Rajkot

Dhawal Sojitra (Indian)
'Bhola', B/H Bus-stand, Lakshman Nagar, Gondal-360311 Gujarat, India.

3. PREAMBLE TO THE DESCRIPTION

The following specification describes the invention.

4. DESCRIPTION

a. Field of Application / Project / Invention

Information Technology / Computer Science / Software Engineering

b. Prior Art / Background of the Invention / References

In the prior softwares and applications, we found that some softwares if they were having some functionalities then they were lacking some other. Like, if it was able to manage stock and generate invoice then it was limited in scope being a desktop application, some didn't provide visual layout of data and lacked some necessary functionalities.

c. Summary of the Invention/Project

The main aim of this project is to automate the process of generation of invoices and manage the inventory of the books. This project is being developed for the firm Shantinath Book Agency which deals in supplying books to many retailers and other educational/non-profit institutions. Previous complications which prevailed due to manual calculations can now be successfully removed by the use of this web application. The novelty of this web application is the ability to provide facilities by which the inventory management can be done. Also it allows the user of the client to locate the location of the books.

This documentation contains the summary of the project which is being developed. It consists of purpose of the project , scope of it and the technologies being used.

d. Objects of the Invention/Project

This project is about a web application which enables the user to manage and maintain the inventory of the books for the firm Shantinath Book Agency and it also enables the user to generate invoices .

The prime objective of this project is to eliminate the need to maintain the records in a book which is a very tedious task. This procedure of maintaining manually generated invoices is also a very much time consuming task. In that procedure an individual would have to manually write down each and every entries of the titles purchased by the customer. Also it would be very difficult to manually search the old entries or invoices .

e. Drawing(s)

f. Description of the Invention

- The expected outcome of this IDP project is the employer would save a lot on resources like time and money and effort.
- The employees will be able to generate the invoices very quickly as they will just have to type the initials of the book-titles and the auto-fill will do the rest of the work. Thus monotonous work will be reduced and productivity in limited time will increase by about 200% as the most time-taking task of invoice generation will be completed within few minutes.
- The employees wouldn't be required to check available stocks of the books as the software being inventory management, will automatically show the available quantity of books while generating invoice and hence if the available quantity is less than the ordered quantity the maximum quantity added in the invoice would be the one that is available.
- This web application will greatly improve the procurement process as it would be able to display the inventory in the form of graph of books classified based on genre of the books. So the procurer would exactly get an idea about which type of books is required to be added to stocks.
- Sometimes when discounts are required to be given to educational institutes, the application will automatically deduct the amount according to the discount rate mentioned.
- Another outcome is that it would be easy for the marketing head to know what books to sell by looking at the statistics like which is the book in highest quantity and which book was demanded previously in more quantity.
- Also it would make it easy to track the previous procurements made as all the data added in the application will be time-stamped. Moreover when the inventory level goes down below a minimum level and rises above a maximum level, an alert will be provided.
- The web application would also provide an easy to read layout of all the details and statistics of the books so business decisions can be made from analyzing these statistics.
- Also another important outcome is the application will increase accuracy of calculations as the calculations are computerized and so human err is thus reduced. So the invoices generated would be perfect and business efficiency is thus increased to a great extent.Thus the outcome of this project would be very helpful to each and every firm engaged in this industry as few minor software tweaks will let them use this software for their own firm.

g. Examples

h. Unique Features of the Project

Web application.
Accessed from anywhere.
10-inch tablet responsive.
Simple and attractive UI.
Visual layout of the inventory.
Alerts on minimum threshold levels.
Use of bootstrap for design.

5. DATE & SIGNATURE

Date: 02-May-2014

	Name	Sign & Date
1	Arjun Parekh	_____
2	Dhawal Sojitra	_____

NOTE: This is just a mock Patent Drafting Exercise (PDE) for semester 8, BE students of GTU. These documents are not to be submitted with any patent office.

6. ABSTRACT OF THE INVENTION

Nowadays there are a lot many fields which have accepted and started using softwares as the softwares make everything easier, faster, accurate and decisive. One such field is medical field which has been using software for maintaining the stock data and generating invoice and maintaining the information about location of medicines in the store. This enables them to locate the medicine rapidly and they don't have to remember anything.

But during the survey of market it was found that the society, or to be specific the middle scale industries or agencies don't have any software available for maintaining data about location, stock of books.

So this project is a web application where it would be made possible to access the software from anywhere the user goes . The name of the web application is Shantinath Book Agency Inventory Management System which is abbreviated as S.B.A.I.M.S. Moreover the user will be able to maintain the data about where (location) the books have been placed in the inventory (repository). This application will ease the addition of new data, invoice and receipt generation and viewing all the details about all the titles of books.

NOTE: This is just a mock Patent Drafting Exercise (PDE) for semester 8, BE students of GTU. These documents are not to be submitted with any patent office.

FORM 3

THE PATENTS ACT, 1970
(39 OF 1970)
&
THE PATENTS RULES, 2003
STATEMENT AND UNDERTAKING UNDER SECTION 8

1. Declaration

I/We, Arjun Parekh
Dhawal Sojitra

2. Name, Address and Nationality of the joint Applicant

Arjun Parekh (Indian)
Flat 102, Ruchita-A, Balmukund Plots, B/h Fire Brigade, Nirmala Convent Road, Rajkot

Dhawal Sojitra (Indian)
'Bhola', B/H Bus-stand, Lakshman Nagar, Gondal-360311 Gujarat, India.

hereby declare:

(i) that I/We have not made any application for the same/substantially the same invention outside India.

(ii) that the right in the application(s) has/have been assigned to,

Name of the Country	Date of Application	Application Number	Status of the Application	Date of Publication	Date of Grant
N/A	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*

(iii) that I/We undertake that up to the date of grant of patent by the Controller , I/We would keep him inform in writing the details regarding corresponding application(s) for patents filed outside India within 3 months from the date of filing of such application.

Dated this _____day of _____ ,20____

3. Signature of Applicants

_____ _____

(Sign and Date) (Sign and Date)
Arjun Parekh Dhawal Sojitra

To
The Controller of Patent
The Patent Office, at **Mumbai.**

Annexure B:
PSAR Review

GUJARAT TECHNOLOGICAL UNIVERSITY

Date : 12-Oct-2013

Patent Search & Analysis Report (PSAR)

Team Id : **130005654**

Name : **Parekh Arjun Shamin -**

Part-1 : Patent Search Technique Used

Patent Search Database Used :	Esp@cenet
Keywords used for search :	Web,Application,Inventory,Management
Search String :	Web OR Application OR Inventory OR Management
Number of Results/Hits getting :	18

Part-2 : Basic data of Patent and Bibliographic

Category / Field of Invention :	Information Technology
Invention is related to/Class of Invention :	Web based Application of management software
Title of Invention :	Web-based Dealership Management System
Patent No :	US2012265648 (A1)
Application No :	US201213488467 20120605
Date of Filing/Application :	2012-06-05
Priority Date :	2012-06-05
Publication /Journal Number - (Issue No. of Journal in which patent is published) :	G06Q30/06; G06Q40/00
Publication Date :	1900-01-01
First Filled Country :	United States of America
Also Published in:	United States
Relevant Patent / Application No :	US2010174571 (A1)
Applicant for Patent is :	Individual

Inventor Details

Sr No	Name	Address	City	Country
1 .	JEROME SANDRA L	Port St. Lucie, FL (US)	Florida	US
1 .	Jerome Keith	Port St. Lucie, FL (US)	Florida	US

Applicant Details

Sr No	Name	Address	City	Country
1 .	JEROME SANDRA L	Port St. Lucie, FL (US)	Florida	US
1 .	JEROME KEITH	Port St. Lucie, FL (US)	Florida	US

Part-3 : Technical part of patented invention

Limitation of Prior Technology/Art :

In prior technology, nothing was integrated. Here, inventory, customer relationship, finance, everything is integrated and so everything works flawlessly and seamlessly.

Specific Problem Solved / Objective of Inventor :

The problem of loosely coupled systems and modules which led to inefficient management and inaccurate data information of different sectors is eliminated

Brief about Invention :

An integrated web-based dealership management system providing accounting, financial reporting, parts and service sales tracking, vehicle and parts inventory, vehicle sales tracking, and customer management software developed on a relational database on a web server and with web application tools.

Key Learning Points :

an integrated wen based dealership management will eliminate the problem of locality. Hence the users can access the application from anywhere and all the work can be done seamlessly due to the gracefulness of the integrated application

Summary of Invention :

This is like an ERP software which integrates many aspects like financial reporting, MIS, CRM, sales tracking, inventory, etc.

Number of Claims :	25
Patent Status :	Granted Patent
How much this invention is related with your IDP/UDP?	< 70%

Do you have any idea to do anything around the said invention to improve it? :

The use of new Hadoop technology or BigData or MangoDB can increase the scalability of this application by hundred times eliminating the limitations of database.

GUJARAT
TECHNOLOGICAL UNIVERSITY

Date : 12-Oct-2013

Patent Search & Analysis Report (PSAR)

Team Id	**: 130005654**
Name	**: Parekh Arjun Shamin -**

Part-1 : Patent Search Technique Used

Patent Search Database Used :	Indian Patent Office Database
Keywords used for search :	Inventory,Management,,
Search String :	Inventory and Management
Number of Results/Hits getting :	3

Part-2 : Basic data of Patent and Bibliographic

Category / Field of Invention :	Information Technology
Invention is related to/Class of Invention :	Inventory management and order handling
Title of Invention :	ORDER HANDLING INVENTORY MANAGEMENT SYSTEM AND METHOD.
Patent No :	213645
Application No :	233/KOLNP/2003
Date of Filing/Application :	2003-02-24
Priority Date :	1900-01-01
Publication /Journal Number - (Issue No. of Journal in which patent is published) :	02/2008
Publication Date :	2008-01-11
First Filled Country :	Singapore
Also Published in:	
Relevant Patent / Application No :	
Applicant for Patent is :	Organization

Inventor Details

Sr No	Name	Address	City	Country
1 .	KOH SOO KEONG	22 SUNSET CLOSE, 597536	Not Available	Singapore

Applicant Details

Sr No	Name	Address	City	Country
1 .	SINGAPORE TECHNOLOGIES LOGISTICS PTE LTD.	5 CLEMENTI LOOP, SINGAPORE 129816	Not Available	Singapore

Part-3 : Technical part of patented invention

Limitation of Prior Technology/Art :

Prior technology used barcodes which had to be scanned manually and so each product (the number can be in thousands) had to be scanned to get it entered in database. So this eases the work by hundred times.

Specific Problem Solved / Objective of Inventor :

Manual entries into database. Manual scanning of each product into database

Brief about Invention :

An order-handling inventory management system includes a database that is capable of containing information about the products. This information includes availability and location of the products when these products are stored in a warehouse. A radio frequency subsystem uses radio frequencies to detect identificators that are on the products stored in the storage site. An order-receiving-processing subsystem receives orders for products and ascertains from the database the availability and the location of the products in the storage site. A handheld RF scanner, which is part of the radio frequency subsystem, is used to detect the products within the storage site by detecting the identification of the products.

Key Learning Points :

Use of RFID technology can ease the transactions in the database

Summary of Invention :

This invention uses RFID technology to handle and manage the stock and inventory of the products in the warehouse.

Number of Claims :	18
Patent Status :	Granted Patent
How much this invention is related with your IDP/UDP?	< 70%

Do you have any idea to do anything around the said invention to improve it? :

instead of handheld RF scanners, a scanning door can be kept, so no individual will be required and as the products pass through the gate, the transactions in database will automatically occur

GUJARAT
TECHNOLOGICAL UNIVERSITY

Date : 12-Oct-2013

Patent Search & Analysis Report (PSAR)

Team Id : **130005654**

Name : **Parekh Arjun Shamin -**

Part-1 : Patent Search Technique Used

Patent Search Database Used :	Esp@cenet
Keywords used for search :	Books,Management,method,
Search String :	Books AND Management AND Method
Number of Results/Hits getting :	20

Part-2 : Basic data of Patent and Bibliographic

Category / Field of Invention :	Information Technology
Invention is related to/Class of Invention :	Space Coordinate Positioning Technology
Title of Invention :	Books management method and books management system based on space coordinate positioning technology
Patent No :	CN103177332 (A)
Application No :	CN2013148310 20130206
Date of Filing/Application :	2013-02-06
Priority Date :	2013-02-06
Publication /Journal Number - (Issue No. of Journal in which patent is published) :	G05B15/02; G06Q10/06; G06Q50/00
Publication Date :	2013-06-26
First Filled Country :	
Also Published in:	
Relevant Patent / Application No :	
Applicant for Patent is :	Organization

Inventor Details

Sr No	Name	Address	City	Country
1 .	HUANG XUEMEI	Original Document is in chinese	not available	China
1 .	ZHANG QI	Original Document is in chinese	not available	China
1 .	ZHANG ZHEN	Not available. Original document is in Chinese	Not available	China
1 .	HU JUN	Original Document is in chinese	not available	China
1 .	ZHANG LEIAN	Not available. Original document is in Chinese	not available	China

Applicant Details

Sr No	Name	Address	City	Country
1 .	UNIV SHANDONG TECHNOLOGY	cannot find in english. it is available in chinese so cannot interprete	not available	China

Part-3 : Technical part of patented invention

Limitation of Prior Technology/Art :

The prior technology did not use the positioning technology so it was too difficult to find the books" location in the warehouse

Specific Problem Solved / Objective of Inventor :

The problem of locating books is eliminated by space positioning technology. The invention helps automatic management of books library.

Brief about Invention :

The invention belongs to the field of automatic library management, and discloses a books management method and a books management system based on a space coordinate positioning technology. The system is characterized by comprising a control portion and an executing portion, the control portion comprises an image processing module, a wireless transmitting module, a human-computer interface, a decision-making module and a database, and the executing portion comprises a wireless receiving module and an executing robot. In the control portion, the image processing module is connected with the decision-making module, and the decision-making module is connected with the wireless transmitting module, and is simultaneously bi-directionally connected with the human-computer interface and the database. In the executing portion, the wireless receiving module is connected with the executing robot. The wireless transmitting module of the control portion is connected with the wireless receiving module through a wireless technology. By the system, library management automation and intelligentization are achieved, and library management reliability is improved.

Key Learning Points :

The space positioning technology is extremely helpful in automatic management of library.

Summary of Invention :

The main application of this invention is automatic library management via its space coordinate technology. The system is characterized by comprising a control portion and an executing portion, the control portion comprises an image processing module, a wireless transmitting module, a human-computer interface, a decision-making module and a database, and the executing portion comprises a wireless receiving module and an executing robot. In the control portion, the image processing module is connected with the decision-making module, and the decision-making module is connected with the wireless transmitting module, and is simultaneously bi-directionally connected with the human-computer interface and the database. In the executing portion, the wireless receiving module is connected with the executing robot. The wireless transmitting module of the control portion is connected with the wireless receiving module through a wireless technology. By the system, library management automation and intelligentization are achieved, and library management reliability is improved.

Number of Claims :	0
Patent Status :	Granted Patent
How much this invention is related with your IDP/UDP?	71 to 90%

Do you have any idea to do anything around the said invention to

improve it? :

The use of space coordinate technology is little costly and sometimes infeasible for small scale industries and so i have a better solution in which the position of the books are maintained by a book shelf no. which is inserted in the database.

GUJARAT TECHNOLOGICAL UNIVERSITY

Date : 12-Oct-2013

Patent Search & Analysis Report (PSAR)

Team Id : **130005654**

Name : **Parekh Arjun Shamin -**

Part-1 : Patent Search Technique Used

Patent Search Database Used :	Indian Patent Office Database
Keywords used for search :	Inventory,Database,Network,
Search String :	Inventory AND Database AND Network
Number of Results/Hits getting :	5

Part-2 : Basic data of Patent and Bibliographic

Category / Field of Invention :	Information & Communication Technology
Invention is related to/Class of Invention :	Database, Network, Inventory
Title of Invention :	A METHOD FOR MAINTAINING A SEARCHABLE DATABASE CONNECTED, USING A NETWORK, TO AN INVENTORY DATABASE OF A PHYSICAL STORE AND A SYSTEM THEREOF
Patent No :	249741
Application No :	10/977,078
Date of Filing/Application :	2007-05-28
Priority Date :	2005-09-16
Publication /Journal Number - (Issue No. of Journal in which patent is published) :	45/2011
Publication Date :	2011-11-11
First Filled Country :	United States of America
Also Published in:	India
Relevant Patent / Application No :	2284/CHENP/2007

Applicant for Patent is : Organization

Inventor Details

Sr No	Name	Address	City	Country
1 .	Fargo, Kendall	703 Market Street, Suite 480, San Francisco, CA 94103	San Francisco	United State of America

Applicant Details

Sr No	Name	Address	City	Country
1 .	INTUIT INC	2700 Coast Avenue, Mountain View, CA 94043	Mountain View	United State of America

Part-3 : Technical part of patented invention

Limitation of Prior Technology/Art :

Customers had to either search for a retail store to find a product locally or they had to call the company to know about any available retail outlets near their location. This was cumbersome and uncomfortable.

Specific Problem Solved / Objective of Inventor :

The problem of locating the retail store to find a particular product, faced by the potential customers is solved by this invention

Brief about Invention :

Internet enhanced local shopping system in which businesses having physical stores where products and services can be purchased submit via the Internet their inventories and business terms, including their geographic locations, into a searchable database available via the Internet to shoppers wanting to buy products and services locally so that shoppers can find stores in their area where the products and services they desire are available and can be purchased under specified terms.

Key Learning Points :

The internet database of location stores enable the customers to find a retail outlets nearby. Thus internet database and network can help the customers locate the store with quite a convenience.

Summary of Invention :

This invention helps the customers find a retail outlet nearby their location very easily via the use of internet database.

Number of Claims :	34
Patent Status :	Granted Patent
How much this invention is related with your IDP/UDP?	Not related to IDP/UDP

Do you have any idea to do anything around the said invention to improve it? :

The application can use an automated location finder (via ip address of the customer) and can ask to automatically inform the customer about the available outlets. Also a mobile application for location finding can be made to further ease the experience of store locating

GUJARAT TECHNOLOGICAL UNIVERSITY

Date : 12-Oct-2013

Patent Search & Analysis Report (PSAR)

Team Id : **130005654**

Name : **Parekh Arjun Shamin -**

Part-1 : Patent Search Technique Used

Patent Search Database Used :	Other
If Selected Other, Then Specify the Database:	Google Patents
Keywords used for search :	Asset,Management,Information Technology,
Search String :	Asset AND Management AND Information Technology
Number of Results/Hits getting :	51300

Part-2 : Basic data of Patent and Bibliographic

Category / Field of Invention :	Information Technology
Invention is related to/Class of Invention :	METHOD AND SYSTEM FOR INFORMATION TECHNOLOGY ASSET MANAGEMENT
Title of Invention :	Method And System For Information Technology Asset Management
Patent No :	
Application No :	PCT/CA2010/001593
Date of Filing/Application :	2010-10-13
Priority Date :	2009-10-13
Publication /Journal Number - (Issue No. of Journal in which patent is published) :	WO2011044681 A1
Publication Date :	2011-04-21
First Filled Country :	United States Of America
Also Published in:	Canada
Relevant Patent / Application No :	CA2777591 (A1)

Applicant for Patent is : Organization

Inventor Details

Sr No	Name	Address	City	Country
1 .	Gordon Watts	[CA/CA]; 3028 Quail Run Avenue, Gloucester, Ontario K1T 3S1 (CA)	Ontario	Canada
1 .	SÃ©bastien ClÃ©ment	[CA/CA]; 17 rue de l"Embellie, Gatineau, QuÃ©bee J9A 3K3 (CA)	QuÃ©bee	Canada

Applicant Details

Sr No	Name	Address	City	Country
1 .	PROVANCE TECHNOLOGIES, INC	[CA/CA]; 85 Bellehumeur Street, 3rd Floor, Gatineau, Québee J8T 8B7 (CA)	Québee	Canada
1 .	Gordon Watts	[CA/CA]; 3028 Quail Run Avenue, Gloucester, Ontario K1T 3S1 (CA)	Ontario	Canada
1 .	Sébastien Clément	[CA/CA]; 17 rue de l"Embellie, Gatineau, Québee J9A 3K3 (CA)	Québee	Canada

Part-3 : Technical part of patented invention

Limitation of Prior Technology/Art :

The prior technology was nothing but physical book-records keeping which was too tiring and cumbersome. It also led to inaccuracy severaltimes.

Specific Problem Solved / Objective of Inventor :

The inefficiency of prior physical book keeping problem is eliminated. This is way fast and efficient and accurate.

Brief about Invention :

The invention discloses a product stock management system, which comprises an automatic storehouse cabinet, product information labels, a virtual storehouse cabinet and a main processor, wherein the automatic storehouse cabinet comprises a plurality of storehouse spaces; each storehouse space corresponds to each product information label; the product information labels are dynamically stored with relevant product storage information such as the types, the number and the production dates of products in the storehouse spaces; the virtual storehouse cabinet is mapped with the automatic storehouse cabinet; and the main processor schedules the products according to the relevant product storage information and generates delivery orders and warehouse warrants. By using the product stock management system, a user can timely master the product stock information and the storehouse capacity information, so that scientific and automatic logistics management is realized.

Key Learning Points :

Automatic stock mangement can reduce a lot of efforts and increase the performance of the system. It also makes the system rapid and economical

Summary of Invention :

This invention provides an automated system for managing the stocks and all information about plurality of product.

Number of Claims :	32
Patent Status :	Published Application
How much this invention is related with your IDP/UDP?	71 to 90%

Do you have any idea to do anything around the said invention to improve it? :

Use of RFID can increase the productivity, performance and rapidness way further.

GUJARAT TECHNOLOGICAL UNIVERSITY

Date : 12-Oct-2013

Patent Search & Analysis Report (PSAR)

Team Id : **130005654**

Name : **Sojitra Dhawal Damjibhai -**

Part-1 : Patent Search Technique Used

Patent Search Database Used :	Esp@cenet
Keywords used for search :	Inventory,Management,,
Search String :	Inventory and management
Number of Results/Hits getting :	1038

Part-2 : Basic data of Patent and Bibliographic

Category / Field of Invention :	Information and Technology
Invention is related to/Class of Invention :	Inventory and management
Title of Invention :	SYSTEM AND METHOD OF ON-SHELF INVENTORY MANAGEMENT
Patent No :	
Application No :	WO2013US30514
Date of Filing/Application :	2012-03-03
Priority Date :	2012-03-12
Publication /Journal Number - (Issue No. of Journal in which patent is published) :	US2013235206 A1
Publication Date :	2013-09-12
First Filled Country :	US
Also Published in:	
Relevant Patent / Application No :	
Applicant for Patent is :	Organization

Inventor Details

Sr No	Name	Address	City	Country
1 .	SMITH JEFFREY O	DALLAS(TX)	Dallas	US
1 .	WOLVERTON ANDREW N	Plano(TX)	Plano	US
1 .	YERABOLU SPOORTHY PRIYA	DALLAS(TX)	DALLAS	US

Applicant Details

Sr No	Name	Address	City	Country
1 .	NUMEREX CORP	Atlanta(GA)	Atlanta	US

Part-3 : Technical part of patented invention

Limitation of Prior Technology/Art :

The stock management was not done accurately. Previously it had many errors.

Specific Problem Solved / Objective of Inventor :

This system uses cameras to describe the items present in the inventory and so the stock is also managed.

Brief about Invention :

An inventory management system is described that includes two or more cameras mounted on a retail display space. The cameras are positioned to capture images showing the presence of items of interest in the retail display space. A hub is in communication with each of the cameras mounted on the retail display space and is operable to aggregate information from the cameras related to the items of interest in the retail display space, and to communicate data regarding the status of the item of interest to an inventory management system operable to receive the data from the hub.

Key Learning Points :

Use of cameras to view the stock management easier.

Summary of Invention :

An inventory management system is described that includes two or more cameras mounted on a retail display space. The cameras are positioned to capture images showing the presence of items of interest in the retail display space. A hub is in communication with each of the cameras mounted on the retail display space and is operable to aggregate information from the cameras related to the items of interest in the retail display space, and to communicate data regarding the status of the item of interest to an inventory management system operable to receive the data from the hub.

Number of Claims :	20
Patent Status :	Granted Patent
How much this invention is related with your IDP/UDP?	< 70%

Do you have any idea to do anything around the said invention to improve it? :

System provided fully specified software tool so there"s no need to improvement and sugestions.

GUJARAT TECHNOLOGICAL UNIVERSITY

Date : 12-Oct-2013

Patent Search & Analysis Report (PSAR)

Team Id : **130005654**

Name : **Sojitra Dhawal Damjibhai -**

Part-1 : Patent Search Technique Used

Patent Search Database Used :	Esp@cenet
Keywords used for search :	Wireless,Display,,
Search String :	Wireless Display
Number of Results/Hits getting :	86

Part-2 : Basic data of Patent and Bibliographic

Category / Field of Invention :	Electronics & Communication Engineering
Invention is related to/Class of Invention :	Wireless Communication
Title of Invention :	Method and apparatus for displaying information during idle time on a wireless mobile device
Patent No :	
Application No :	EP20000302859
Date of Filing/Application :	1999-04-05
Priority Date :	1900-01-01
Publication /Journal Number - (Issue No. of Journal in which patent is published) :	
Publication Date :	1900-01-01
First Filled Country :	US
Also Published in:	
Relevant Patent / Application No :	
Applicant for Patent is :	Organization

Inventor Details

Sr No	Name	Address	City	Country
1 .	Martin bruce K Jr.	Palo Alto,CA	California	US
1 .	Stein Lawrence M.	San Jose,CA	California	US
1 .	Heumann Gregory A	San mateo,CA	California	US
1 .	Chen David A.	San carlos,CA	California	US
1 .	Schwartz Bruce V.	San mateo,CA	California	US

Applicant Details

Sr No	Name	Address	City	Country
1 .	Phone .Com Inc.	Redwood City,CA	California	US

Part-3 : Technical part of patented invention

Limitation of Prior Technology/Art :

Many of these wireless computing devices are kept in a functioning state even when the user is not using the device in order to keep the wireless computing device in touch with the wireless communication network. Many wireless computing devices simply display a default status screen while the wireless computing device is not being used. A typical default status screen may include such information as radio signal strength, battery charge level, current date, time of day or current user options (e.g., menu of choices).

Specific Problem Solved / Objective of Inventor :

The present invention relates to the field of wireless personal communication devices. In particular, the present invention discloses a method and apparatus for displaying user oriented information on the displays of wireless personal communication devices while such devices are idle.

Brief about Invention :

To more effectively use the display screen during idle time of wireless communication devices, the present invention introduces an idle content display system. For example, when a wireless computing device is not being used by the user the wireless computing device might display the network operators customer support telephone number, or advertisements. In one embodiment, a browser program within the wireless communication device is used to display other idle content information to the user during such time when the wireless communication device is idle. The browser program may be modified to support looping content, interaction with idle displays, automatic scrolling, and automatic updating of idle content information. Other objects, features, and advantages of present invention will be apparent from the company drawings and from the following detailed description.

Key Learning Points :

to present the wireless personal communication devices.In particular,the present discloses a method and apparatus for displaying user oriented information on the displays of wireless personal communication devices while such devices are idle.

Summary of Invention :

To provide information and communication services to today"s busy mobile professionals, a new class of mobile computing devices has emerged. Notebook computers, palm-top computer systems, and cellular telephones all provide information services to travelling people. The mobile computing devices typically support a collection of personal information management applications such as phone books, electronic calendars, memo pads, and the like. Many mobile computing devices are also wireless communication devices such as cellular telephones and mobile network computers. Wireless communication devices typically support communication applications such as web browsers and email clients.

Number of Claims :	10
Patent Status :	Published Application
How much this invention is related with your IDP/UDP?	Not related to IDP/UDP

Do you have any idea to do anything around the said invention to improve it? :

To provide the display methods using wireless system,a microcontroller and embedded system programming.

GUJARAT TECHNOLOGICAL UNIVERSITY

Date : 12-Oct-2013

Patent Search & Analysis Report (PSAR)

Team Id : **130005654**

Name : **Sojitra Dhawal Damjibhai -**

Part-1 : Patent Search Technique Used

Patent Search Database Used :	Esp@cenet
Keywords used for search :	Inventory,Management,,
Search String :	Inventory and management
Number of Results/Hits getting :	1038

Part-2 : Basic data of Patent and Bibliographic

Category / Field of Invention :	Information Technology
Invention is related to/Class of Invention :	Inventory and management
Title of Invention :	COLOR-BASED IDENTIFICATION, SEARCHING AND MATCHING ENHANCEMENT OF SUPPLY CHAIN AND INVENTORY MANAGEMENT SYSTEMS
Patent No :	
Application No :	US201313762160
Date of Filing/Application :	2012-02-07
Priority Date :	2013-02-07
Publication /Journal Number - (Issue No. of Journal in which patent is published) :	US2013204743 (A1)
Publication Date :	2013-08-08
First Filled Country :	US
Also Published in:	
Relevant Patent / Application No :	
Applicant for Patent is :	Organization

Inventor Details

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Applicant Details

Sr No	Name	Address	City	Country
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Part-3 : Technical part of patented invention

Limitation of Prior Technology/Art :

At times user want to search for a product by color even though it is an attribute that cannot be described adequately using words. For example, other than using rudimentary color names, such as "red" and "blue," searching for products of a particular shade using color as a parameter is extremely difficult, even when the color is relatively popular and intuitively should be easy to locate.

Specific Problem Solved / Objective of Inventor :

Many of the drawbacks involving color-based searching stem from the nature of internet searching, which has historically been text-based, thus requiring a user to enter text into a search engine to describe the information sought. With regard to color, textual color names are typically tagged or embedded beneath an image of a product or associated webpage as metadata, making it virtually impossible to obtain reliable and complete search results when specific color shades are sought.

Brief about Invention :

A color-based system, methods and interfaces to gather, identify, search for and match products using color as a primary indicator. The system, methods and interfaces are preferably implemented as an enhancement of proprietary merchant inventory management systems (IMS) and supply chain management systems (SCM) which enable the effective codification and evaluation of color-based data received and transformed from a number of different merchant IMS and SCM feeds. The system architecture further enables dynamic color processing, pattern recognition and a robust set of features for enhancing commercial experiences of and interactions between consumers and merchants.

Key Learning Points :

Color based searching item

Summary of Invention :

It is a primary objective of the present invention to provide a system, methods and interfaces for merchants and consumers to identify, search for and match products based on color.It is another objective of the present invention to provide a universal convention for color-based identification, searching and matching across multiple proprietary platforms for consumers and merchants to conduct more efficient searches and provide more relevant and up-to-date product results.

Number of Claims :	62
Patent Status :	Granted Patent
How much this invention is related with your IDP/UDP?	< 70%

Do you have any idea to do anything around the said invention to improve it? :

This technology is already so advanced that it can"t be advanced further.

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Date : 12-Oct-2013

Patent Search & Analysis Report (PSAR)

Team Id : **130005654**

Name : **Sojitra Dhawal Damjibhai -**

Part-1 : Patent Search Technique Used

Patent Search Database Used :	Esp@cenet
Keywords used for search :	led,display,,
Search String :	led
Number of Results/Hits getting :	141

Part-2 : Basic data of Patent and Bibliographic

Category / Field of Invention :	Electronics & Communication Engineering
Invention is related to/Class of Invention :	LED
Title of Invention :	A LED Display System
Patent No :	
Application No :	PCT/AU2010/001210
Date of Filing/Application :	2010-09-16
Priority Date :	2009-09-16
Publication /Journal Number - (Issue No. of Journal in which patent is published) :	
Publication Date :	2011-03-24
First Filled Country :	
Also Published in:	
Relevant Patent / Application No :	
Applicant for Patent is :	Organization

Inventor Details

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Applicant Details

Sr No	Name	Address	City	Country
1 .	Tsang	Auburn,Australia	Auburn	Australia
1 .	Ben	Sydney, Australia	Sydney	Australia

Part-3 : Technical part of patented invention

Limitation of Prior Technology/Art :

The majority of traffic light lanterns currently in use are fitted with a quartz halogen light bulb, or even less efficient incandescent light globes with associated reflector and lens.It is very robust and low life and power loss is greater. It is strong and power lost is higher.

Specific Problem Solved / Objective of Inventor :

Although the housing of a traffic lantern housing is very robust with an average life expectancy of twenty years, the quartz halogen aspect contained within the housing is fairly high maintenance as it is not fully sealed and hence the reflector and lens surface need to be cleaned at regular intervals. Also, the fine element within the bulb is very easy to break when it is bumped. Therefore there has been an attempt to replace the quartz halogen light bulbs with light emitting diodes (LEDs) which have a solid-state light source. The power lost is less in this system.

Brief about Invention :

In a preferred embodiment, the panel is a printed circuit board on which the LEDs are mounted.Each driver circuit is preferred to be capable of varying the brightness of the LEDs at a predetermined time or for a predetermined period of time as desired.In a preferred embodiment, the detecting means may be in communication with the microprocessor.The microprocessor may be programmed to enable various parameters to be set and changed for activation and deactivation of the driver circuit.The LED display system is preferred to be powered by an AC or DC power source. Preferably, the power source is a printed circuit board (PCB) heat sinked LED driver. Optionally, the LED display system includes an additional drive circuit adapted to control a larger or an additional LED panel.The power lost is less in this system.

Key Learning Points :

A panel having an array of LEDs;
means for selectively varying power supply to the panel; and detecting means adapted to activate or deactivate one or more of the LEDs.,Programming of LED with the
microprocessor, power loss is less.

Summary of Invention :

The printed circuit board includes a dual in-line package (DIP) switch adapted to customise the behaviour of the LED for specific situations or to control additional software functions. The LED display system is preferred to be powered by an AC or DC power source. Preferably, the power source is a printed circuit board (PCB) heat sinked LED driver. Optionally, the LED display system includes an additional drive circuit adapted to control a larger or an additional LED panel.The power lost is less in this system.

Number of Claims :	23
Patent Status :	Published Application
How much this invention is related with your IDP/UDP?	Not related to IDP/UDP

Do you have any idea to do anything around the said invention to improve it? :

Instead of using 8085 processor it can be also used with 8051 family controller too.

GUJARAT TECHNOLOGICAL UNIVERSITY

Date : 12-Oct-2013

Patent Search & Analysis Report (PSAR)

Team Id	**: 130005654**
Name	**: Sojitra Dhawal Damjibhai -**

Part-1 : Patent Search Technique Used

Patent Search Database Used :	Esp@cenet
Keywords used for search :	wireless,display,gsm,
Search String :	wireless display
Number of Results/Hits getting :	6

Part-2 : Basic data of Patent and Bibliographic

Category / Field of Invention :	Electronics & Communication Engineering
Invention is related to/Class of Invention :	LED,MODEM
Title of Invention :	WIRELESS ACCESSIBLE DISPLAY AND METHODS
Patent No :	
Application No :	WO2010US22297
Date of Filing/Application :	2010-01-27
Priority Date :	2009-01-28
Publication /Journal Number - (Issue No. of Journal in which patent is published) :	
Publication Date :	2010-08-05
First Filled Country :	US
Also Published in:	
Relevant Patent / Application No :	
Applicant for Patent is :	Individual

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Applicant Details

Sr No	Name	Address	City	Country
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Part-3 : Technical part of patented invention

Limitation of Prior Technology/Art :

Remotely accessible signs such asstore signs,marketin signs, information signs and like can be addresed or accessed electrnically by handles controls,like hitting various buttons or enters various keystrokes to change display.And from distant place the display cannot be seen.It also limits the user""s ability to access the sign or make changes.

Specific Problem Solved / Objective of Inventor :

Methods and apparatus are described that provide a display and other information sources that can be addressed wirelessly,and in some cases even from anywhere in the world by using GSM modem having the same frequency.LEDs and LCDs are used for better graphical display.Also SIM card is programmed to process messages,which increases security of information.

Brief about Invention :

Changeable displays are described and methods of making and using such displays are described as well. Displays can be made changeable using wireless communications, including through cellular indications networks. GSM modem technology can be used. A changeable display can incorporate a GSM modem incorporating a programmable SIM card, which may be programmed with a cellular telephone number for remotely accessing the display. An I/O unit may be included to interface between the modem and a visual display. An edge lit display is also described along with its method of manufacture.

Key Learning Points :

Various Display Methods, GSM communication, Programming of SIM card for saving and deleting the messages.

Summary of Invention :

Changeable displays are described and methods of making and using such displays are described as well. Displays can be made changeable using wireless communications, including through cellular indications networks. GSM modem technology can be used. A changeable display can incorporate a GSM modem incorporating a programmable SIM card, which may be programmed with a cellular telephone number for remotely accessing the display. An I/O unit may be included to interface between the modem and a visual display. An edge lit display is also described along with its method of manufacture.

Number of Claims :	32
Patent Status :	Published Application
How much this invention is related with your IDP/UDP?	Not related to IDP/UDP

Do you have any idea to do anything around the said invention to improve it? :

Programming and interfacing between GSM and SIM should be done through microcontroller.