Electronic Book Shop: An Online Book Store for the Individual

Submitted By

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The Project has been submitted in Partial Fulfillment of the Requirements for the Degree of Master of Science in Computer Science and Engineering at East West University.

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Abstract

The main objective of this project is to create an Electronic Book Shop that allows users to search and purchase a book online based on category, author and subject. The selected books are displayed and the user can order their books online through bkash, dbbl mobile banking or Cash on delivery. Using this Website the user can purchase a book online instead of going out to a book store and wasting time.

Electronic Book Shop is an online web application where the customer can purchase books online. Through a web browser the customers can search for a book by its subjects, titles or authors and later can add to the shopping cart and finally purchase using bkash or Cash on delivery. The user can login using his account details or new customers can set up an account very quickly. They should give the details of their name, contact number and shipping address. The books are divided into many categories based on subject like School, College and University. A customer can, create, sign in to his account, place items into a shopping cart and purchase. The Administrator will have additional functionality when compared to the common user. He can add, delete and update the book details, book categories, member information and also confirm a placed order. After all, this Website is error free. Any user can use this website friendly.

Declaration

I do hereby declare that this project report has been prepared by me under the supervisor of **Md. Shamsujjoha**, Senior Lecturer, Department of Computer Science and Engineering, East West University, for the partial fulfillment of the requirement for the M.S.C degree from the Department of Computer Science and Engineering at East West University. I'm also declaring that this project report is original in nature and has not been submitted elsewhere.

Signature of Candidate

………………….

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Letter of Acceptance

The project entitled **'Electronic Book Shop** is submitted by Mafrina Rahman, ID: 2014-1-96-008 to the department of Computer Science and Engineering, East West University, Dhaka-1212, Bangladesh is accepted by the Department for the partial fulfillment of the requirements for the degree of M.S.C in Computer Science and Engineering on August 10, 2016.

Approval of Chairperson   **Approval of Supervisor**

Dr. Md. Mozammel Huq Azad Khan   Md. Shamsujjoha
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Bangladesh   Bangladesh

Acknowledgement

Any accomplishment requires the effort of many people and there are no exceptions. The report being submitted today is a result of collective effort. I would like to extend my sincere thanks to all of them. The report has been solely prepared by me with the purpose of fulfilling the Degree of M.S.C in Computer Science and Engineering. There are innumerous helping hands behind it who have guided me.

A special gratitude I give to my project supervisor, Md. Shamsujjoha, Senior Lecturer whose contribution in stimulating suggestions and encouragement helped me to coordinate my project.

Last but not the least we place a deep sense of gratitude to my family members and my friends who have been constant source of inspiration during the preparation of this project work.

Acronyms

WWW= World Wide Web

PHP= Hypertext Preprocessor

SQL=Structured Query Language

CSS = Cascading Style Sheets

HTML = Hyper Text Markup language

Ajax =Asynchronous JavaScript and XML

OTBMS= Online Text Books Monitoring System

SDLC= System Development Life Cycle

DBMS = Database Management System

ER diagram=Entity Relationship Diagram

DDF= Data Flow Diagram

GUI= Graphical User Interface

GPL= General Public License

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1.1 Overview

The modern world is surrounded by the technology and internet is the biggest invention of the world which is a worldwide system of computer networks. In the network users at any computer can communicate with the other if they have permission to get information from any other computer. Today hundreds of millions of people worldwide are using internet and most widely used part of the internet is the World Wide Web (www). It is basically a system of internet servers that support specially formatted documents which is formatted in a markup language called Hyper Text Markup Language (HTML) that supports links to other documents, as well as graphics, audio, and video files. Web page is a document commonly written in Hyper Text Markup Language (HTML) that is accessible through the internet or other network using an internet browser by entering a URL address and many contain text, graphics and hyperlinks to other web pages and files. A website contains thousands of different pages including the web pages. The people can access the website in any places using the internet. So that the businessman and consumers are selling, showing, marketing their products making the attractive website and deliver the products as early as possible. Any type of business or commercial transactions that involves the transfer of information across the internet is called Electronic Commerce or ecommerce. It allows consumers to electrically exchange goods and services with no barriers of time or distance.

Shopping cart software is an operating system used to allow consumers to purchase goods and or services, track customers, and tie together all aspects of ecommerce into one cohesive whole. A user can entered an online store, see the product that fulfill their demand and select it in the cart for the next step. To complete the order they need to checkout and complete the transaction by providing payment information.

Online Electronic Book Shop is an ecommerce site where the user can see the books, select the books in the cart and place the order to collect them easily at home. [1]

1.2 Purpose and Motivation

The main objective of this project is to create an Electronic Book Shop that allows users to search and purchase a book online based on category, author and subject. The selected books are displayed and the user can order their books online through bkash or DBBL. The Administrator will have additional functionalities when compared to the common user.

The motivation to create this project has many sources -

- Interest to develop a good user friendly website with many online transactions using a database.
- To increase my knowledge horizon in technologies like PHP, SQL, CSS, HTML, JavaScript, JQuery.
- To reduce time consumption, labor requirements.

1.3 Project Overview

There are many online book stores like Powell's, Amazon which were designed using HTML. I want to develop a similar website using PHP, JavaScript, JQuery. Online Book store is an online web application where the customer can purchase books online. Through a web browser the customers can search for a book by its title or author, later can add to the shopping cart and finally purchase using bkash or Cash on delivery. The user can login using his account details or new customers can set up an account very quickly. They should give the details of their name, contact number and shipping address. The books are divided into many categories based on subject Like School, College, and University.

This project has the following functionalities:

- **A Home page with product catalog**

  This is the page where the user will be navigated after a successful login. It will display all the book categories and will have a search keyword option to search for the required book. It also includes some special sections like top selling books, top author, recommended books etc.

- **Search**

  A search by keyword option is provided to the user using a textbox .The keyword to be entered should be the book title. If the user would like to know details about a book he can click on the title or the image from where he will be directed to a Book description page. It includes the notes of the book content, the recommend book titles. Users can also comment about the book and show the commented articles.

- **Complain**

  The user can complain if they will find any problem. The admin will try to solve their problem**.**

- **Shopping Cart**

  The user can manage a shopping cart which will include all the books he selected. The user can edit, delete and update his shopping cart. A final shopping cart summary is displayed which includes all the items the user selected and the final total cost.

- **Managing user accounts**

  Each user should have an account to access all the functionalities of website. User can login using login page and logout using the logout page. All the user sessions will be saved in the database.

- **Administration**

  The Administrator will be provided with special functionalities like

  - Add or delete a book category
  - Add or delete a member.
  - Add or delete author and publisher.
  - Manage member orders.
  - Add or delete a Payment status.

1.4 Objective of the project:

Electronic Book Shop focuses precisely on the following objectives:

- To enable administrator to access the system from anywhere.
- To reduce data redundancy and pruning ambiguous data.
- To process data in possibly least amount of time.
- To secure the information and obstruct the access of unauthorized persons.
- To avail the information immediately in demand.
- To analyze the data for providing analytical decisions

1.5 Facilities

My system will provide facilities:

- System administrator
- Users:
  - Guest user
  - Registered user.

1.5.1 Facilities to be provided to the system administrator:

- System administrator will have user friendly asynchronous GUI (Graphical User Interface) system.
- Can be accessed from anywhere of the world.
- To have the details information of order, average selling rate, top selling books information, weekly selling books information etc

1.5.2 Facilities to be provided to the registered user

- User can choose and buy any kinds of books easily from this site only by registering.
- User can search any kind of books from this website.
- User can easily access this website
- User can add, update or cancel his/ her shopping cart within limited time

1.5.3 Facilities to be provided to the Guest user

- Users can show all information of books.

- User can search any kind of books from this website.

- Users can read review about the books.

- Users can complain about the website.

- Users can contact with the admin

2.1 Technical Overview:

Development of an ecommerce website used the technologies of both front and back end. In the Front-End development refers to the web users interact with directly.

The front end development needs a bundle of programs like as -

* HTML
* CSS
* Ajax
* Java script.

A back end development serves indirectly in support of front-end services and it consists of three parts: Server, Application and Database.
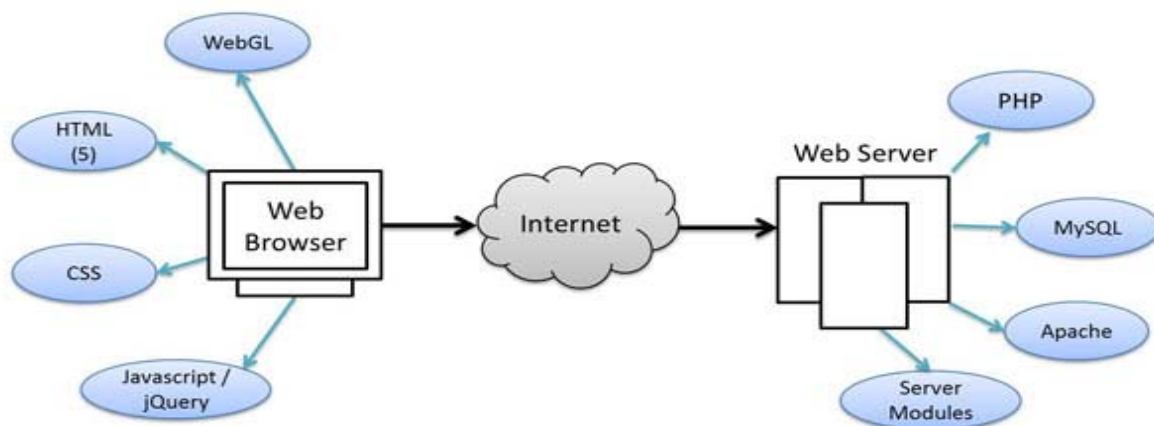
* PHP
* MYSQL

Figure: Typical diagram of a website

2.1.1 <u>HTML:</u>

HTML or Hyper Text Markup Language is the standard markup language used to create web pages. HTML is the set of markup symbols or codes inserted in a file intended for display on a World Wide Web (WWW) browser page. The markup tells the web browser how to display a web page's words and images for the user.

The basic form of a HTML page is like following......

Figure: Typical diagram of a website

2.1.2 <u>CSS:</u>

CSS stand for Cascading Style Sheet. Web Designers that don't use CSS for their design and development of web sites are rapidly becoming a thing of the past. And it is arguably as important to understand CSS as it is to know HTML - and some would say it was more important to know CSS style sheet refers to the document itself. Style sheets have been used for document design for years. Cascade is the special part. A Web style sheet is intended to cascade through a series of style sheets, like a river over a waterfall.

CSS is one of the most powerful tools

- A Web designer can learn because with it you can affect the entire mood and tone of a Web site.

- Well written style sheets can be updated quickly and allow sites to change what is prioritized or valued without any changes to the underlying XHTML.

- It saves time. When most of us first learn HTML, I get taught to set the font face, size, color, style etc every time it occurs on a page. This means I find myselves typing (or copying & pasting) the same thing over and over again. With CSS, you only have to specify these details once for any element.

- CSS will automatically apply the specified styles whenever that element occurs.

- It makes Pages to load faster less code means faster download times.

- It's Easy to maintain. To change the style of an element, you only have to make an edit in one place.

2.1.3 <u>Ajax:</u>

Ajax (Asynchronous JavaScript and XML) is a method of building interactive applications for the Web that process user requests immediately. Ajax combines several programming tools including JavaScript, dynamic HTML (DHTML), Extensible Markup Language (XML), cascading style sheets (CSS), the Document Object Model (DOM), and the Microsoft object, XML Http Request. Ajax allows content on Web pages to update immediately when a user performs an action, unlike an HTTP request, during which users must wait for a whole new page to load. For example, a weather forecasting site could display local conditions on one side of the page without delay after a user types in a zip code.

2.1.4 <u>JQuery:</u>

JQuery stands from JavaScript Query which is a powerful framework of JavaScript. The purpose of JQuery is to make it much easier to use JavaScript on website. JQuery is a

lightweight, "write less, do more", and JavaScript library. The purpose of J query is to make it much easier to use java's website. JQuery takes a lot of common tasks that require many lines of JavaScript code to accomplish, and wraps them into methods that you can call with a single line of code. JQuery also simplifies a lot of the complicated things from JavaScript, like AJAX calls and DOM manipulation.

The jQuery library contains the following features:

- HTML/DOM manipulation
- CSS manipulation
- HTML event methods
- Effects and animations
- Utilities

2.1.5 PHP:

PHP stands for Preprocessor Hypertext which is a server site is scripting language mainly used for communicating with server. It is also widely-used open source general-purpose scripting language that is especially suited for web development and can be embedded into HTML.

PHP code is interpreted by a web server with a PHP processor module, which generates the resulting web page: PHP commands can be embedded directly into an HTML source document rather than calling an external file to process data. It has also evolved to include a command-line interface capability and can be used in one graphical application.[4]

2.1.6 MYSQL:

Mysql is an open source RDBMS that relies on SQL for processing the data in the database. Mysql provides APIs for the languages C, C++, Eiffel, Java, Perl, PHP and

Python. In addition, OLE DB and ODBC providers exist for MySQL data connection in the Microsoft environment. A mysql.NET Native Provider is also available, which allows native MySQL to .NET access without the need for OLE DB.

My SQL is most commonly used for Web applications and for embedded applications and has become a popular alternative to proprietary database systems because of its speed and reliability. Mysql can run on UNIX, Windows and Mac OS.

Mysql is developed, supported and marketed by mysql AB. The database is available for free under the terms of the GNU General Public License (GPL) or for a fee to those who do not wish to be bound by the terms of the GPL. [2]

MySQL does the following terms:

- MySQL is a database system used on the web
- MySQL is a database system that runs on a server
- MySQL is ideal for both small and large applications
- MySQL is very fast, reliable, and easy to use
- MySQL supports standard SQL
- MySQL compiles on a number of platforms
- MySQL is free to download and use
- MySQL is developed, distributed, and supported by Oracle Corporation

2.1.7 Xampp :

XAMPP stands for "X (as in "cross-platform"), Apache, MySQL, PHP, Perl" and is a "solution stack package" that installs each of those items (don't you just love techno-jargon?). Similarly there exists a WAMP, MAMP, and LAMP, standing for Windows, Mac, and Linux, respectively. I believe they condense the "P" to PHP/Perl/Python because Python is additionally included in the stack, whereas it's not in XAMPP.
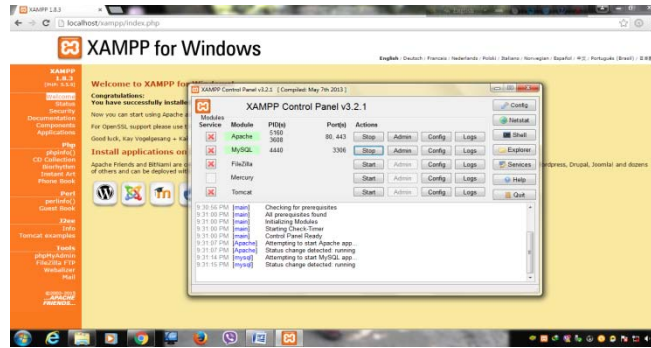
Figure: User view of XAMPP control center

In general, XAMPP is used for web development on your local machine, as opposed to directly on your web space. It allows you to tinker and test out changes on your personal computer before making those changes publicly online. The XAMPP package is simply an easy way to install all the vital web server parts all at once, though it's just as possible to install them all individually and by hand instead. Some people prefer to do that for a better understanding of the individual setup for each piece of software. If you prefer to focus on web development, though, XAMPP should be perfectly acceptable.

2.2 Methodology:

Various inconsistencies and mismanagement of several **Electronic Book Shop systems** are detected after the case study and my findings. By analyzing the finding and the demand of people of several categories I have tried to remove those inconsistencies and security hazard in my system. Based on my findings and report I will implement the following functionalities to ablate the drawbacks of existing system.

2.2.1 Developing the crucial functionalities:

This will include the development and fertilize the administration part of my project which will include add admin, edit admin, buy books and so on.
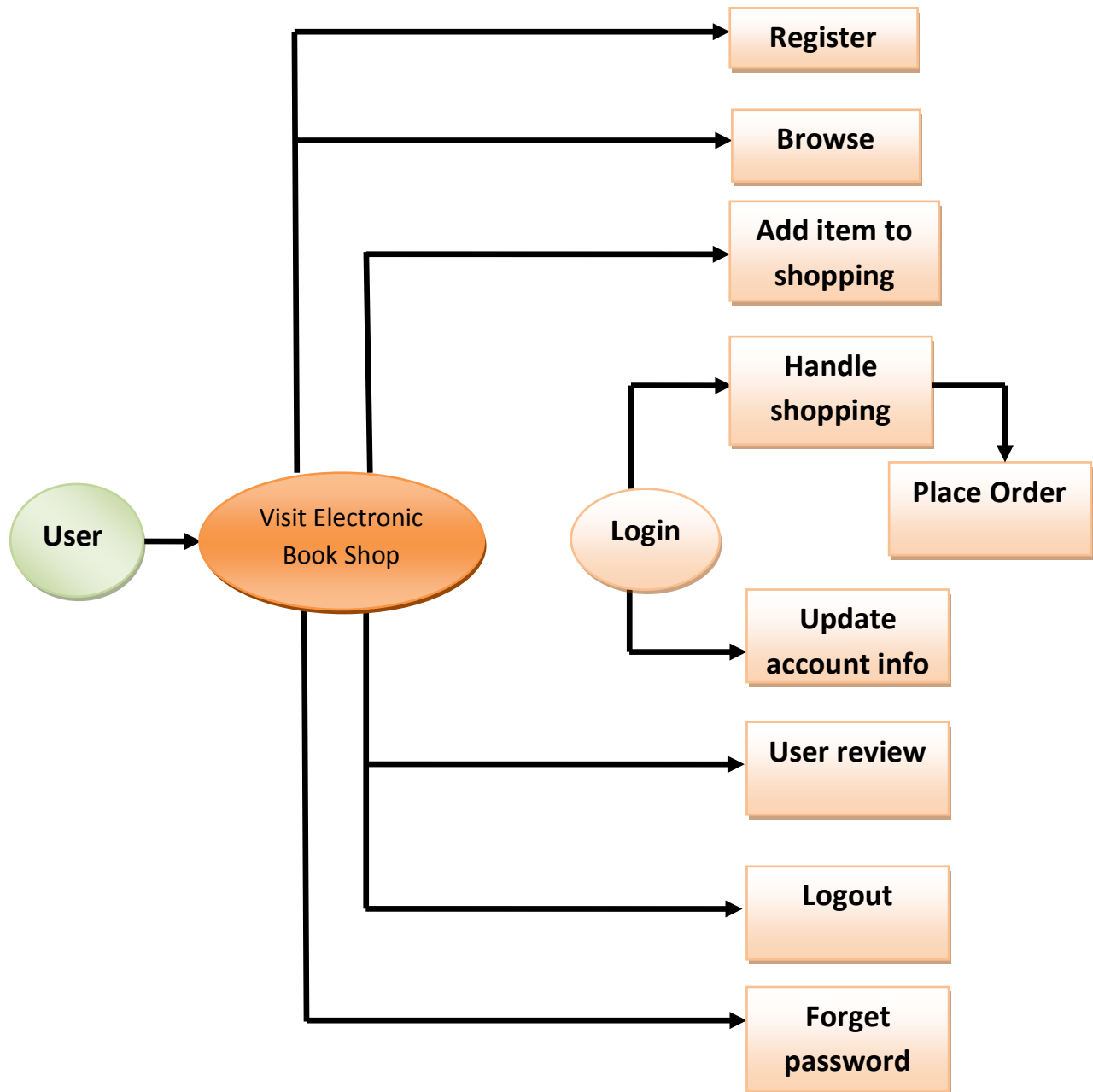

Figure: Customer user case diagram

2.2.2 Facilitating the user for allowing them access in the system:

In my next phase I will develop the panel for user so that this will enable them to choose category anytime from anywhere with detail information .This functionality will be a major one because most of the user wants to know every detail of the books and order details.

2.2.3 Developing the report generation and analytical functionalities:

Sometimes it is boring to search for information of any books. In the system as the chronological information are not stored in one place. So, to get rid of this monotonous task, I will develop functionality for my system that will generate a search option from where a user can search for books like for her / him.

2.2.4 Use of waterfall method:
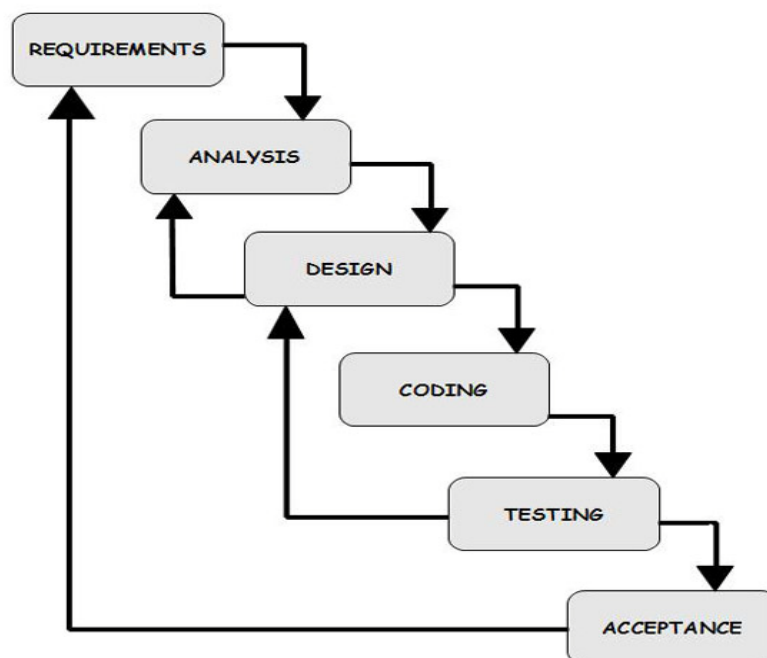
The methodology I will use to develop the **OTBMS** is waterfall model. Waterfall model is one of the system development life cycle (SDLC) models. Users proceed to next phase

if and only if current phase is complete. Users are not allowed to go back to previous phases if there is any mistake so the model is named after **waterfall** model.

In Royce's original waterfall model, the waterfall model originally consists of **seven phases** which are ___

- Requirement specification
- Design
- Construction
- Integration
- Testing
- Debugging
- Installation and
- Maintenance

Requirement Analysis and Definition:

All possible requirements of the system to be developed are stated in this phase. Requirements are a set of functions and constraints that the end user expects from the system. The requirements are gathered from the end user, and are analyzed for their validity and the possibility of incorporating them. Finally, a requirement specification document is created which serves the purpose of a guideline for the next phase of the model.

System and Software Design:

Before starting the actual coding phase, it is highly important to understand the requirements of the end user and also have an idea of how the end product should look like. The requirement specifications from the first phase are studied here, and a system design is prepared. The design helps in specifying hardware and system requirements,

And also helps in defining the overall system architecture. The system design specifications serve as an input for the next phase of the model.

Implementation and Unit Testing:

On receiving system design documents, the work is divided in modules/units and actual coding starts. The system is first elaborated into small programs called units, which are integrated in the next phase. Each unit is developed and tested for its functionality; this is referred to as unit testing. Unit testing mainly verifies if the modules/units meet their specifications.

Integration and System Testing:

The units are now integrated to form a complete system during the integration phase and tested to check if all modules/units coordinate with each other and the system as a whole behaves as per the specifications. After successfully testing the software, it is delivered to the user.

Installation and Deployment:

The software is now applied by the user to his/her own system(s). What the user's needs to take care of is his system complying with the minimum system requirements of the software. He also needs to take care of any system configurations and reconfigurations on his side of the deal. Once the software is properly installed, he will begin communication with the dealers on a need-to-know basis, and help report any bugs that occur.

Operations & Maintenance:

This phase of the model is virtually never-ending. Generally, problems with the system (which are not found during the development cycle) come up after its practical use starts, so the issues related to the system are solved after its deployment. Not all the problems come into picture directly, but they arise from time to time and need to be solved; hence this process is referred.

Systems analysis is the study of sets of interacting entities. According to the Merriam-Webster dictionary, systems analysis is "the process of studying a procedure in order to identify its goals and purposes and create systems and procedures that will achieve them in an efficient way". Analysis and synthesis, as scientific methods, always go hand in hand; they complement one another. Every synthesis is built upon the results of a preceding analysis, and every analysis requires a subsequent synthesis in order to verify and correct its results.

3.1 Schema:

Pronounce *skee-ma,* the structure of a database system, described in a formal language supported by the database management system (DBMS). In a relational database, the schema defines the tables, the fields in each table, and the relationships between fields and tables.

Schemas are generally stored in a data dictionary. Although a schema is defined in text database language, the term is often used to refer to a graphical depiction of the database structure.

3.2 Primary Key:

A primary key, also called a primary keyword, is a key in a relational database that is unique for each record.

3.3 Foreign Key:

A foreign key is a column or group of columns in a relational database table that provides a link between data in two tables. It acts as a cross-reference between tables because it references the primary key of another table, thereby establishing a link between them.

3.4 Schema diagram for Users:
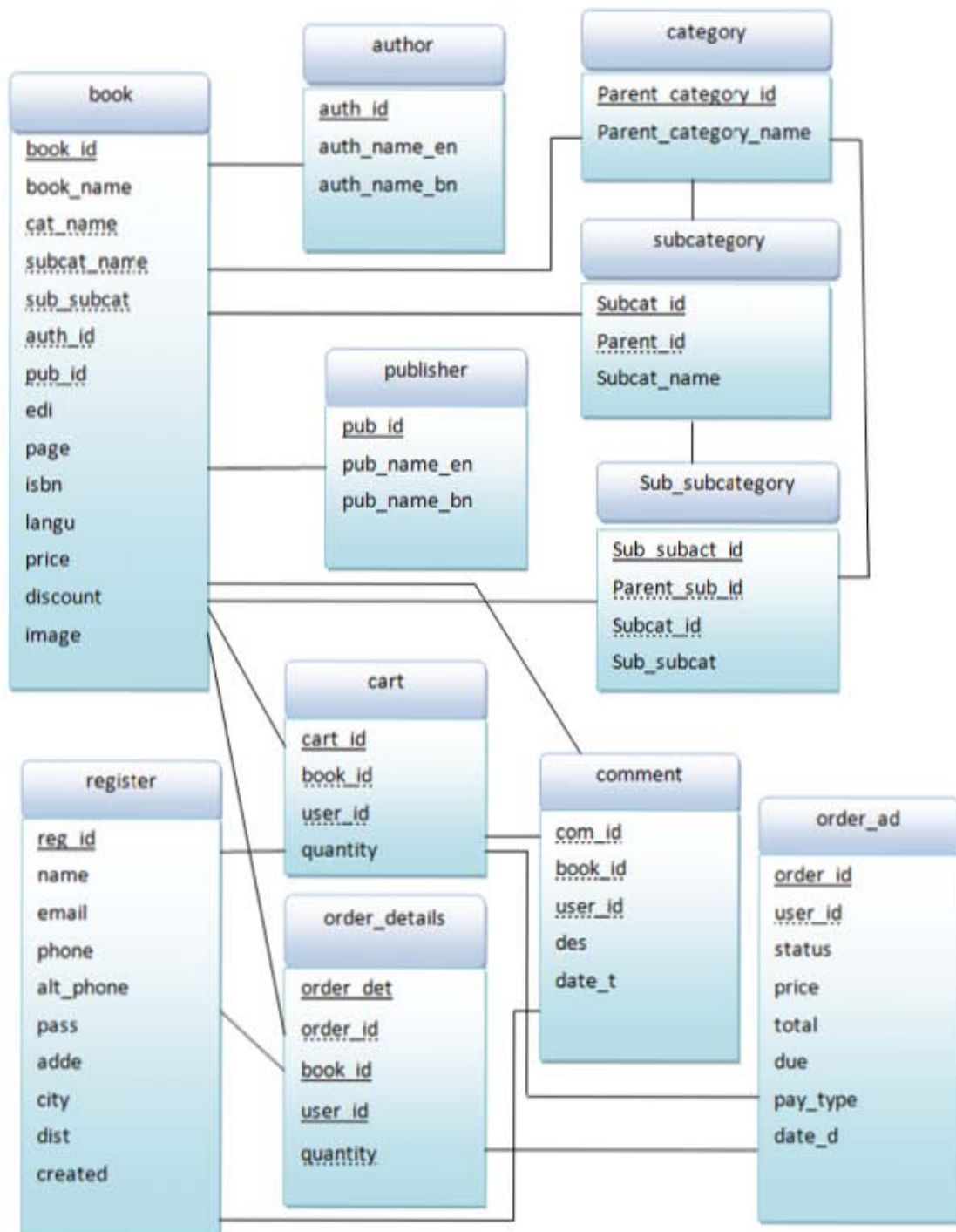
3.5 Data Dictionary:

A data dictionary is a collection of descriptions of the data objects or items in a data model for the benefit of programmers and others who need to refer to them. A first step in analyzing a system of object with which users interact is to identify each object and its relationship to other objects. This process is called data modeling and results in a picture of object relationships. After each data object or item is given a descriptive name, its relationship is described (or it becomes part of some structure that implicitly describes relationship), the type of data (such as text or image or binary value) is described, possible predefined values are listed, and a brief textual description is provided. This collection can be organized for reference into a book called a data dictionary.

➢ In order to manage the details in large-scale systems.
➢ Most systems are ongoing and dynamic and management of all the descriptive details is difficult, therefore an accurate and consistent recording technique is essential.
➢ To communicate a common meaning for all of the elements in the system.
➢ Simply making sure that for all elements, the meaning will remain consistent.
➢ To document features of the system.
➢ It is essential to document the circumstances under which data items occur.
➢ To locate errors and omissions in the system.
➢ The data dictionary may reveal information that is incomplete and/or inaccurate. It may show stores that are never accessed and/or processes that should be sub-divided, etc.

3.6 Description of data objects in database table:-

Table 1: Table Structure of users

Field	Type	Null	Key	Description
reg_id	int	No	Primary key	User id
name	Varchar (30)	No		User name
email	Varchar (100)	No		User Email Id
Pass	Varchar (30)			User password
phone	int	No		Phone of User
alt_phone	int	No		Alter phone of User
Adde	Varchar (30)	No		Address
City	Varchar (30)	No		City
Dist	Varchar (30)	No		District
created	Varchar (30)	No		Date of created

User information

reg_id	name	email	phone	alt_phone	pass	adde	city	dist	created
2	Jikrulamin	jak@gmail.com	1722703858	0	81dc9bdb52d04dc20036dbd8313ed055	Savar	সাভার	19	08/04/2016
3	oahidujjaman	oahid@gmail.com	1670060212	0	81dc9bdb52d04dc20036dbd8313ed055	dhaka	সাভার	19	08/06/2016
4	Mafrina Rahman	mafrina@gmail.com	1670262459	0	81dc9bdb52d04dc20036dbd8313ed055	fara	ধামরাই	19	08/06/2016
5	Fahad chowdhury	fahad@gmail.com	1729889086	NULL	81dc9bdb52d04dc20036dbd8313ed055	NULL	NULL	NULL	08/06/2016
6	Ashraful Alam	ashraf@gmail.com	1671756036	NULL	81dc9bdb52d04dc20036dbd8313ed055	NULL	NULL	NULL	08/06/2016

Table 2: Table structure of Books

Field	Type	Null	Key	Description
book_id	Int	No	Primary key	Book id
book_name	varchar(200)	No		Books Description

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cat_name	varchar(50)	No		Parent category name
subcat_name	varchar(50)	No		Category name
sub_subcat	varchar(50)	No		Subcategory name
auth_id	Int	No	Foreign key	Author id
pub_id	Int	No	Foreign key	Publisher id
edi	varchar(50)	No		Edition
page	Int	No		Page of books
isbn	Int	Yes		Isbn of books
langu	varchar(50)	No		Language
price	Int	No		Price
discount	Int	No		Discount
image	Longtext	No		Image of books

Available books

book_id ≥ 1	book_name	cat_name	subcat_name	sub_subcat	auth_id	pub_id	edi	page	isbn	langu	price	discount	image
5	Manual of Practical Anatomy: Upper and Lower Limbs...	বিশ্ববিদ্যালয়	মেডিকেল	Physiology	4	4	2nd Edition ,2013	300	9788123922713	English	750	0	upload/nafiz_1.GIF
6	Clinical Anatomy By Regions (With the Point Access...	বিশ্ববিদ্যালয়	মেডিকেল	Anatomy	3	3	9th Edition, 2012	800	9788184736588	English	3950	0	upload/ricard_1.GIF
7	Clinical and Surgical Anatomy (Paperback)	বিশ্ববিদ্যালয়	মেডিকেল	Anatomy	2	1	2nd Edition, 2006	528	9788131203033	English	890	0	upload/vishram_2.gif
8	Basic Atlas of Sectional Anatomy: With Correlated ...	বিশ্ববিদ্যালয়	মেডিকেল	Anatomy	4	4	4th Edition, 2007	580	9788131218983	English	3465	0	upload/j jeffrey_1.gif
10	Essentials of Anatomy	বিশ্ববিদ্যালয়	মেডিকেল	Anatomy	2	2	2nd Edition, 2009	520	9788184484618	English	1611	10	upload/indr_2.gif
11	Clinical Neuroanatomy	বিশ্ববিদ্যালয়	মেডিকেল	Anatomy	6	1	7th Edition, 2008	560	9788184732214	English	2430	0	upload/ricard_2.GIF
12	Human Anatomy: Regional And Applied Dissection Cl...	বিশ্ববিদ্যালয়	মেডিকেল	Anatomy	8	4	5th Edition, 2010	296	9788123918631	English	754	0	upload/1.GIF
13	Cross Sectional Imaging Made Easy	বিশ্ববিদ্যালয়	মেডিকেল	Anatomy	9	4	1st Edition , 2011	292	9789350251959	English	891	0	upload/hariq_1.gif

Table 3: Table structure of author

Field	Type	Null	Key	Description
auth_id	Integer (15)	No	Primary Key	Id of the author
auth_name_bn	Varchar(100)	No		Author name in English
auth_name_en	Varchar(100)	No		Author name in bangla

Author information

auth_id	auth_name	auth_name_bn
1	Vishram Singh	ভিশরাম সিং
2	Inderbir Singh	ইন্দারবির সিং
3	Richard S. Snell	রিচার্ড এস. এসনেল
4	Nafis Ahmad Faruq	নাফিজ আহমাদ ফা
6	J. Jeffrey Carr	জে. জাফরে কার্
8	BD. Chaurasia	বিডি চৌরাসিয়া
9	Hariqbal Singh	হারিকবাল সিং
10	John E. Hall	জন ই. হল
11	K. Sembulingam	কে. সেমবালিঙ্গাম
12	S.S. Hiremath	এস.এস. হায়ারমেথ

Table 4: Table Structure of publisher

Field	Type	Null	Key	Description
Pub_id	Integer (15)	No	Primary Key	Id of the publisher
Pub_name_en	Varchar(100)	No		Publisher name in English
Pub_name_bn	Varchar(100)	No		Publisher name in bangle

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Publisher information

pub_id	pub_name	pub_name_bn
1	Jaypee Brothers Medical Publisher	জায়পি ব্রাদার্স মেডিক্যাল পাবলিশার্স
2	Elsevier	এলজ্বাড়িয়ার
3	Lippincott Williams and Wilkins	লিপিনকট উইলিয়ামস্ এন্ড উইলকিল
4	CBS	সিবিএস
6	W B Saunders Co.	ডব্লিউ বি সান্ডার্স কোং
7	Lecture	লেকচার
8	Panjeree publication	পাঞ্জেরী পাবলিকেশন
9	Galaxy Publications	গ্যালাক্সী পাবলিকেশন
10	Gazi publisarsh	গাজী পাবলিসার্স
11	Pearson	পিয়ারসন
12	Oxford University Press	অক্সফোর্ড ইউনিভার্সিটি প্রেস

Table 5: Table Structure of shopping cart

Field	Type	Null	Key	Description
cart_id	int	No	Primary key	Cart id
book_id	int	No	Foreign key	Book id
user_id	int	No	Foreign key	User id
quantity	varchar (30)	No		Quantity of books

Shopping cart

cart_id	user_id	book_id	quantity
1	4	31	1

Table 6: Table Structure of order

Field	Type	Null	Key	Description
order_id	Int	No	Primary key	Order id
user_id	Int	No	Foreign key	User id
status	Varchar(50)	No		Status of payment
Total	Double	No		Total price
Due	Double	No		Paid price
pay_type	Varchar(50)	No		Payment type
date_d	Varchar(50)	No		Date and time of order

Order information

order_id	user_id	status	price	total	due	pay_type	date_d
11150	1	Paid	1242	1242	1242	bkash	01/24/2016 08:59:11 PM
11151	3	Paid	0	752	752	dbbl	01/12/2016
11153	2	not	972	972	972	bkash	01/27/2016 01:27:14 PM
11154	4	Closed	5400	5400	5400	bkash	01/27/2016 09:15:12 PM
11155	4	Processing	972	1944	0	bkash	01/27/2016 09:29:49 PM
11156	2	Processing	1248	1248	0	dbbl	01/28/2016 01:18:25 AM
11157	1	Processing	754	1508	0	bkash	01/31/2016 08:15:44 PM
11158	3	Processing	3465	3465	0	bkash	02/01/2016 12:15:40 AM
11159	5	Paid	3950	3950	3950	dbbl	02/01/2016 11:44:57 PM
11160	6	Processing	700	700	0	bkash	02/04/2016 10:53:09 PM
11161	6	Processing	972	972	0	cod	02/04/2016 11:26:18 PM

Table 7: Table Structure of order details

Field	Type	Null	Key	Description
order_det	Int	No	Primary key	Order details id
order_id	Int	No	Foreign key	Order id
book_id	Int	no	Foreign key	Book id
user_id	Int	No	Foreign key	User id
quantity	Int	No		Quantity of books

Order details

order_det	order_id	book_id	user_id	quantity
89	11150	22	1	1
90	11150	30	1	1
91	11151	12	3	1
94	11153	30	2	1
95	11154	6	4	1
96	11154	10	4	1
97	11155	30	4	2
98	11156	35	2	1
99	11157	12	1	2
100	11158	8	3	1
101	11159	6	5	1
102	11160	32	6	1
103	11161	30	6	1
104	11162	36	1	1

Table 8: Table Structure of complain of user

Field	Type	Null	Key	Description
Com_id	Int	No	Primary key	Complain id
Name	Varchar(50)	No		Customer name
Email	Varchar(100)	No		Email
Des	Varchar(150)	No		Description of complain
Date_t	Varchar(50)	No		Date of complain

Complain of the user

com_id	name	email	des	date_t
1	oahid	oahid@gmail.com	Is any commic book here	06/15/2016
3	Rakib	rakib@gmail.com	Should enable tracking order	08/04/2016
4	Jikrulamin	jak@gmail.com	Good Services	08/06/2016
5	Mafrina Rahman	mafrina@gmail.com	Is possible to enable credit card	08/06/2016

3.7 Entity Relationship Diagram (E-R diagram):

An entity-relationship (ER) diagram is a specialized graphic that illustrates there relationships between entities in a database. ER diagrams often use symbols to represent three different types of information. Boxes are commonly used to represent entities. Diamonds are normally used to represent relationships and ovals are used to represent attributes.

3.7.1 General Overview:

An **entity relationship diagram** consists of several components. Components those are frequently used to represent an **e-r diagram** are-

- Entity
- Weak entity
- Attribute
- Multi valued attribute
- Derived attribute
- Relationship

Entity:

An entity can be a person, place, event, or object that is relevant to a given system. For example, a school system may include students, teachers, major courses, subjects, fees, and other items. Entities are represented in ER diagrams by a rectangle and named using singular nouns. It is represented by **rectangle.**
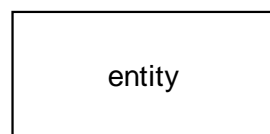
Weak entity:

A weak entity is an entity that depends on the existence of another entity. In more technical terms it can defined as an entity that cannot be identified by its own attributes. It uses a foreign key combined with its attributed to form the primary key. An entity like order item is a good example for this. The order item will be meaningless without an order so it depends on the existence of order. It is represented by **double rectangle**.
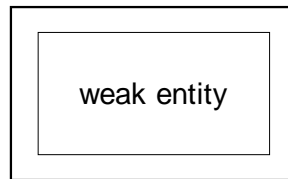
Attribute:

An attribute is a property, trait, or characteristic of an entity, relationship, or another attribute. It is represented by an **ellipse**.
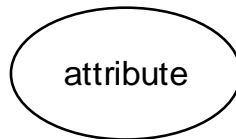
Multi valued attribute:

If an attribute can have more than one value it is called an multi valued attribute. It is important to note that this is different to an attribute having its own attributes. For example a teacher entity can have multiple subject values. It is represented by a **double ellipse**.
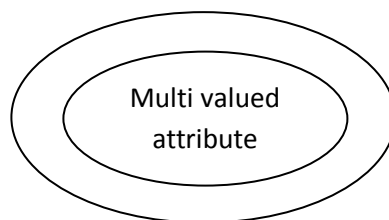
3.7.2 Mapping Cardinality:

Cardinality refers to the number of entity objects on each side of the relationship. In e-r diagram there are four types of mapping cardinalities. For example: a customer can order products one after another.

- One-to-One
- One-to-Many or Many-to-One (dependent on the direction)
- Many-to-One
- Many-to-Many

One to One:

A one-to-one relationship is the simplest relationship between two beans. One entity bean relates only to one other entity bean. For example: a customer can be kept only in one word/cell at a time.
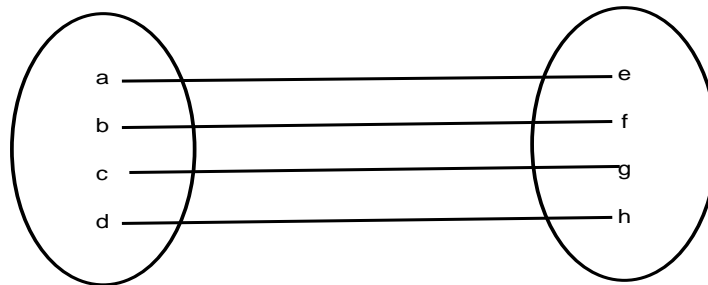
One-to-many:

In a one-to-many relationship, one object can reference several instances of another.
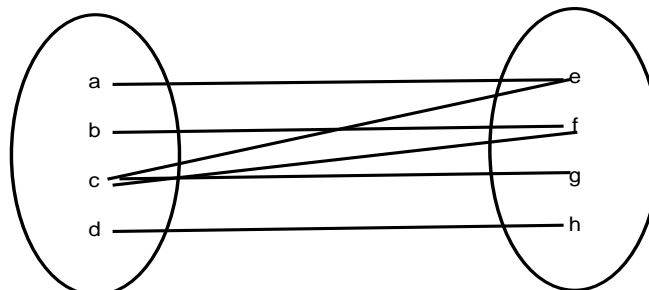
Many –to-one:

In a many-to-one relationship, many objects can reference one instance of another.
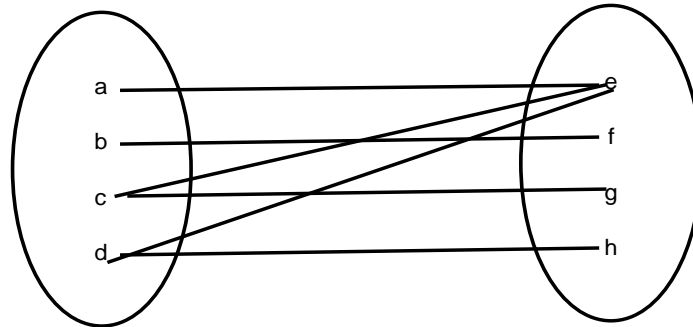
Many-to-many:

A many-to-many relationship is complex. In a many-to-many relationship, many objects can reference many objects. This cardinality is the most difficult to manage.
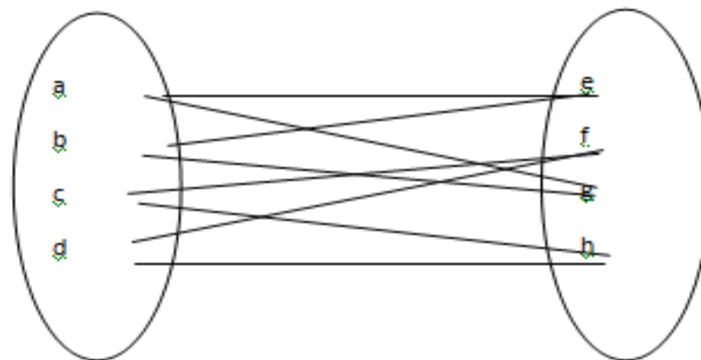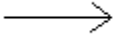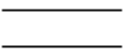
3.7.3 ER diagram for user
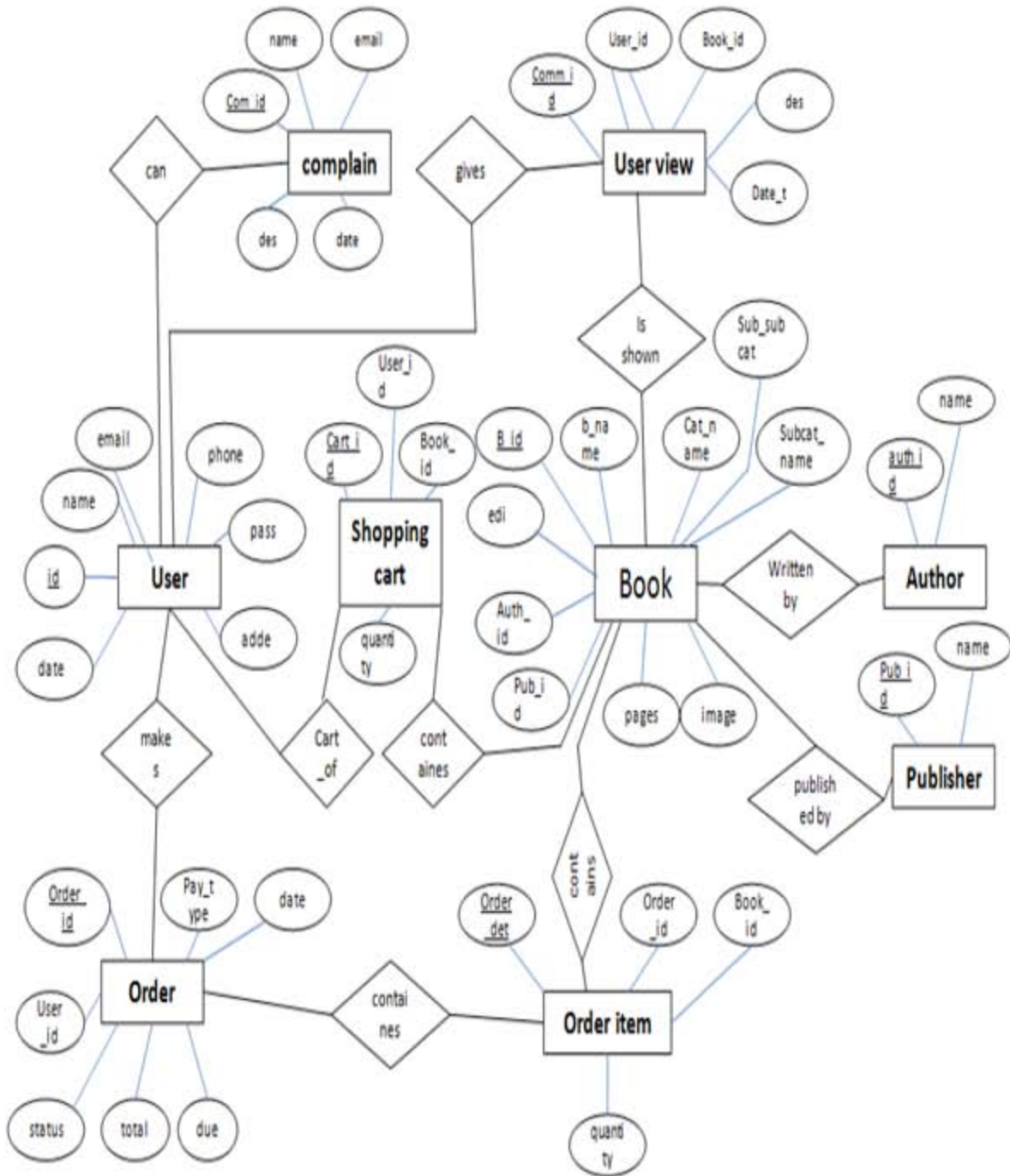
3.8 Representation of Components:

DFDs only involve four symbols. They are:

- Process
- Data Object
- Data Store
- External entity

◯	Process Transform of incoming data flow(s) to outgoing flow(s).
⟶	**Data** **Flow** Movement of data in the system.
═══	**Data** **Store** Data repositories for data that are not moving. It may be as simple as a buffer or a queue or a s sophisticated as a relational database.
☐	**External** **Entity** Sources of destinations outside the specified system boundary.

3.9 DFD for User registration:

Here the information will be collected by the data entry operator from the user including the user personal detail. As there are multiple forms to be filled these information will not be stored in the database one by one. First of all data will be saved into a temporary storage. After being ensured that all data regarding user's registration has been input to the system then the system will saved the data into the database. This will ensure that no process will be incomplete or partial during power failure.

DFD for user registration
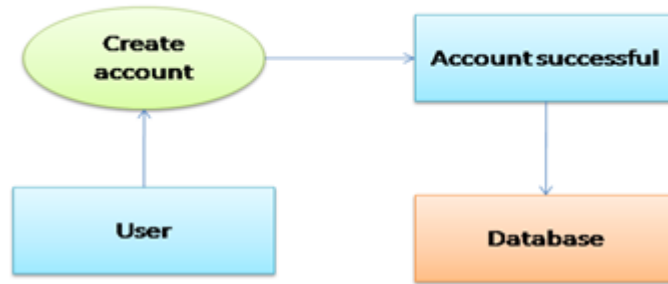
3.10 DFD For user view

Here the information regarding by user review about the special books. All users can read book view but only registered users can write reviews. All the information is stored in this database.

DFD for Book review
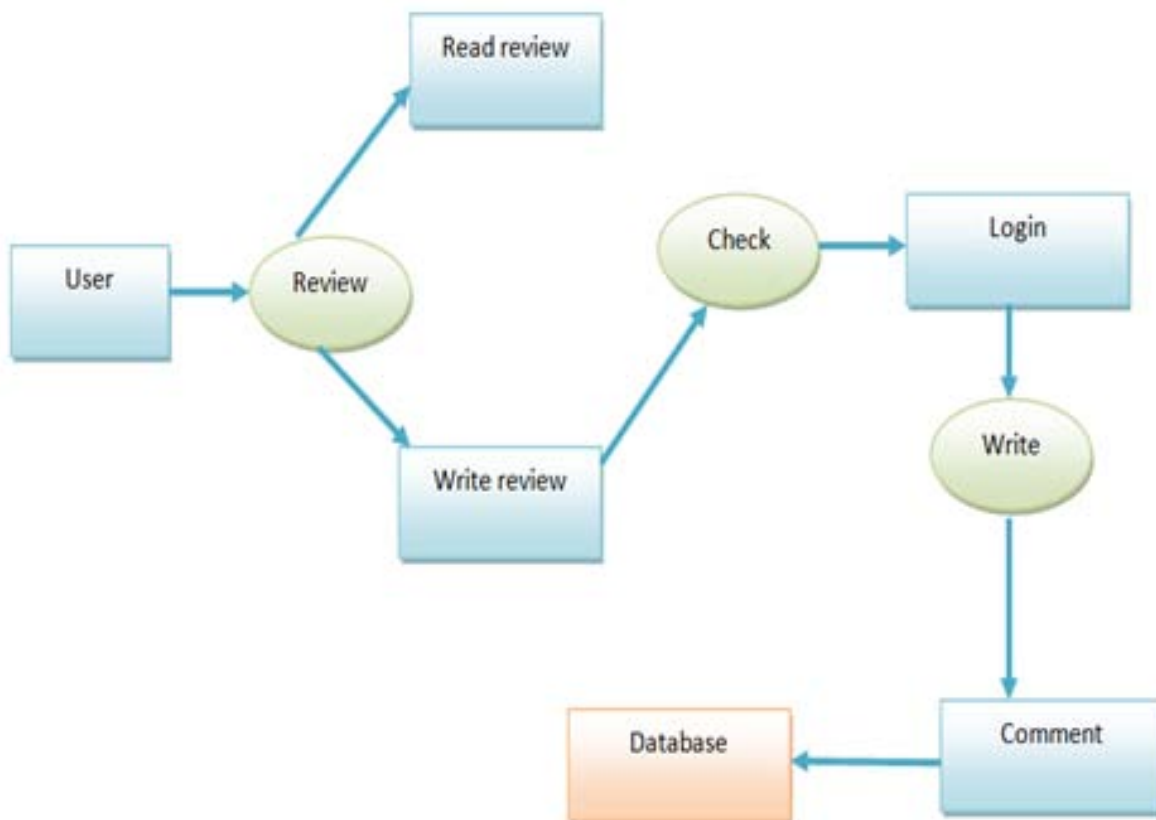
3.11 DFD for Electronic Book Shop order:

The users search the available books and then order the books. There are three options to complete order: shopping cart, update account info and then fulfill payment. Then the order details is shown to user invoice & stored in database.

DFD for order
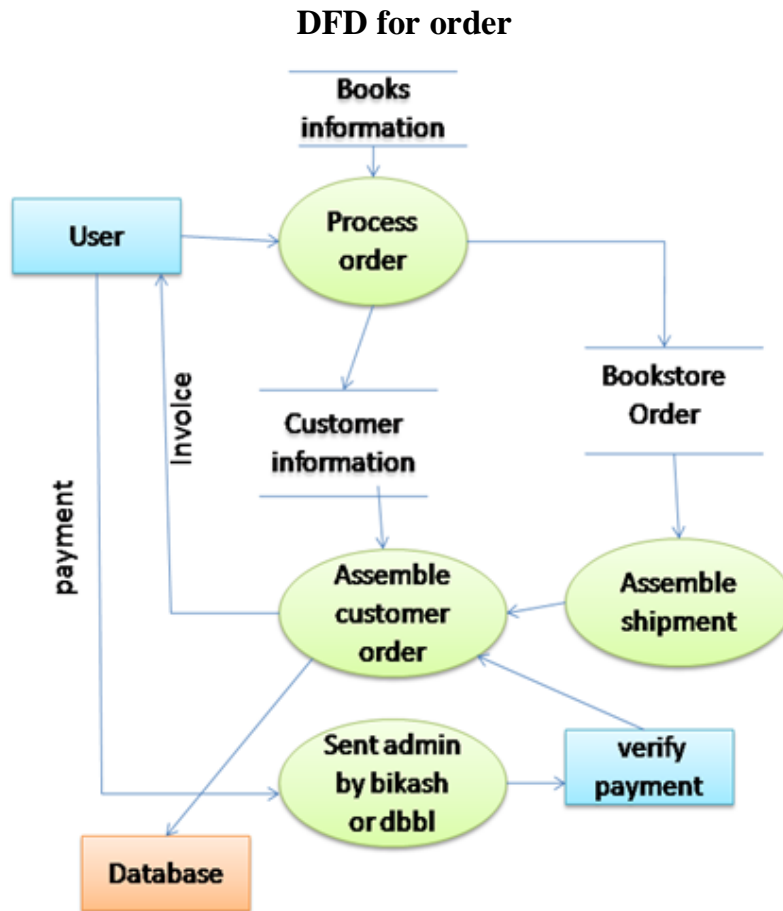
This chapter describes to develop a test plan for the Online Book Store design system. This document defines all the procedures and activities required to prepare for testing of the functionalities of the system which are specified in Vision document. The objectives of the test plan are to define the activities to perform testing, define the test deliverables documents and to identify the various risks and contingencies involved in testing.

4.1 Featured to be tested

The following list describes the features to be tested:

USER:

- Registration
- Login
- Add To Cart
- Edit Cart

ADMIN:

- Create and Delete book from Category
- Create and Delete a Category
- Manage Orders
- Manage Members

4.2 Test cases

4.2.1 User

Registration

ID	Test case	User input	Pass Criteria
U_reg_1	User Registration	User selects already existing Email address.	Display message to choose different email address
U_reg_2	User Registration	User enters different password in password confirm field	Display message that Password and Confirm Password fields don't Match
U_reg_3	User Registration	User forgets to enter a particular required fields	Display message The value in field is required
U_reg_4	User Registration	User enters all the details successfully	User account created

Login

ID	Test case	User input	Pass Criteria
U_log_1	User login	User enters wrong email address	Display message to Login or wrong email
U_log_2	User login	User enter wrong password	Display message to message or wrong password
U_log_3	User login	User enters correct email address and password	User logs in successfully

Add to cart

ID	Test case	User input	Pass Criteria
U_cart_1	Add to cart	Users select a book and click add to cart	Book is added to shopping cart
U_cart_2	Add to cart	Guest selects a book and click add to cart	User should create an account

Edit cart

ID	Test case	User input	Pass Criteria
U_EC_1	Edit cart	User changes the quantity	Quantity and total cost should be changed
U_EC_2	Edit cart	User deletes a book from shopping cart	Books and total cost of Cart should be updated
U_EC_3	Edit cart	Users select a new book to shopping cart	Books and total cost of Cart should be updated

4.2.2 Admin

Create edit and delete a book

ID	Test case	User input	Pass Criteria
A_book_1	Create edit and delete a book	Admin creates a new book	Book should be Created in the book list
A_book_1	Create edit and delete a book	Admin edits an available book	Book should be updated in the book list
A_book_1	Create edit and delete a book	Admin deletes a book	Book should be updated in the book list

Create edit and delete a category

ID	Test case	User input	Pass Criteria
A_cat_1	Create edit and delete a category	Admin creates a new category	Book should be updated in the category.
A_cat_1	Create edit and delete a category	Admin edits a category	Book should be updated in the category.
A_cat_1	Create edit and delete a category	Admin deletes category	Book should be updated in the category.

Manage order

ID	Test case	User input	Pass Criteria
A_mo_1	Manage order	Admin accepts an order	Order is processed
A_mo_1	Manage order	Admin detects an order	Order is not processed

Manage Users

ID	Test case	User input	Pass Criteria
A_mu_1	Manage users.	Admin accepts members	Member is accepted
A_mu_1	Manage users.	Admin detects members	Member is not accepted

4.3 Approach

This section describes the overall approach of the testing which ensures that the each feature and the combination of the features are adequately tested. The major tasks that are used are

Unit testing

Unit testing is a method of testing that verifies the individual units of source code are working properly. The goal of unit testing is to isolate each part of the program and show that the individual parts are correct

Load testing

Load testing is the process of creating demand on a system or device and measuring its response. It generally refers to the practice of modeling the expected usage of a software program by simulating multiple users accessing the program concurrently. As such, this testing is most relevant for multi-user systems; often one built using a client/server model, such as web servers

System Testing

Once the entire system has been built then it has to be tested against the Software Requirement Specification and System Specification to check if it delivers the features required. System testing can involve a number of specialist types of test to see if all the functional and non-functional requirements have been met.

Performance Testing

The system should meet the performance requirements as mentioned in the document. The performance will be evaluated based on the response time of the GUI and the database commands.

Manual Testing

Manual Testing will be done to ensure the correctness of various parts of the code using test cases generated by the tester.

4.4 Pass/fail criteria

The system should satisfy all the functional requirements, in the document. Each feature to be tested will be evaluated against its requirement as stated in the Vision Document. The pass or fail of a test depends on whether the system meets with all the particular post conditions. Test cases executed on the Online Book Store will pass if they meet the specific requirements as mentioned in the Documentation.

This chapter will show the Graphical User Interface (GUI) of the system through screenshots and user guides that how will they operate the system.

5.1 Organization of the Template:

Header	Login & registration	
Logo	Search	Cart

Menu bar

Latest subjects

Bestselling books

New Released books

Top authors books

Various category books

Footer

5.1.1 Home Page :

শীর্ষ লেখকের প্রস্তাবিত বই

S S C English for Today	**Clinical Anatomy By Regions (With the Point Access Scratch Code) - (Paperback)**	**Programming With Java**	**Manual of Practical Anatomy: Upper and Lower Limbs (Volume-1) (Paperback)**
লেকচার	বিডি চৌরাসিয়া	ই বালাগুরুসামি	নাফিজ আহমাদ ফারুকী
Tk. 387.00 কিনুন	Tk. 3950.00 কিনুন	Tk. 700.00 কিনুন	Tk. 750.00 কিনুন
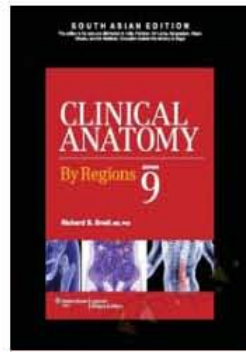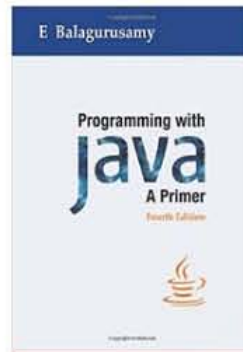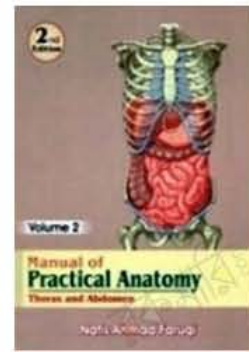
পেমেন্ট অপশন

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5.1.2 Registering Users:

5.1.3 Book details and user's view

5.1.4 Search books

5.1.5 User's Order

5.1.5.1 Shopping cart

5.1.5.2 Update user's address

5.1.5.3 Order confirmation

5.1.6 User's invoice
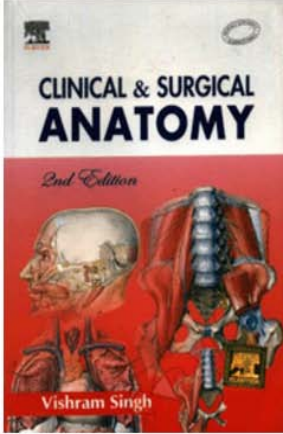
E_BOOK SHOP

— বই অনুসন্ধান করুন   🔍

আমার অ্যাকাউন্ট ⌄   কার্ট (০) 🛒

🏠 সকল বই   বিভাগ ⌄   লেখক   প্রকাশক   যোগাযোগ   অভিযোগ এবং পরামর্শ

ইনভয়েজ

অর্ডারের অবস্থা

অর্ডার নং: #4
অর্ডারের তারিখ : 08/06/2016 02:07:56 PM
পেমেন্টের ধরণ:
স্ট্যাটাস: Processing

অর্ডার নং: #7
অর্ডারের তারিখ : 08/06/2016 02:48:08 PM
পেমেন্টের ধরণ: cod
স্ট্যাটাস: Processing

বিলিং ঠিকানা

Mafrina Rahman
mafrina@gmail.com
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dfds
গাজীপুর সদর , গাজীপুর

সংক্ষিপ্ত অর্ডার

মূল্য :   Tk. 1221.00

মোট মূল্য: Tk. 1221.00

যোগাযোগ

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mafrina.os1002@gmail.com

ছবি	বর্ণনা	পরিমাণ	মূল্য	মোট মূল্য
	পাঞ্জেরী এসএসসি টেস্ট পেপারস- ২০১৬ (বিজ্ঞান বিভাগ)	1	Tk. 1141.00	Tk. 1141.00
	ধান সবুজে পান সবুজে	1	Tk. 80.00	Tk. 80.00

আরো বই যোগ করুন

পেমেন্ট অপশন

bKash

2016 © E_BookShop

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5.1.7 Complain of user:

5.2 Admin login page

5.2.1 Admin home page

5.2.2: Update order status

ID #	Purchased on	Customer	Total Price	Paid Price	Status	Action
					Status.....	Update

Order Record

Search...

Order Id #	User Name	Purchased on	Total Price	Paid Price	Status	Edit	Delete
4	Mafrina Rahman	08/06/2016 02:07:56 PM	Tk 1141 .00	Tk 0 .00	Processing		
7	Mafrina Rahman	08/06/2016 02:48:08 PM	Tk 80 .00	Tk 0 .00	Processing		

6.1 Limitation of the system:

Though I have tried my level best to make my system flawless and user friendly by using the modern technologies, some minor functional and design inconsistencies exist in my system due to time constraint, design of prototype and cost constraints. The limitations of "Online Electronic Book Shop is:

- I have used Ajax in my system which will show the system after loading fully. Though it is faster, it may cause malfunction in hasty situation. That is, incomplete loading of the system.
- In this system no transaction is added, so users can not show any transaction details.
- Users can not pay online using credit cart.
- Users can add books in his/her wish list.
- Users can not cancel order.

6.2 Prospective future improvement:

My system websites developed based on current findings, demand of users satisfaction and facilities. In my system I have used the modern web technologies to make my system fast, convenient and efficient for all of the personnel mentioned. Due to time and cost constraint it was not possible to fulfill all requirements and functionalities those were planned. But in future these planned functionalities and more improvement will be possible to pursue. The functionalities to be implemented are:

- I will try to keep a function so that any user can add book in his/her wish list.
- Book rating system will be added.
- If any new feature like, the credit card system will be added and verification will be occurred.

6.3 Conclusion:

The purpose of the website is to create an Electronic Book Shop that allows users to search and purchase a book online based on category, author and subject without any hassle. I hope this will satisfy the demand of the user and the user can find all available books and details of the books to purchase without any time and energy waste.

This website is totally dynamic and extendable.

If the website needs to extend then I must have to work little on the database. So, I have the demand to develop a website that considers all the issues. Keeping all these things in mind i have tried my best to build a website which is secure, dynamic, extendable and reusable. There still have the opportunity to add other features that are not mentioned here.

Some minor functional problem may occur during operation, but it will not have any minimum effect on kernel part of the system.

Appendix

Login code:

```php
if (isset($_POST['login']) == 'login') {
    if (empty($_POST['email'])) {
        $e = " * " . Email;
    }
    if (empty($_POST['pwd'])) {
        $p = "*" . login_p;
    }

    if (empty($_POST['email']) & empty($_POST['pwd'])) {
        $msg = req;
    } else {
        $email = $_POST['email'];
        $pass = $_POST['pwd'];
        $pass1 = md5($pass);
        $res = mysql_query("select * from register where email='$email'", $dbhandle);
        $cnt = mysql_num_rows($res);
        if ($cnt == 0) {
            echo "soory";
        } else {
            $row = mysql_fetch_array($res);
            if ($row['pass'] == $pass1) {
                $_SESSION = array();
                $_SESSION['name'] = $row['name'];
                $_SESSION['email'] = $row['email'];
                $_SESSION['id'] = $row['reg_id'];
                $_SESSION['phone'] = $row['phone'];
                $_SESSION['pass'] = $row['pass'];
                $_SESSION['status'] = true;
                header("location:index.php");
            }
        }
    }
```

Registration code:

```php
if (isset($_SESSION['user']) != "") {
    header("location:index.php");
}
if (isset($_POST['register']) == 'ok') {

    if ($_POST['pass'] != $_POST['cpass']) {
        $msg.="<br><br>" . login_p;
    }
    if (!ereg("^[a-z0-9_]+[a-z0-9_.]*@[a-z0-9_-]+[a-z0-9_.-]*\.[a-z]{2,5}$", $_POST['email'])
        $msg.="<br><br>" . Email;
    }


    if (strlen($_POST['pass']) > 10 & strlen($_POST['pass']) < 3) {
        $msg.="<br><br>" . Comfirm;
    }

    if (is_numeric($_POST['name'])) {
        $msg.="<br><br>" . Name;
    }



    if ($msg != "") {
        header("location:register.php?error=" . $msg);
    } else {
        $name = $_POST['name'];
        $email = $_POST['email'];
        $pass = $_POST['pass'];
```

```php
$sql = mysql_query("select * from register where email='$email", $dbhandle);
if (mysql_num_rows($sql) > 0) {
    $msg.="Sorrry you are alrady registered";
} else {
    $date = date("m/d/Y");

    $query = "insert into register(name,email,phone,pass,created)
                values('$name','$email',$phone,'$pass1','$date')";

    mysql_query($query, $dbhandle) or die("Can't Execute Query...");

    header("location:register.php?ok=1");
}
```

Search books

```php
if(isset($_GET['search'])){
$s=$_GET['search'];
 $result= mysql_query(" select b.* ,a.* from book b inner join author a on b.auth_id=a.auth_id where b.book_name like '%$s%' "
        . "or b.sub_subcat like '%$s%' or b.cat_name like '%$s%'");
}
if(isset($_GET['auth'])){
$auth=$_GET['auth'];
 $result= mysql_query(" select b.* ,a.* from book b inner join author a on b.auth_id=a.auth_id where a.auth_name_bn like '%$auth%'");
}
if(isset($_GET['pub'])){
$pub=$_GET['pub'];
 $result= mysql_query(" select b.* ,a.* , p.* from book b inner join publisher a inner join author p on b.pub_id=a.pub_id and "
        . "b.auth_id=p.auth_id  where a.pub_name_bn like '%$pub%'");
}
```

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Shopping cart

```php
if (isset($_POST['qunt']) == 'qunt') {
    $name1 = $_POST['value'];

    $user = $_POST['quantity'];
    mysql_query("UPDATE cart set quantity='" . $name1 . "' where book_id=$user");
}
```

```php
$t = 0;
$to = 0;
$user = $_SESSION['id'];
$query2 = mysql_query("select b.* ,c.* from book b  inner join cart c  on b.book_id=c.book_id  where c.user_id=$user");
$cnt=  mysql_num_rows($query2);
if($cnt==NULL){
    echo "<div style='padding:50px;text-align:center;font:20px verdana;color:red;'>".s_cart."</div>";

}
```

Update user account info

```php
if (isset($_SESSION['status'])) {
    $name = $_SESSION['name'];
    $email = $_SESSION['email'];
    $phone = $_SESSION['phone'];

    if (isset($_POST['register']) == 'register') {
        $newname = $_POST['name'];
        $newemail = $_POST['email'];
        $newphone = $_POST['phone'];
        $alt_phone = $_POST['altphone'];
        $adde = $_POST['adde'];
        $city = $_POST['city'];
        $dist = $_POST['dist'];
        mysql_query("UPDATE register set name='" . $newname . "',email='" . $newemail . "',phone='" . $newphone . '
                . "alt_phone='" . $alt_phone . "',adde='" . $adde . "',city='" . $city . "',dist='" . $dist . "' "
                . "where reg_id='" . $_SESSION['id'] . "'");

        header("location:index.php");
    }
}
```

Order confirmation

```php
if (isset($_POST['buy']) == 'buy') {

    $to = $_SESSION['total'];

    $type = $_POST['bkash'];
    date_default_timezone_set("Asia/Dhaka");
    $date_t = date("m/d/Y h:i:s A");




    mysql_query("insert into order_ad(user_id,price,total,pay_type,date_d)values($id,$t,$to,'$bkash','$date_t') ");
    $o = mysql_query("select * from order_ad ");
    while ($row2 = mysql_fetch_array($o)) {
        $order = $row2['order_id'];
    }
    $c = mysql_query("select * from cart  where user_id=$id");
    while ($row = mysql_fetch_array($c)) {

        $userid = $row['user_id'];
        $bookid = $row['book_id'];
        $qun = $row['quantity'];
        mysql_query("insert into order_details(order_id,book_id,user_id,quantity)values($order,$bookid,$userid,$qun)")
    }

    header("location:invoice.php");
}
```

New books

```php
$img = "upload/" . $_FILES['img']['name'];
$b_name = $_POST['name'];
$p_cat = $_POST['p_cat'];
$sub_cat = $_POST['sub_cat'];
$cat = $_POST['cat'];
$auth_name = $_POST['auth'];
$pub_name = $_POST['pub'];
$edition = $_POST['edition'];
$isbn = $_POST['isbn'];
$pages = $_POST['page'];
$langu = $_POST['langu'];
$price = $_POST['price'];
$discount = $_POST['dis_c'];
mysql_query("INSERT INTO book (book_name,cat_name,subcat_name,sub_subcat,auth_id,pub_id,edi,page,"
        . "isbn,langu,price, discount,image)"
        . "values('$b_name','$p_cat','$sub_cat','$cat',$auth_name,$pub_name,'$edition','$pages',"
        . "'$isbn','$langu','$price',$discount,'$img')", $dbhandle);
```

Order status change

```php
if (isset($_POST['save']) == 'save') {
    $new_id = $_POST['or_id'];
    $or_date = $_POST['or_date'];
    $price = $_POST['or_p'];
    $total = $_POST['or_t'];
    $status = $_POST['status'];
    $rr = mysql_query("select * from order_ad where order_id=$ID");
    while ($row = mysql_fetch_array($rr)) {
        $type = $row['status'];
        $t_p = $row['total'];
        if ($type == 'Paid') {
            $row['due'] = $t_p;
        }

        mysql_query(" UPDATE order_ad set order_id='" . $new_id . "',status='" . $status . "',total='" . $total
                . "',due='" . $t_p . "', date_d='" . $or_date . "'  where order_id=$ID");
        mysql_query(" UPDATE order_details set order_id='" . $new_id . "'  where order_id=$ID");
    }

}
```

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