Synopsis

"Bookstore Management System"

Submitted to **Mr. Vikas Kumar.**

(GLA University)

in partial fulfillment for the award of degree of

BACHELOR
OF
COMPUTER SCIENCE &
ENGENEERING

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BOOKSTORE MANAGEMENT SYSTEM

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TO WHOMSOEVER IT MAY CONCERN

This is to certify that the Student **Yash Gupta** and **Abhishek Kumar Sharma** and **Krishna Saraswat** of Gla University of Computer Science Mathura has satisfactorily completed his Project **BOOKSTORE MANAGEMENT SYSTEM** during the period April 2023 in the partial fulfillment of the Students.

Name & Signature of Project Guide: **Signature and Seal of Department:**

ACKNOWLEGEMENT

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ABSTRACT

Bookstore Management System is basically used to build an web application program which help people to find and buy latest design of Books with different categories like Biography, Programming, Management, etc. It is useful in the way that it makes an easier way to buy Personal Bookstore.

Today most of the book shop is useful for shopping site. The admin have lots of paper work and they are using desktop, spread sheet like MS Excel application to manage data in soft copy about user record. In this proposed Bookstore System it will run in server and user can handle whole the registration activities.

This application maintains the centralized database so that any changes done at a location reflects immediately. This is an online tool so more than one user can login into system and use the tool simultaneously.

The aim of this application is to reduce the manual effort needed to manage transactions and historical data used in various gods owns. Also this application provides an interface to users to view the details And Design about Bookstore.

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Chapter 1

<u>Introduction</u>

Project Background

- This Software allows the Admin to store the book details and the customer details.

- Easier access to information like customer information and availability.

- Provide facility of storing data to reduce the paper work.

- In Bookstore Management System Users can by a book and Admin shows their name and other background of the user.

- A new idea about Project how Bookstore Management System works.

  For make a system computerized.

1.1 Objectives of Project

- To reduce the paper work.To make computerized system.

- Increase operational speed.Faster searching as well as accuracy.

- Large storage of data using database.

- Manual process of vehicle purchase and sales on finance and cash and generate reports of model wise, weekly, monthly ,annual progress is so difficult so this project make is easier.

- Speed and faster information retrieval.

1.3 Purpose of Project

- The main purpose of Book-store Management System is to focused on the solution of all the problems related to the paper work from the different reasons.

- It provides a facility to handle all the activities at one place. With the help of this application, admin can perform different kind of operations at the same time and place.

- Bookstore management System has an ability to keep the records safe related to Books.

- We provide the best service in our website or focuses on user choice. We will improve new feat user can easily understand and trust our system.

1.4 Scope of Project

- The intentions of the system are to reduce over-time pay and increase the number of records that can be treated accurately; Requirements statements in this document are both functional and non-functional.
- Correct and Accurate Searching that provides the result by applying search operation.
- Customers can book a book with just few clicks.
- Give flexibility admin to use database effectively and utilize the word, not pad and calculator Unambiguous and understandable by all level facilities effectively.
- Unambiguous and understandable by all level.

1.5 Applicability of Project:

- For customers who want to buy books at anywhere or anytime.
- Admin applicable for insert books, list of books.
- Database is used for store and fetch data from or to the database so both users and admin can fetch or read data.

Chapter 2

Requirement And Analysis

2.1 Problem Statement

- So much Paper work

- Process is much time consuming

- Extra expense in paper work

- Large storage of data

- Manual process of Vehicle purchase and sales on finance and cash and generate reports of model wise, weekly, monthly, annual progress is so difficulties.

- Speed and faster information retrieval.

- Accuracy and consistency in manual system is less.

- Personal delay.

- In manual system it is tedious task to search a particular record later after.

- Increase the staff in test taken place and wasting of their precious time.

2.2 Requirement Specification

As per the System Requirements it contains two (2) Modules:

1) Admin

2) Client

Functionalities of Admin:

- This Module includes the mainly following tasks:
  - ❖ Entry of Category.
  - ❖ Category List.
  - ❖ Add a New Book.
  - ❖ View Book.
  - ❖ View Message which Send by Client.

Functionalities of Client:

- This Module includes the mainly following tasks:
    - ❖ View Books.
    - ❖ Add books to Cart.
    - ❖ Search Books.
    - ❖ View or Add items in Cart.

2.3 Hardware requirement

- System type 32 bit Operating System.
- Windows 7/8/8.1/10
- Linux Ubuntu / Light ubuntu
- Mac OS
- 350MB RAM

2.4 Software Requirement

- Wamp Server
- MySQL
- Browser
- PHPMyAdmin

Client Side Tools

- **Processor :** PC with a Dual core processor or above isϖ Recommended: 2.20 GHz processor.
- **RAM :** 512 MB or onwards Recommended.
- **Hard Disk :** 45 MB of available space required on system drive of available or more.
- **Operating System :** Windows or open source 32/64 bit operating system, or later versions. Browser Mozilla Firefox 2.0 /Internet Explorer 8.0 Onwards / Googleϖ Chrome.

2.5 Planning and scheduling

Different amount of time may be required for each stage in the project cycle, depending on the particulars of the key aspect of the project cycle seem to recur during development process. The information obtained during the requirement gathering of pre-development phase provides the impetus for the requirement analysis and the information is further used in the design phase.

Planning and Scheduling:-

ID	Task Name
1	Analysis
2	Design
3	Coding
4	Implementation
5	Testing
6	Documentation

(Figure 1 : Planning and Sheduling)

The above schedule specifies the estimated time that will be required in various software development phases, considering all situational factors. Team members are technically ready accepting few days training on to get the Technology Awareness. Thus, according to calculation, it is feasible to build such solution in time. "**The schedule will be revised at the end of each phase and updated as required**".

Brief overview of the technology

Front End - HTML, CSS , BOOTSTRAP

1. **HTML**

HTML stands for HYPER TEXT MARKUP LANGUAGE, which is most¬ widely used language on web to develop web pages. HTML refers to the way in which Web pages (HTML documents) are linked together. Thus, the link available on a web page is called Hypertext.

HTML was created by Berners-Lee in late 1991 but "HTML 2.0" was the first standard HTML specification which was published in 1995. HTML 4.01 was a major version of HTML and it was published in late 1999. Though HTML 4.01 version is widely used but currently we are having HTML-5 version which is an extension to HTML 4.01, and this version was published in 2012.

As its name suggests, HTML is a Mark-up Language which means you use HTML to simply "mark-up" a text document with tags that tells a web browser how to structure it to display.

Originally, HTML was develop with the intent of defining the structure of documents like heading, paragraph, lists, and so forth to facilitate the sharing of scientific information between researchers. Now, HTML is being widely used to format web pages with the help of different tags available in HTML.

2. **CSS**

Cascading Style Sheet is a style sheet language used for describing the presentation of a document written in a markup language Although most often used to set the visual style of web page and user interfaces written in HTML and XHTML, the language can be applied to any XML document, including plain XML, SVG and XUL, and is applicable to rendering in speech, or on other media. Along with HTML and JavaScript, CSS is a cornerstone technology used by most websites to create visually engaging webpages, user interfaces for web applications, and user interfaces for many mobile applications.

CSS is designed primarily to enable the separation of document content from document presentation, including aspects such as the layout, colors, and fonts. This separation can improve content accessibility, provide more flexibility and control in the specification of presentation characteristics, enable multiple HTML pages to share

formatting by specifying the relevant CSS in a separate .css file, and reduce complexity and repetition in the structural content.

The CSS specifications are maintained by the World Wide Web Consortium (W3C). Internet media type (MIME type) text/css is registered for use with CSS by RFC 2318 (March 1998). The W3C operates a free CSS validation service for CSS documents

CSS has a simple syntax and uses a number of English keywords to specify the names of various style properties. A style sheet consists of a list of rules. Each rule or rule-set consists of one or more selectors, and a declaration block.

3. BOOTSTRAP

Bootstrap is a free and open-source, front-end web frame work for designing websites and web applications. It contains HTML- and CSS-based design templates for typography, forms, buttons, navigation and other interface components, as well as optional JavaScript extensions. Unlike many web frameworks, it concerns itself with front-end development only.

Bootstrap is modular and consists of a series of less stylesheets that implement the various components of the toolkit. These stylesheets are generally compiled into a bundle and included in web pages, but individual components can be included or removed. Bootstrap provides a number of configuration variables that control things such as color and padding of various components.

Since Bootstrap 2, the Bootstrap documentation has included a customization wizard which generates a customized version of Bootstrap based on the requested components and various settings.

As of Bootstrap 4, is used instead of less for the stylesheets. Each Bootstrap component consists of an HTML structure, CSS declarations, and in some cases accompanying JavaScript code.

Back End - PHP, MySQL

1. PHP

The PHP Hypertext Pre-processor (PHP) is a programming language that allows web developers to create dynamic content that interacts with databases. PHP is basically used for developing web based software applications. This tutorial helps you to build your base with PHP. PHP started out as a small open source project that evolved as more and more people found out how useful it was. Rasmus Lerdorf unleashed the first version of PHP way back in 1994.

- PHP is a recursive acronym for "PHP: Hypertext Preprocessor".
- PHP is a server side scripting language that is embedded in HTML. It is used to manage dynamic content, databases, session tracking, even build entire e-commerce sites.
- It is integrated with a number of popular databases, including MySQL, Postgre SQL, Oracle, Sybase, Informix, and Microsoft SQL Server.
- PHP is pleasingly zippy in its execution, especially when compiled as an Apache module on the Unix side. The MySQL server, once started, executes even very complex queries with huge result sets in record-setting time.
- PHP supports a large number of major protocols such as POP3, IMAP, and LDAP. PHP4 added support for Java and distributed object architectures (COM and CORBA), making n-tier development a possibility for the first time.
- PHP is forgiving: PHP language tries to be as forgiving as possible.
- PHP Syntax is C-Like.

2. **MySQL**

MySQL is a database, widely used for accessing querying, updating, and managing data in databases.

MySQL is an open source RDBMS that relies on SQL for processing the data in database. MySQL provides APIs for the languages like C, C++, Eiffel, JAVA, Perl, PHP and Python. MySQL is most commonly used for web applications and for embedded applications and has become a popular alternative to proprietary database system because of its speed and reliability. MySQL can run on UNIX, Windows and Mac OS.

Project Analysis and Planning

The BMS is critical to set-up online order, customers to browse through book categories. This is a small scale project for BMS. The basic idea is that the customers can buy a book from anywhere during any time by the cash through.

User

- User can Register, Login, Logout the system.
- View different categories and by books.
- Contact with Admin
- Add Books to Cart
- Order Books

Functionality

- One or more user visit web page at a time.

Usability

- In any browser run this webpage.

Performance

- It performs the webpage as per User's operating system.

Admin

- Admin can manage system.
- Provide books.

Functionality

- Admin can insert a book or manage the records.

Spiral Model

The spiral model combines the idea of iterative development with the systematic, controlled aspects of the waterfall model. This Spiral model is a combination of iterative development process model and sequential linear development model i.e. the waterfall model with a very high emphasis on risk analysis. It allows incremental releases of the product or incremental refinement through each iteration around the spiral.

Spiral Model - Design

The spiral model has four phases. A software project repeatedly passes through these phases in iterations called Spirals.

Identification

This phase starts with gathering the business requirements in the baseline spiral. In the subsequent spirals as the product matures, identification of system requirements, subsystem requirements and unit requirements are all done in this phase.

This phase also includes understanding the system requirements by continuous communication between the customer and the system analyst. At the end of the spiral, the product is deployed in the identified market.

Design

The Design phase starts with the conceptual design in the baseline spiral and involves architectural design, logical design of modules, physical product design and the final design in the subsequent spirals.

Construct or Build

The Construct phase refers to production of the actual software product at every spiral. In the baseline spiral, when the product is just thought of and the design is being developed a POC (Proof of Concept) is developed in this phase to get customer feedback.

Then in the subsequent spirals with higher clarity on requirements and design details a working model of the software called build is produced with a version number. These builds are sent to the customer for feedback.

Evaluation and Risk Analysis

Risk Analysis includes identifying, estimating and monitoring the technical feasibility and management risks, such as schedule slippage and cost overrun. After testing the build, at the end of first iteration, the customer evaluates the software and provides feedback.

The following illustration is a representation of the Spiral Model, listing the activities in each phase.
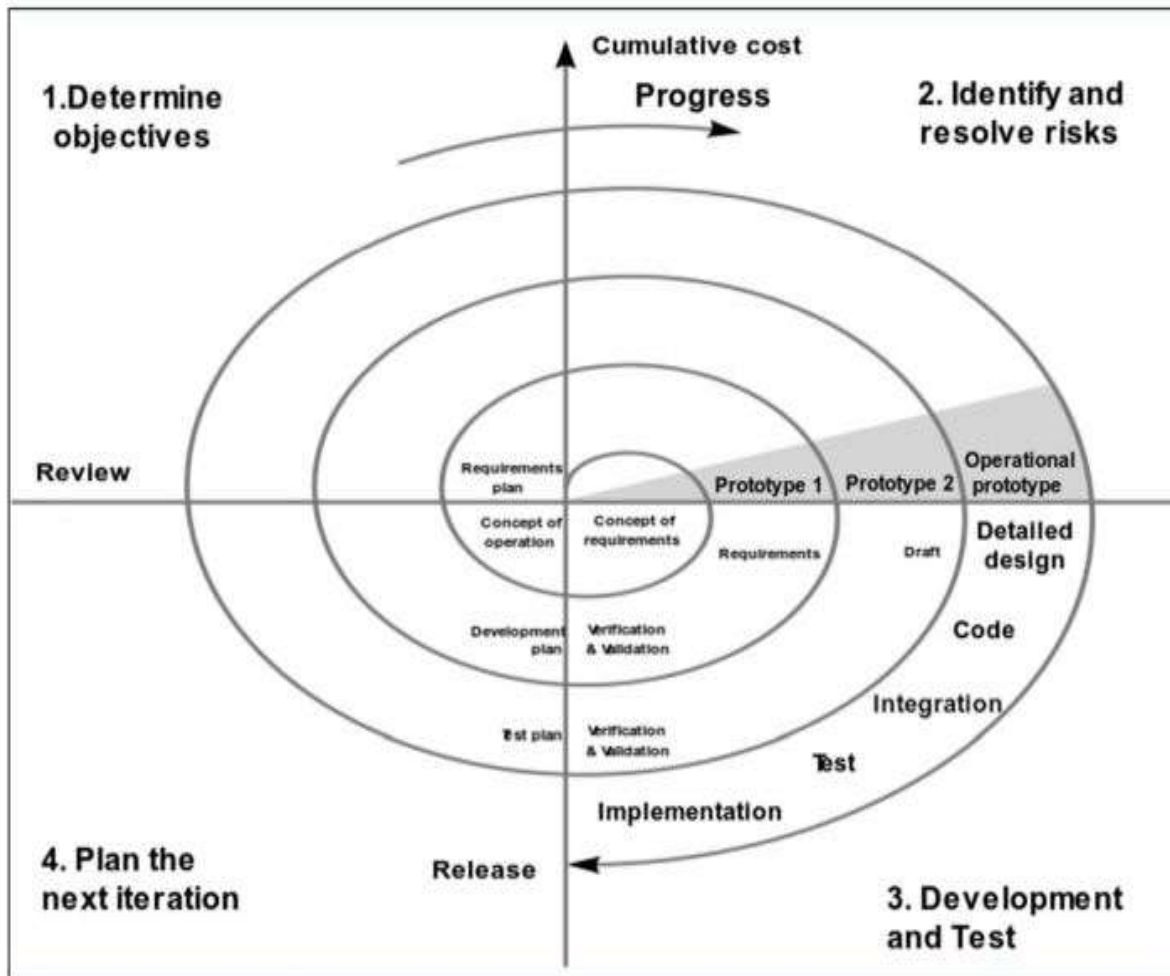
(Figure 2 : Spiral Model)

Based on the customer evaluation, the software development process enters the next iteration and subsequently follows the linear approach to implement the feedback suggested by the customer. The process of iterations along the spiral continues throughout the life of the software.

Spiral Model Application

The Spiral Model is widely used in the software industry as it is in sync with the natural development process of any product, i.e. learning with maturity which involves minimum risk for the customer as well as the development firms.

The following pointers explain the typical uses of a Spiral Model −

- When there is a budget constraint and risk evaluation is important.

- For medium to high-risk projects.

- Long-term project commitment because of potential changes to economic priorities as the requirements change with time.

- Customer is not sure of their requirements which are usually the case.

- Requirements are complex and need evaluation to get clarity.

- New product line which should be released in phases to get enough customer feedback.

- Significant changes are expected in the product during the development cycle.

Spiral Model - Pros and Cons

The advantage of spiral lifecycle model is that it allows elements of the product to be added in, when they become available or known. This assures that there is no conflict with previous requirements and design.

This method is consistent with approaches that have multiple software builds and releases which allows making an orderly transition to a maintenance activity. Another positive aspect of this method is that the spiral model forces an early user involvement in the system development effort.

On the other side, it takes a very strict management to complete such products and there is a risk of running the spiral in an indefinite loop. So, the discipline of change and the extent of taking change requests are very important to develop and deploy the product successfully.

The advantages of the Spiral SDLC Model are as follows −

1. Changing requirements can be accommodated.

2. Allows extensive use of prototypes.

3. Requirements can be captured more accurately.

4. Users see the system early.

5. Development can be divided into smaller parts and the risky parts can be developed earlier which helps in better risk management.

Chapter 3

<u>System Design</u>

3.1 Over All System Design Using Designing Tools

The Purpose of Design Phase is to plan a solution for problem specified by the requirements. System Design aims to identify the modules that should be in the system, the specification of those modules and how they interact with other to produce the results. The goal of the design process is to produce a model that can be used later to build that system. The produced model is called design of the system.

System Design is the process of defining the architecture, components, modules, interfaces and data for a system to satisfy specified requirements.

Normally, the design proceeds in 2 stages:

- Physical Design
- Database Design

Physical Design
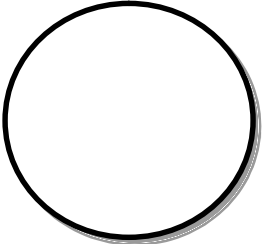
The Physical Design is a graphical representation of a system showing the system's internal and external entities and the flow of data into and out of these entities. An internal entity is an entity within the system that transforms data.

To represent the Physical Design of the system, we use diagrams like Data Flow Diagrams, E-R Diagrams, Use Case Diagrams, etc…
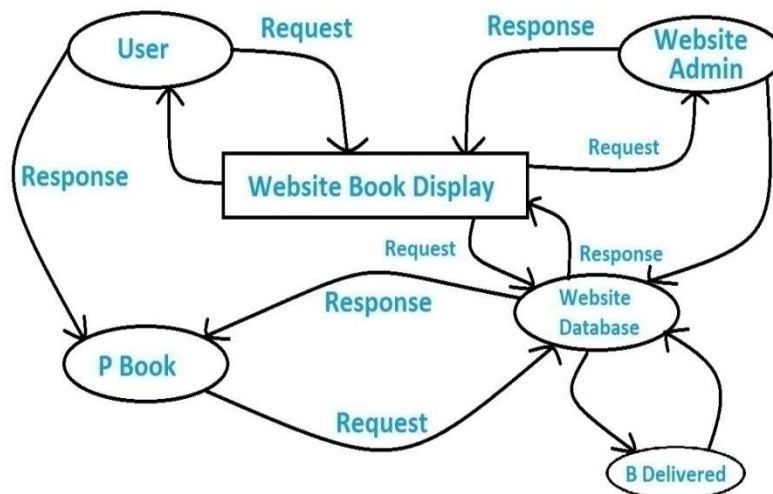
1. Data Flow Diagram

The Data Flow Diagrams (DFD) is a graphical representation of the flow of data through an information system. Data Flow Diagrams are used by systems analysis to design information processing systems but also a way to model whole organization. The main merit of DFD is that it can provide an overview of what data a system would processes. What transformations of data are done, what data are stored and which stored data is used, and where the result is flow.

Standard Symbols used in DFD:

| Symbol	Name	Function
	Data Flow	Used to connect processes to each other. The Arrowhead indicates the direction of Data Flow.
	Process	Performs some transformation to input data to output data.
	Input / Output	It is used to Input or Output data.

(Figure 3 : Data Flow Diagram Symbols)

- **0 Level DFD (Website Flow Diagram)**
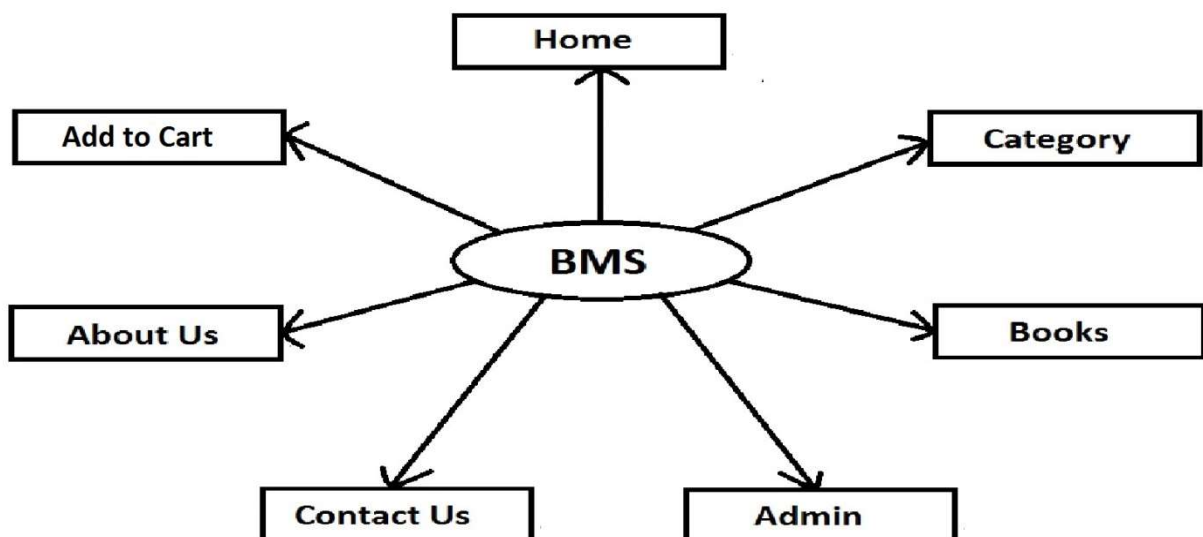

(Figure 4 : 0 Level Data Flow Diagram)

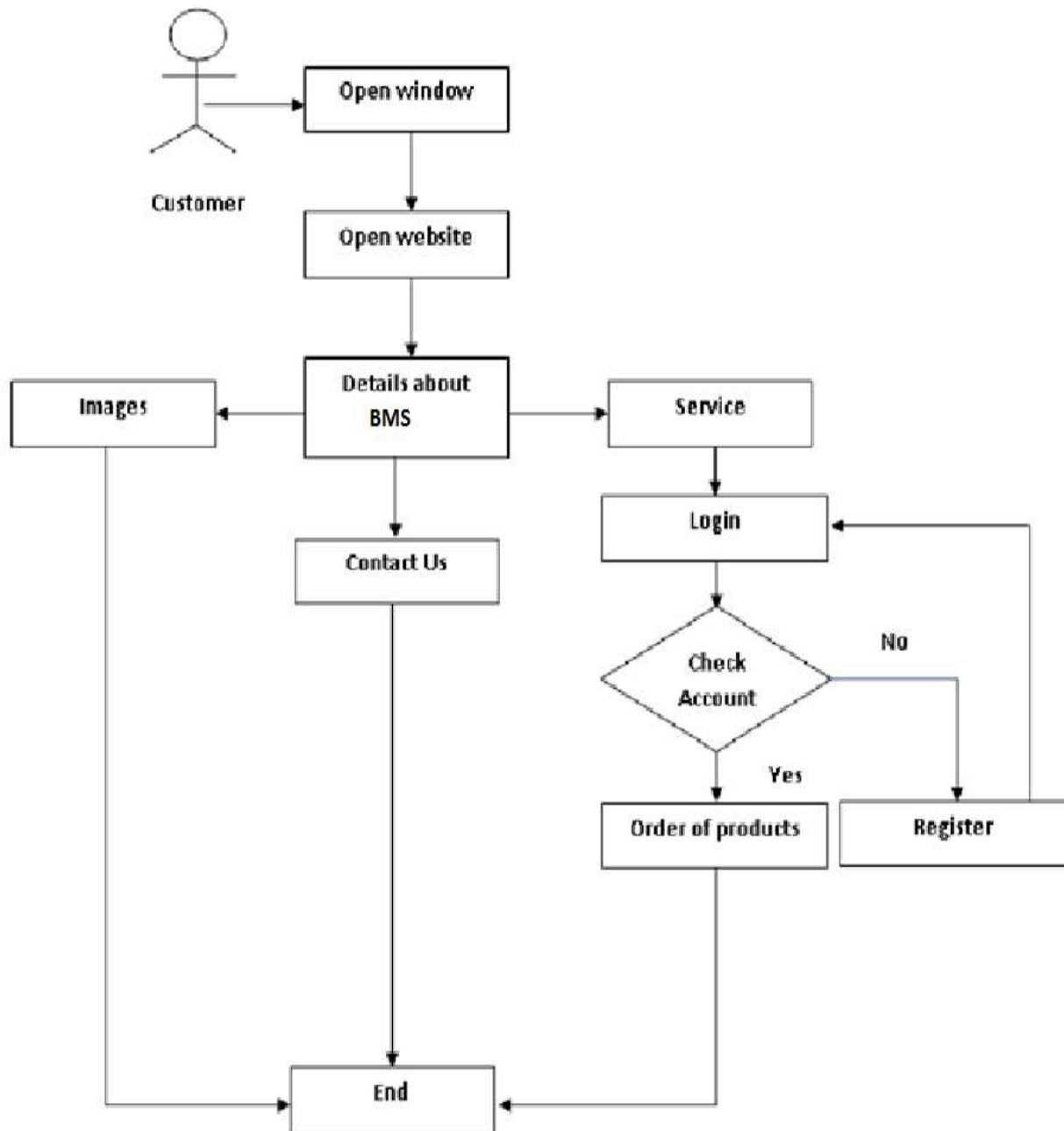- **1st Level DFD (Website Flow Diagram)**
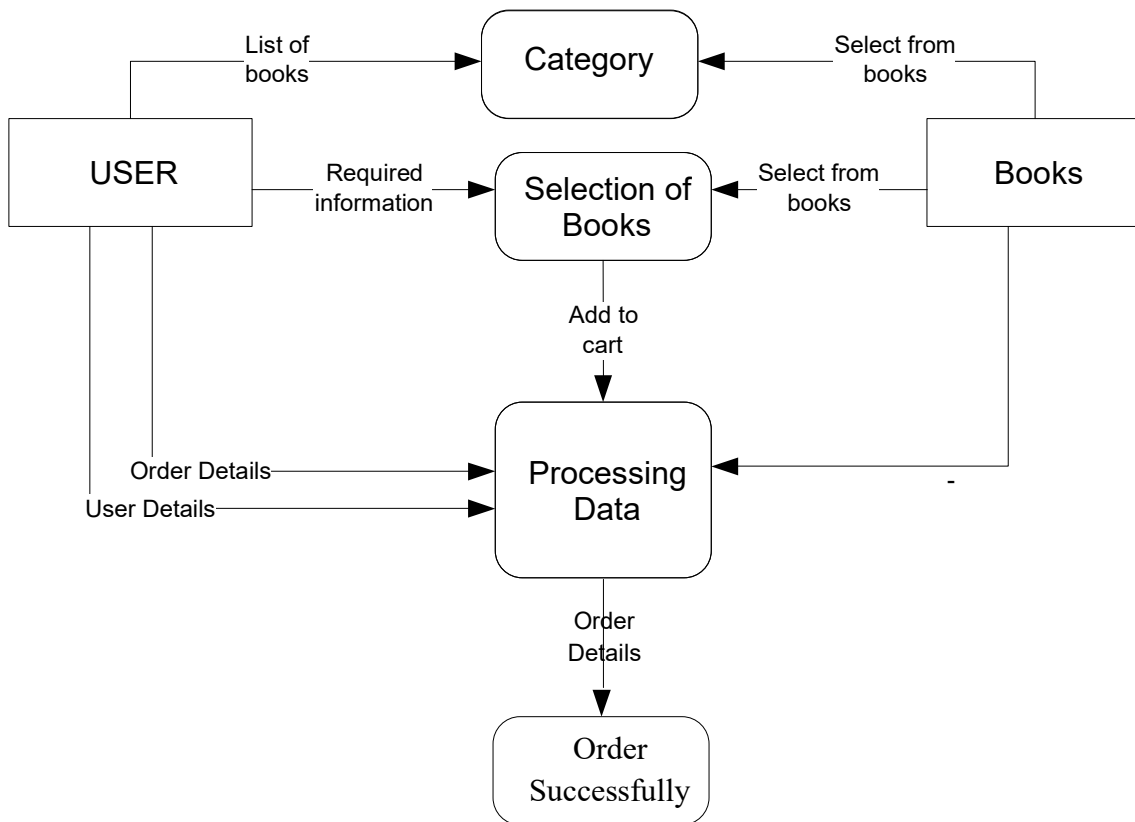
(Figure 5 : 1st Level Data Flow Diagram)

- **Flowchart Diagram**

(Figure 6 : BMS Flowchart Diagram)

- **User Flow Diagram**

(Figure 7 : User Flow Diagram)