

**DESIGN AND DEVELOPMENT OF E-LIBRARY FOR
INFORMATION TECHNOLOGY AND COMPUTER SCIENCE**

**SHEIKH SHAKAWAT HOSSAIN
ROLL: ASH1411045M**

**BACHELOR OF SCIENCE IN INFORMATION AND
COMMUNICATION ENGINEERING
NOAKHALI SCIENCE AND TECHNOLOGY UNIVERSITY**

**DESIGN AND DEVELOPMENT OF E-LIBRARY FOR INFORMATION
TECHNOLOGY & COMPUTER SCIENCE.**

SHEIKH SHAKWAT HOSSAIN

**This Project is submitted in fulfilment of the requirements for the award of the degree
of Bachelor of Science in Information and Communication Engineering**

**DEPARTMENT OF INFORMATION AND COMMUNICATION ENGINEERING
NOAKHALI SCIENCE AND TECHNOLOGY UNIVERSITY**

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DECLARATION

I hereby declare that this project has not been submitted elsewhere for the requirement of any kind of Degree, Diploma or Publication.

(Sheikh Shakawat Hossain)
Dept. of ICE
Class Roll: ASH1411045M
Session: 2013-2014
Year: 4th Term: 2nd

ACCEPTANCE

This project is submitted to the Dept. of Information and Communication Engineering of Noakhali Science and Technology University in partial fulfillment of the requirement for having the B.Sc. in Information and Communication Engineering (ICE).

(Professor Dr. Md. Ashikur Rahman Khan)
Chairman
Dept. of ICE
Noakhali Science and Technology University

ABSTRACT

In today's world, everything is digitalized and paper is being used less and less every day. E-books become more popular than paper books. There are a number of benefits of E-books over paper books. E-books are delivered almost instantaneously. We can download and start reading them within minutes, without leaving our chair. No trees are required to manufacture paper for the pages of e-books. When we need certain information, we can get it immediately, by downloading an e-book. E-books take up less space. We practically don't need any space to store them. We can store hundreds and thousands of e-books on our computer or reading device. E-books are portable. With today's technology we can read e-books everywhere, on the bus, train, airplane, and while standing in line. E-books are searchable. We can easily search for any information in an e-book, instead of turning page after page. Since e-books are delivered through the Internet, there are no packing and shipping expenses. E-books can be printable, so that if we wish to read an e-book in the traditional way, we can very inexpensively print it with our home printer or at any printing shop. An E-library for computer science and Information Technology might help students of our country as most of the IT books of our syllabus are not available everywhere and also cost effective for us. The developed system aims to an E-Library for Computer Science and Information Technology where stored most of free source IT books sequentially with different sub categories.

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CHAPTER 1

INTRODUCTION

1.1 E-Library

An E-Library Application is a web-based document management system. These documents or objects include books, articles, presentations, reports, visual, audio, and video material stored in electronic media formats. These digital content may be stored locally, or accessed remotely via computer networks. A library system also provides some means for organizing, storing, and retrieving the information contained in the collection. Digital libraries can vary in size and scope, and can be maintained by individuals, organizations, or affiliated with established physical library buildings or institutions, or with academic institutions.

Traditional libraries are limited by storage space; digital libraries have the potential to store much more information, simply because digital information requires very little physical space to contain it. As such, the cost of maintaining a digital library can be much lower than that of a traditional library. A physical library must spend large sums of money paying for staff, book maintenance, rent, and additional books. Digital libraries may reduce or, in some instances, do away with these fees. Both types of library require cataloging input to allow users to locate and retrieve material. Digital libraries may be more willing to adopt innovations in technology providing users with improvements in electronic and audio book technology as well as presenting new forms of communication such as wikis and blogs; conventional libraries may consider that providing online access to their OP AC catalog is sufficient. An important advantage to digital conversion is increased accessibility to users.

They also increase availability to individuals who may not be traditional patrons of a library, due to geographic location or organizational affiliation.

The developed E-Library is intended for the students of Information Technology and Computer Science of Bangladesh where most of the open source books will be available of their syllabus. The developed system acts as an E-Library which might help the IT students of our country to find their desire books. Here all books are sorted sequentially with different sub categories like Programming, Database and Algorithm, Electronics, Mathematics, Networking etc. As it is a web base project anyone could download or read any book instantly from anywhere simply by visiting the site. Anyone might find a book in category or by just typing the book name or author name in search option.

1.2 Scope

The developed system is currently mainly intended to be E-Library only for IT books. Further applications of this system may include any fields (Medical, Engineering, Mathematics, Law etc.) books where any student might find their books through internet from anywhere.

1.3 Objective and Purpose of the System

The aim of the E-Library is to store E-books which are teaching most of the Universities or Institutions of Bangladesh as information and computer science courses. Following are the objectives of the developed system:

- I. To develop an E-Library for the students of Information Technology and Computer Science of Bangladesh.
- II. To make Available IT books everywhere in internet.
- III. To reduce the cost for buying paper books.
- IV. To reduce the time to search books in internet.
- V. To increase my knowledge horizon in technologies like PHP, SQL, CSS, HTML, JavaScript, JQuery.

CHAPTER 2

LITERATURE REVIEW

Libraries form a vital part of the world's systems of education and information storage and retrieval. They make available-through books, films, recordings, and other media Knowledge that has been accumulated through the ages. People in all walks of life-including students, teachers, business executives, government officials, scholars, and scientists use library resources for their research. Large number of people also turn to library to satisfy a desire for knowledge or to obtain material for some kind of leisure-time activity. In addition, many people enjoy book discussions, and other activities that are provided by their Libraries.

The Library of the future will be less a place where information is kept on a portal through which students and faculty will access the vast information resources of the world. The Library of the future will be about access and knowledge-management, not about ownership. The main products of the library and information professionals in the 21st century will be introduction of the digital Libraries and the archives.

In 1993, the British Library initiated the "Electronic Beowulf Project" to capture, enhance, and preserve forever this cultural artifact in digital form [1]. Not only has the manuscript been captured in its current form, but it is now available for study anywhere. This is only one example of how, throughout the world, libraries, museums and archives are digitizing the important documents and images of our culture, both to preserve them for future generations and to make them more accessible to our own.

In Table 2.1, shown a list of previous projects done as E-Library, developing year, application and their limitations.

Table 2.1 Some previous Projects done as E-library

Project Name	Year	Author	Application	Limitation
ArXiv	1990	Cornell University	Preprints in Mathematics , Physics, Computer science, quantitative biology and statistics.	It's not specifically for Computer Science or Information Technology.
Arnetminer	2003	Professor Jie Tang	A free online service used to index and search academic social networks, hosted at Department of Computer Science and Technology of Tsinghua University	Only index available here. No E-book is available to read or download.
Free Tech Book	2004	Thomas Park	IT is free site for all Technology e-book like Math, Physics, Engineering etc.	It's not specifically Information Technology.
Publish Green	2018	Fayaz Ahmed	IT is site for all Engineering e-book like Computer Engineering, Civil Engineering, Electrical Engineering etc.	It's not specifically for Computer Science or Information Technology.

Through the 1990s, digital library projects were largely experimental activities. Many important advances in digital library techniques came through research sponsored by the U.S. National Science Foundation (NSF) and the U.K. Joint Information Systems Committee

(JISC). In 1999 these projects began expanding internationally when NSF linked its digital library research program with similar activities being undertaken by JISC, resulting in the JISC-NSF International Digital Library Initiative [2].

Ekere et al. studied the perception of users towards digital library facilities, resources and services and found that users are highly satisfied with it [3]. Users are highly aware and satisfied about the digital library resources such as WWW, WIFI and search engines compare to online databases, portals, online abstract, video CDs, CD-ROMs, and online indexes and abstract. Asad Khan investigated the factors that influence the adoption of Digital Library among research students. The findings revealed that Interface characteristics influence cognitive response which predict student's intention of using digital library. Whereas navigation, individual differences and system characteristics significantly affected the ease of use. Usefulness is directly affected by system characteristics and system quality. Finally, it is found that usefulness has highest effects on digital library usage intention.

In Bangladesh IT books (paper books) are so costly and most of the books are not available in everywhere. Most of the time E-book becomes viaticum for us. But all books are not find in internet easily. Most of the website link are fake and show their advertisement. It's really time consuming to find our desire books. Though there are many websites for free downloading E-books, there is no website where we get all IT books at a time.

Fayaz Ahmed developed a website name Publish Green [4]. The Aim or the purpose of this website is to help students with their studies. He mainly develops the site for all engineering students like Computer Engineering, Civil Engineering, Electrical Engineering etc. In this site there are a few number of IT books but not sufficient.

There are also several websites for IT books like Google e Book store, Book Boon, LibriVox, Open Library, Project Gutenberg, Free Tech Book, Free Book Centre [5]. A few number of Programming, Database, Networking, Software Engineering, Electronics, Web Engineering, Mobile Technology, Mathematics, Physics, Computer Graphic, Operating System, Robotics, Artificial Intelligence, Algorithm, Data Structure, Data Communication, Networking, Cryptography, Image Processing and Database books are available here.

CHAPTER 3

METHODOLOGY

3.1 Software Development Life Cycle (SDLC)

The Incremental model has been deemed the best suited for the Software Development Life Cycle (SDLC) process and followed. Figure 3.1 shown basic structure of Incremental Process Model. Using this model, we have the benefit over the Linear Sequential Model (LSM) in the sense that it is inherit the quality of the LSM but exclude the rigidity. Furthermore, the feedback process of Process Iteration model is also available in the incremental model. It is more flexible – less costly to change scope and requirements. It's easier to test and debug during a smaller iteration. Another contributing factor in choosing this model is the short period of time available to make a working initial version of the system.

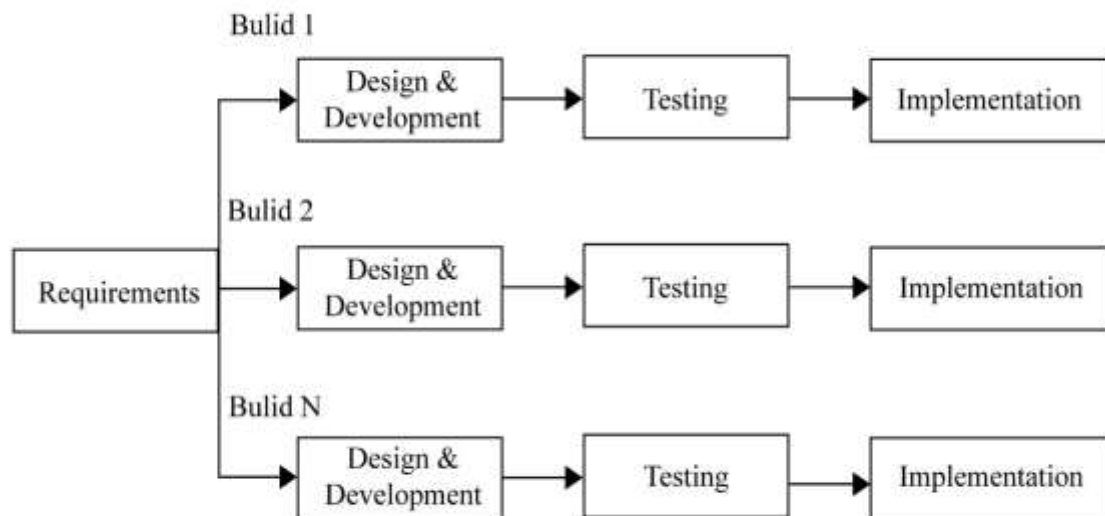


Figure 3.1: Incremental Process Model

3.2 Requirement Analysis

Existing system is time consuming and it makes difficult to convey huge amount of users. Also there will always a huge amount of visitors. So it was hectic to read or download any book. Thus all the problems of the 24 existing system are summarized and proposing a new system that works as an online application. It is a value added solution to the problem. It resolves all the problems stated above. It provides simple interface to the user to operate on and convey the intended users about events almost instantly, anytime and anywhere.

3.3 Design

It includes translation of the requirements specified in the SRS into a logical structure that can be implemented in a programming language. The output of the design phase is a design document that acts as an input for all the subsequent SDLC phases. The design of this webpage is simple and user friendly containing search option and different categories.

Design Process

- I. Determine the purpose of the database - This helps prepare for the remaining steps
- II. Find and organize the information required - Gather all of the types of information to record in the database, such as product name and order number.
- III. Divide the information into tables - Divide information items into major entities or subjects, such as Products or Orders. Each subject then becomes a table.
- IV. Turn information items into columns - Decide what information needs to be stored in each table. Each item becomes a field, and is displayed as a column in the table. For example, an Employees table might include fields such as Last Name and Hire Date.
- V. Specify primary keys - Choose each tables primary key. The primary key is a column, or a set of columns, that is used to uniquely identify each row. An example might be Product ID or Order ID.
- VI. Set up the table relationships - Look at each table and decide how the data in one table is related to the data in other tables. Add fields to tables or create new tables to clarify the relationships, as necessary.

3.4 Data Flow Diagrams

A data flow diagram (DFD) is a graphical representation of the "flow" of data through an information system, modelling its process aspects. A DFD is often used as a preliminary step to create an overview of the system without going into great detail, which can later be elaborated. DFDs can also be used for the visualization of data processing (structured design).

A DFD shows what kind of information will be input to and output from the system, how the data is advanced through the system, and where the data is stored. It does not show information about process timing or whether processes operate in sequence or in parallel, unlike a traditional structured flowchart which focuses on control flow, or a UML activity workflow diagram, which presents both control and data flows as a unified model.

Level 0: DFD Level 0 is also called a Context Diagram. It's a basic overview of the whole system or process being analyzed or modeled. It's designed to be an at-a-glance view, showing the system as a single high-level process, with its relationship to external entities. Figure 3.2 is Level 0 Data Flow Diagram, it shows the system within the entities like Applicant, User/Admin and Database as shown below.

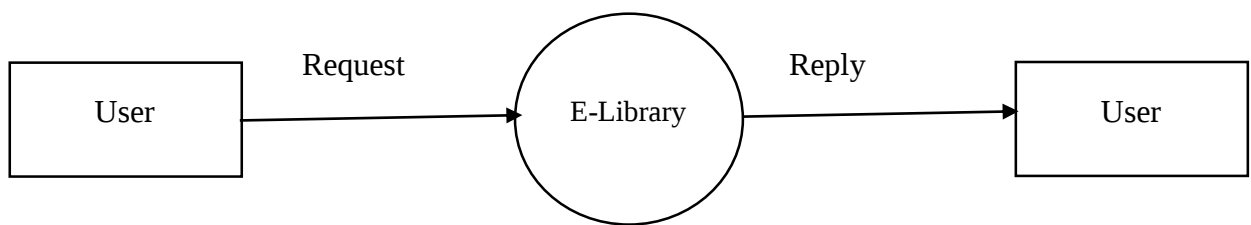


Figure 3.2: Data flow diagram (Level 0)

Level 1: DFD Level 1 (Figure 3.3) provides a more detailed breakout of pieces of the Context Level Diagram. It is highlight the main functions carried out by the system, as we break down the high-level process of the Context Diagram into its sub processes.

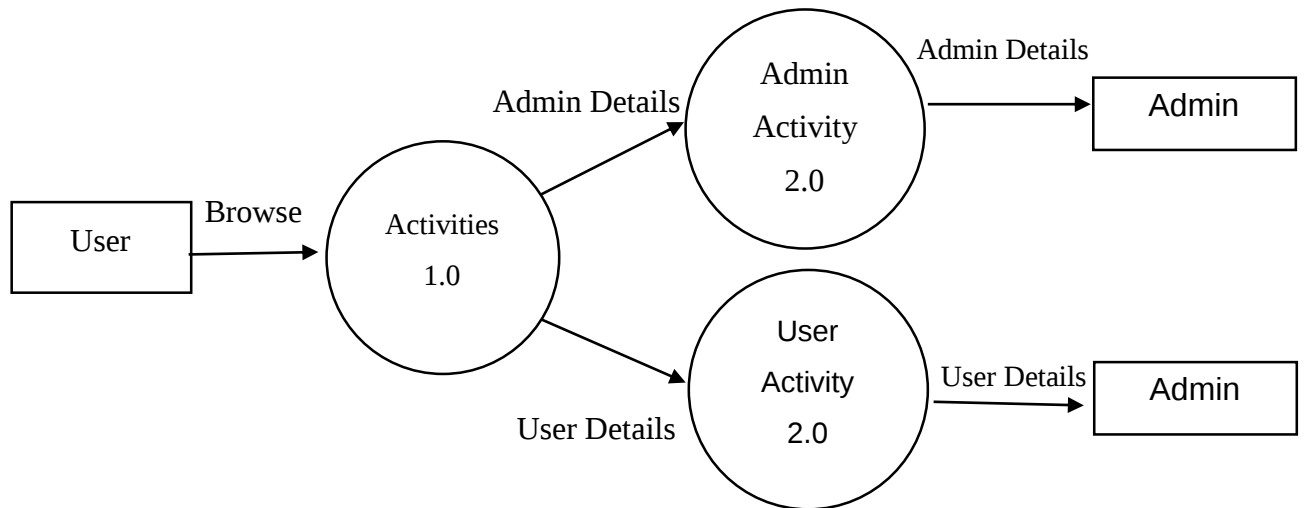


Figure 3.3: Data flow diagram (Level 1)

Level 2: DFD Level 2 then goes one step deeper into parts of Level 1. It is required more text to reach the necessary level of detail about the system's functioning. Figure 3.4 Data flow diagram (Level 2) showing this procedure.

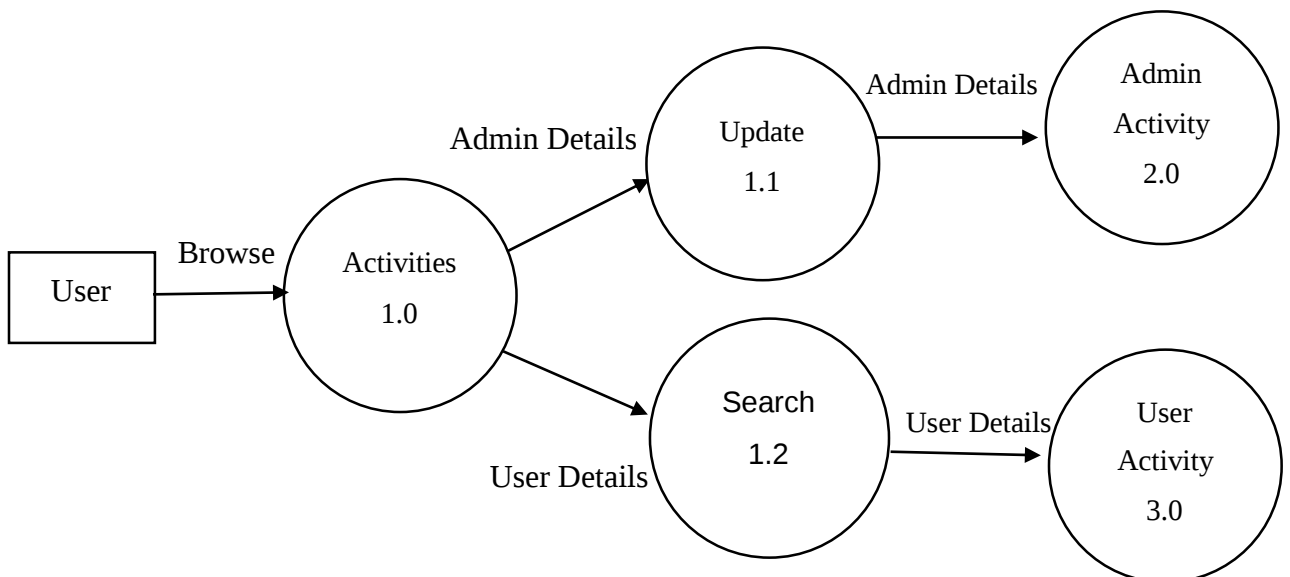


Figure 3.4: Data flow diagram (Level 2)

3.5 Coding/Implementation

As the project is web and based, we had to code this. For coding this we used PHP for back end programming, for database storing MYSQL. Table 3.1 shown Development Tools and Table 3.2 shown Server Requirements for the system.

Table 3.1 Development Tools

Feature	Description
Development environment	Windows, Linux
Design tools	Adobe Photoshop, Microsoft Paint
Front end	HTML5[5], CSS3, Twitter Bootstrap, JavaScript[6], jQuery etc.
Back end	PHP[2][3], MySQL[3]
IDE	PHPStorm, Notepad++
Compatible browsers	Mozilla 43+, Chrome: 38+, IE 50+

Table 3.2 Server Requirements

Feature	Description
Operating System	Linux
Web Server	Apache/NGINX
PHP Version	Minimum 5.4
MySQL version	Minimum 5.0
RAM	Minimum 4 GB
Storage	Minimum 10 GB
Bandwidth	Minimum 100 GB/month

Introduction to Languages

HTML: 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.

CSS: 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 myself 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 is 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.

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, OLEDB 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.

PHP: PHP is a server-side scripting language designed for web development but also used as a general-purpose programming language. Originally created by Rasmus Lerdorf in 1994, the PHP reference implementation is now produced by The PHP Group.

PHP Development Tools

PhpStorm: It supports FTP/SFTP synchronization, integrates well with Subversion, CVS, Mercurial and even with Git. Also, it supports HTML, CSS, JavaScript and handles language-mixing well like SQL or HTML blocks inside PHP code, JSON, etc.

3.6 Testing

It includes detection of errors in the application. The testing process starts with a test plan that recognizes test-related activities, such as test case generation, testing criteria, and resource allocation for testing. The code is tested and mapped against the design document created in the design phase. The output of the testing phase is a test report containing errors that occurred while testing the application. Testing of the project has not been done on real hardware and also on the emulator or software environment.

Testing has been done for each of the individual activities of the project

Various Testing Activities are as follow:

- a) **Black box testing** Internal system design is not considered in this type of testing. Tests are based on requirements and functionality.

- b) **White box testing** This testing is based on knowledge of the internal logic of an applications code. Also known as Glass Box Testing. Internal software and code working should be known for this type of testing. Tests are based on coverage of code statements, branches, paths, conditions.
- c) **Unit testing** Testing of individual software components or modules. Typically done by the programmer and not by testers, as it requires detailed knowledge of the internal program design and code. may require developing test driver modules or test harnesses.
- d) **Integration testing** Testing of integrated modules to verify combined functionality after integration. Modules are typically code modules, individual applications, client and server applications on a network, etc. This type of testing is especially relevant to client/server and distributed systems.
- e) **Functional testing** This type of testing ignores the internal parts and focus on the output is as per requirement or not. Black-box type testing geared to functional requirements of an application.
- f) **System testing** Entire system is tested as per the requirements. Black-box type testing that is based on overall requirements specifications, covers all combined parts of a system.
- g) **End-to-end testing** Similar to system testing, involves testing of a complete application environment in a situation that mimics real-world use, such as interacting with a database, using network communications, or interacting with other hardware, applications, or systems if appropriate.
- h) **Acceptance testing** Normally this type of testing is done to verify if system meets the customer specified requirements. User or customer do this testing to determine whether to accept application.
- i) **Usability testing** User-friendliness check. Application flow is tested, can new user understand the application easily, Proper help documented whenever user stuck at any point. Basically system navigation is checked in this testing.

3.7 Use Case Diagram

The system design can be clearly explained from the following diagrams:

A Use Case diagram at its simplest is a representation of a user's interaction with the system and depicting the specifications of a use case. A use case diagram can portray the different types of users of a system and the various ways that they interact with the system. This type of diagram is typically used in conjunction with the textual use case and is often be accompanied by other types of diagrams as well. There are two types of user in this application, user and admin.

Figure 3.5 Shown use case diagram of E- Library. This diagram is showing what a normal user can do with this application. A user can search, view or download the books. An admin can add, remove or update the categories and books.

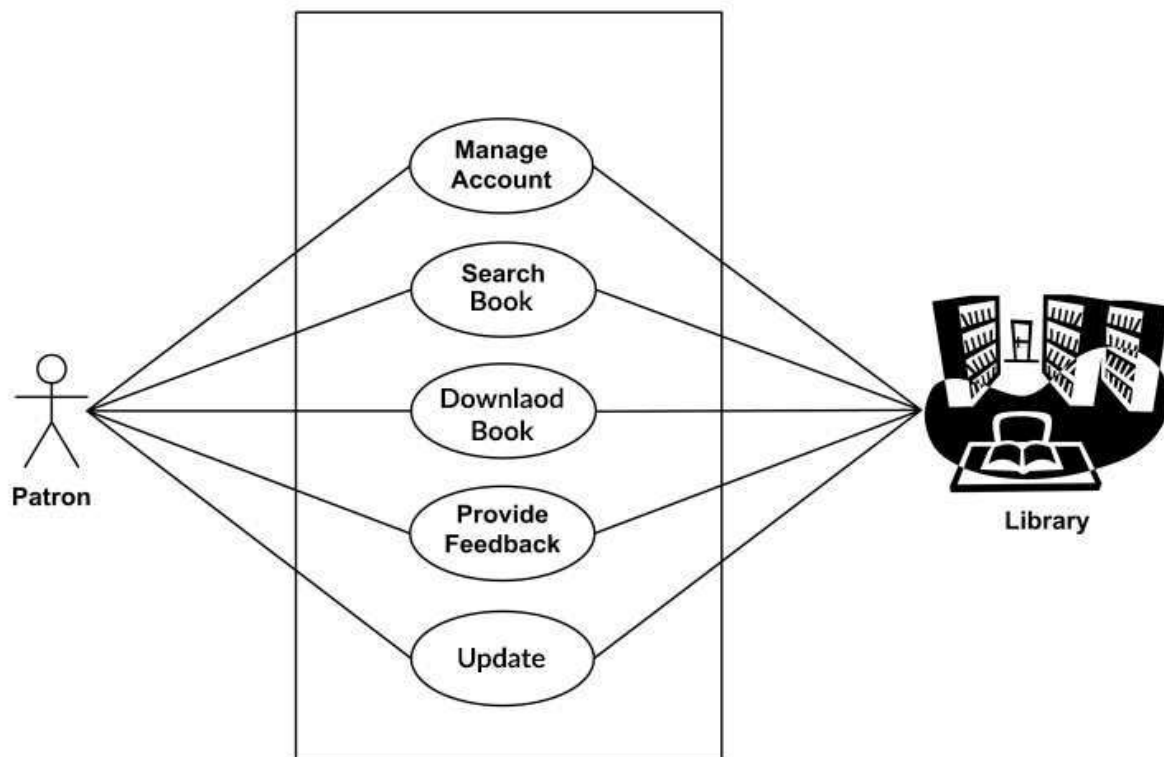


Figure 3.5: Use Case Diagram for E-Library

3.8 Systems Analysis:

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 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.

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.

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

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.

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.

CHAPTER 4

RESULTS AND DISCUSSION

4.1 Outcomes

We try to make user friendly online library for the students of Information Technology and Computer Science. Anyone can easily search, read or download books from here. Here all books are sort sequentially with different sub categories like Programming, Database, Algorithm, Electronics, Mathematics, Web Engineering, Software Engineering, Artificial Intelligence, Operating System, Computer Graphic, Computer Architecture, Networking etc. As it is a web base project anyone may download or read any book instantly from anywhere simply by visiting the site. Anyone able to find a book in category or by just typing the book name or author name in search option.

We sustain each and every records such as books, user name, user's mail address, phone number etc. with efficient way. This system can reduce paper based works and increase transparency. This website is totally dynamic and extendable. If the website needs to extend then I must have to work little on the database. So, we have the demand to develop a website that considers all the issues. Keeping all these things in mind we have tried my best to build a website which is secure, dynamic, extendable and reusable. We used MySQL database so that the users can work very easily. Here all books are sort sequentially with different sub categories like Programming, Database and Algorithm, Electronics, Mathematics, Networking etc. As it is a web base project anyone may download or read any book instantly from anywhere simply by visiting the site. Anyone is find a book in category or by just typing the book name or author name in search option.

The Outcomes of this project is very broad. Few of them are:

- Users could read or download any IT book from there.
- Users might introduce to many IT books.
- This can be accessed anytime anywhere, since it is a web application provided only an internet connection.
- The users don't need to pay for downloading books so it's cost effective.
- It will reduce the time to search books in internet.

4.2 Limitation of Project

Every system has some limitations. Our system also has some limitations too. Some limitation of our system are given below

- i. Only registered person will be able read or download books from the website.
- ii. People who are not familiar with computers can't use this software.
- iii. The system is only for legally and freely available books.
- iv. The system is only for IT related books.
- v. Books of other field are not available here.
- vi. If internet connection is slow it may create problem.
- vii. If xampp server is not run, it doesn't work.
- viii. Database connection must be needed.

4.2 Graphical User Interface:

Graphical User Interface (GUI) is a visual way of interacting with a computer using items such as windows, icons, and menus, used by most modern operating systems. This system has mainly two interface, Interface for Admin and Interface for Users. Here is show the Graphical User Interface (GUI) of the system through screenshots and user guides that how is they operate the system.

Login Page:

Both users and admin are able to login from this page using their own username and password. Figure 4.1 shown Login Page for both users and admin.

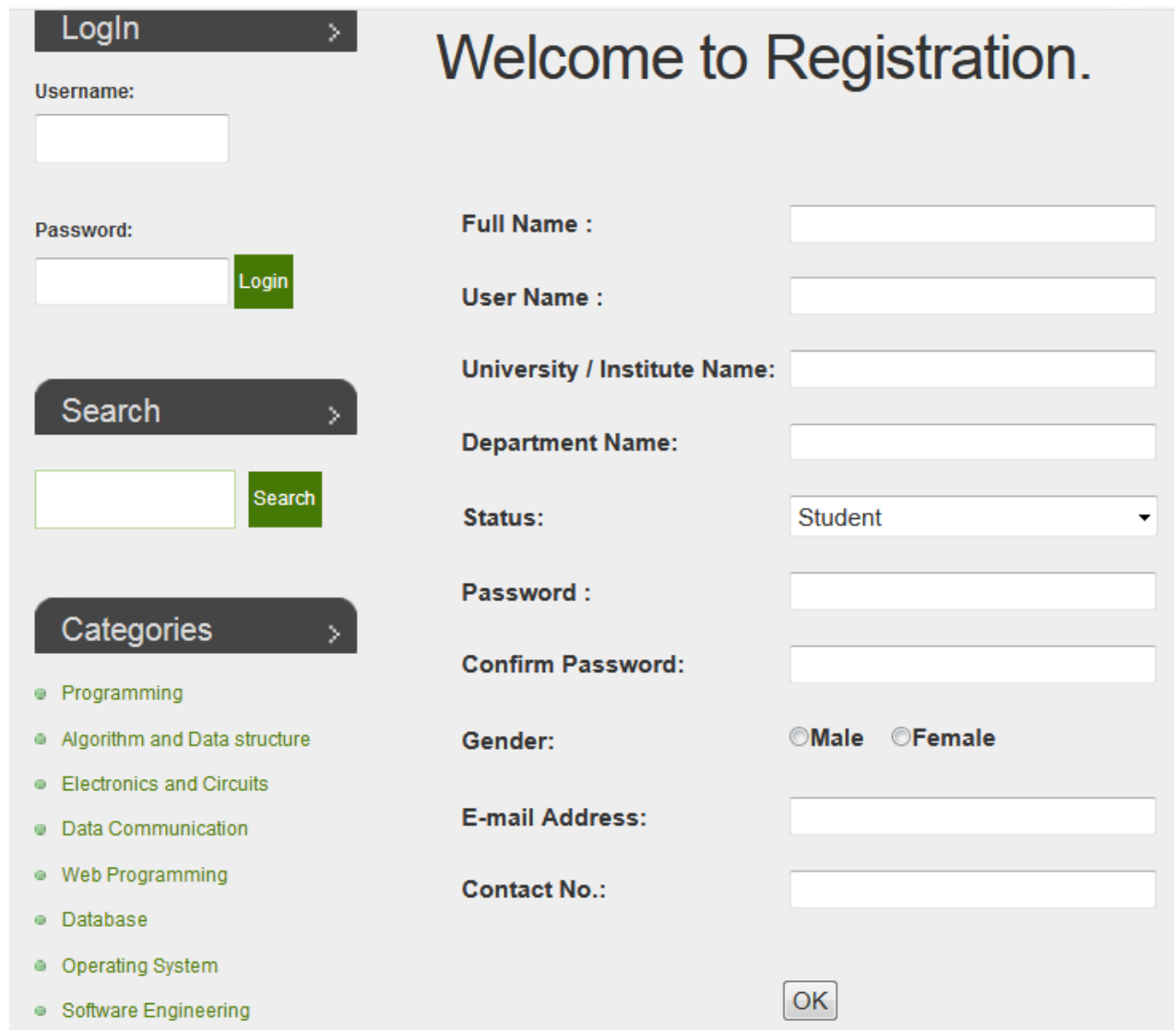


The screenshot displays the login interface for the 'Free IT Book Centre'. At the top, a dark navigation bar contains links for 'Home', 'Register', 'Contact', and 'About Us'. Below this is a banner featuring a green icon of a building with an open book at its base, followed by the text 'Free IT Book Centre' in a large, purple, serif font. The main content area is divided into two sections. On the left, there is a login form with a 'Login' button above a 'Username:' label and an input field. Below this is a 'Password:' label and an input field with a green 'Login' button to its right. Further down is a 'Search' button above a search input field with a green 'Search' button to its right. At the bottom left, there is a 'Categories' button followed by two links: 'Programming' and 'Algorithm and Data structure', each preceded by a green circular icon. On the right side of the main content area, the text 'Welcome to Free IT Book Centre' is displayed above a large illustration of a hand typing on a laptop keyboard, with several colorful books (blue, orange, and red) appearing to rise from the screen.

Figure 4.1: Login Page

User Registration:

To read or download books from this site, registration is must. User who wants to download or read books from this site can registration from this page. Figure 4.2 shown User Registration Process.



The image shows a web interface for user registration. On the left side, there are three sections: 'Login' with fields for 'Username' and 'Password' and a 'Login' button; 'Search' with a search bar and a 'Search' button; and 'Categories' with a list of topics including Programming, Algorithm and Data structure, Electronics and Circuits, Data Communication, Web Programming, Database, Operating System, and Software Engineering. The main area on the right is titled 'Welcome to Registration.' and contains a registration form with fields for 'Full Name', 'User Name', 'University / Institute Name', 'Department Name', 'Status' (a dropdown menu currently showing 'Student'), 'Password', 'Confirm Password', 'Gender' (radio buttons for 'Male' and 'Female'), 'E-mail Address', and 'Contact No.'. An 'OK' button is located at the bottom right of the form.

Login >

Username:

Password: **Login**

Search >

Search

Categories >

- Programming
- Algorithm and Data structure
- Electronics and Circuits
- Data Communication
- Web Programming
- Database
- Operating System
- Software Engineering

Welcome to Registration.

Full Name :

User Name :

University / Institute Name:

Department Name:

Status: ▼

Password :

Confirm Password:

Gender: ☐ **Male** ☐ **Female**

E-mail Address:

Contact No.:

OK

Figure 4.2: User Registration.

Book Details:

From this page user may find details of the books including Name, Publisher, Edition and Description etc. and also can download from here. Figure 4.3 shown Book Details and Download option.

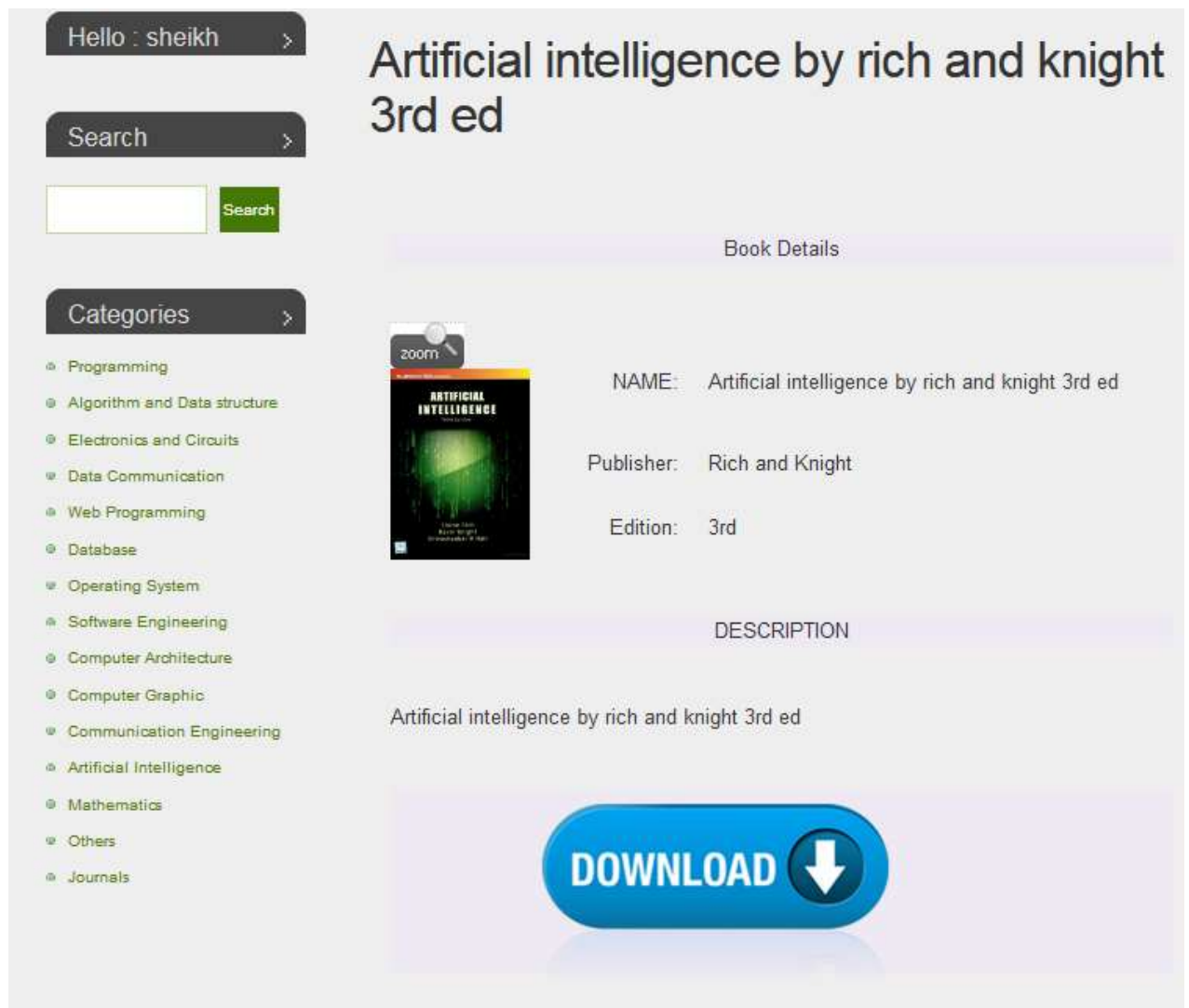


Figure 4.3: Book Details.

Contact Us and About Us:

Users may contact us from there if they have any query or request for new books. Figure 4.4 shown Contact Us and Figure 4.5 About Us page.

Login >

Username:

Password:
 Login

Search >

Search

Categories >

- Programming
- Algorithm and Data structure
- Electronics and Circuits
- Data Communication
- Web Programming
- Database
- Operating System
- Software Engineering

Contact us

Name :

E-mail ID:

Query:

OK

Figure 4.4: Contact Us.

Login >

Username:

Password:
 Login

Search >

Search

About Us

Hi visitors, My Name is Sheikh Shakawat Hossain. I live in Chittagong, Bangladesh. I am Studying Information and Communication Engineering at Noakhali Science and Technology University (NSTU), I developed this website in October 2018. The Aim or the purpose of this website is to help IT and CSE students with their studies. This site lists free online books of computer science and Information Technology all of which are legally and freely available over the Internet

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Figure 4.5: About Us.

Admin's Dashboard:

When Admin login to the site with his user name and password it is look like this. Figure 4.6 shows Admin's Dashboard and Figure 4.7 shown Add or Delete Category process.

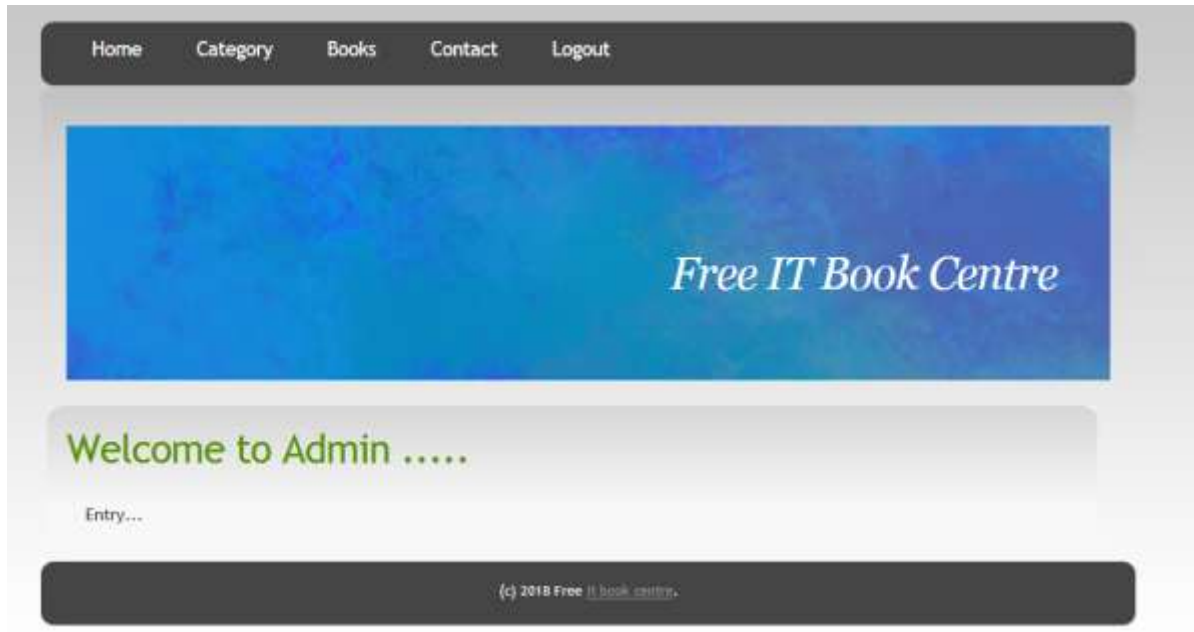


Figure 4.6: Admin's Dashboard.

Add or Delete Category:

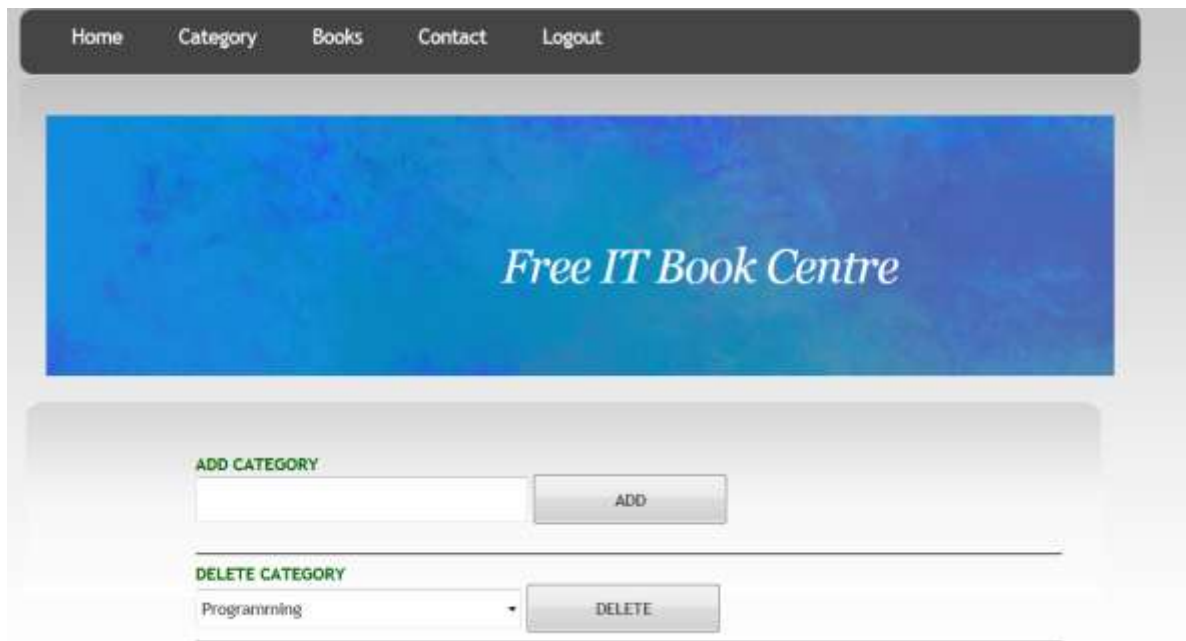


Figure 4.7: Add or Delete Category.

Add new books:

Admin can add new books from there. Figure 4.8 shown process of adding new books. And Figure 4.9 shows list of people and their query who have contacted us.

Add New Book						
SR.NO	NAME	PUBLISHER	ISBN	IMAGE	DELETE	
1	Fundamental of data structure by horovitz & sahani	Horovitz & Sahni	89564636	500		✗
2	Artificial intelligence by rich and knight 3rd ed	Rich and Knight	89564636	500		✗
3	Microwave Engineering David M Pozar 4ed	David M Pozar	89564636	500		✗
4	Computer graphics by schaum_series	Schaum_series	89564636	500		✗

Figure 4.8: Add new books.

Check Who Contacted Us:

SR.NO	NAME	EMAIL	QUERY	DELETE
1	Hiren	hiru@gmail.com	English Novels....	✗
2	Shital	shital@yahoo.com	Are you send me medical books?	✗
3	Manali	manali@yahoo.com	Java Complete Reference is available?	✗
4	Rina	rina@gmail.com	Artificial Intelligence	✗

Figure 4.9: Check Who Contacted Us.

CHAPTER 5

CONCLUSION

After completing our project E-Library for computer Science and Information Technology we are sure that we may read or download our desire books easily. Here all books are sort sequentially with different sub categories like Programming, Database and Algorithm, Electronics, Mathematics, Networking etc. As it is a web base project anyone may download or read any book instantly from anywhere simply by visiting the site. Anyone able to find a book in category or by just typing the book name or author name in search option.

We hope this will satisfy the demand of the user and the user can find all available books and details of the books to download without any time and energy waste. This website is totally dynamic and extendable. If the website needs to extend then we must have to work little on the database. So, we have the demand to develop a website that considers all the issues. Keeping all these things in mind we have tried my best to build a website which is secure, dynamic, extendable and reusable.

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APPENDIX

A. Project Code

Some important part of project codes is given below:

Login Process:

```
<?php session_start();
require('includes/config.php');
if(!empty($_POST))
{
    $msg="";
    if(empty($_POST['usernm']))
    {
        $msg[]="No such User";
    }
    if(empty($_POST['pwd']))
    {
        $msg[]="Password Incorrect.....";
    }
    if(!empty($msg))
    {
        echo '<b>Error:-</b><br>';
        foreach($msg as $k)
        {
            echo '<li>'.$k;
        }
    }
    else
    {
        $unm=$_POST['usernm'];
        $q="select * from user where u_unm='$unm'";
        $res=mysqli_query($conn,$q) or die("wrong query");
        $row=mysqli_fetch_assoc($res);
```

```

if(!empty($row))
{
    if($_POST['pwd']==$row['u_pwd'])
    {
        $_SESSION=array();
        $_SESSION['unm']=$row['u_unm'];
        $_SESSION['uid']=$row['u_pwd'];
        $_SESSION['status']=true;
        if($_SESSION['unm']!="admin")
        {
            header("location:index.php");
        }
        else
        {
            header("location:admin/index.php");
        }
    }
    else
    {
        echo 'Incorrect Password....';
    }
}
else
{
    echo 'Invalid User';
}
}
else
{
    header("location:index.php");
}

```

?>

Registration Process:

```
<?php
    require('includes/config.php');
    if(!empty($_POST))
    {
        $msg="";
        if(empty($_POST['fnm']) || empty($_POST['unm']) ||
empty($_POST['gender']) || empty($_POST['pwd']) ||
empty($_POST['cpwd']) ||
empty($_POST['mail']) || empty($_POST['city']))
        {
            $msg."<li>Please full fill all requirement";
        }
        if($_POST['pwd']!= $_POST['cpwd'])
        {
            $msg."<li>Please Enter your Password Again.....";
        }

        if(!ereg("^[a-z0-9_]+[a-z0-9_.]*@[a-z0-9_-]+[a-z0-9_.-]*\.[a-
z]{2,5}$", $_POST['mail']))
        {
            $msg."<li>Please Enter Your Valid Email
Address...";
        }
        if(strlen($_POST['pwd'])>10)
        {
            $msg."<li>Please Enter Your Password in
limited Format.....";
        }
        if(is_numeric($_POST['fnm']))
        {
            $msg."<li>Name must be in String Format...";
        }
    }
}
```

```

        if ($msg!="")
        {
            header("location:register.php?error=".$msg);
        }
    else
    {
        $fnm=$_POST['fnm'];
        $unm=$_POST['unm'];
        $pwd=$_POST['pwd'];
        $gender=$_POST['gender'];
        $email=$_POST['mail'];
        $contact=$_POST['contact'];
        $city=$_POST['city'];
        $query="insert into
user(u_fnm,u_unm,u_pwd,u_gender,u_email,u_contact,u_city)
values('$fnm','$unm','$pwd','$gender','$email','$contact','$c
ity')";

        mysqli_query($conn,$query) or die("Can't
Execute Query...");
        header("location:register.php?ok=1");
    }
}
else
{
    header("location:index.php");
}
?>

```

Adding Book Process

```
<?php
require('includes/config.php');

if(!empty($_POST))
{
    $msg=array();

    if(empty($_POST['name']) ||
empty($_POST['description']) || empty($_POST['publisher']) ||
empty($_POST['edition']) || empty($_POST['isbn']) ||
empty($_POST['pages']) || empty($_POST['price']))
    {
        $msg[]="Please full fill all requirement";
    }
    if(!(is_numeric($_POST['pages'])))
    {
        $msg[]="Page must be in Numeric Format...";
    }
    if(empty($_FILES['img']['name']))
    $msg[] = "Please provide a file";
    if($_FILES['img']['error']>0)
    $msg[] = "Error uploading file";
    if(!(strtoupper(substr($_FILES['img']['name'],-4))==".JPG" ||
    strtoupper(substr($_FILES['img']['name'],-5))==".JPEG" ||
    if(file_exists("../upload_image/".$_FILES['img']['name']))
    $msg[] = "File already uploaded. Please do not updated with
    same name";

    if(empty($_FILES['ebook']['name']))
    $msg[] = "Please provide a document file";

    if($_FILES['ebook']['error']>0)
    $msg[] = "Error uploading document file";
```

```

if(!(strtoupper(substr($_FILES['ebook']['name'],-4))==".PDF"
|| strtoupper(substr($_FILES['ebook']['name'],-4))==".PPT"
||strtoupper(substr($_FILES['ebook']['name'],-5))==".PPTX" ||
strtoupper(substr($_FILES['ebook']['name'],-4))==".DOC"||
strtoupper(substr($_FILES['ebook']['name'],-4))==".TXT"||
if(file_exists("../upload_ebook/".$_FILES['ebook']['name'])))
    $msg[] = "Document File already uploaded.
Please do not updated with same name";
    if(!empty($msg))
    {
        echo '<b>Error:-</b><br>';
        foreach($msg as $k)
        {
            echo '<li>'.$k;
        }
    }
    else
    {
move_uploaded_file($_FILES['img']['tmp_name'], "../upload_image/
".$_FILES['img']['name']);
$b_img = "upload_image/".$_FILES['img']['name'];
move_uploaded_file($_FILES['ebook']['tmp_name'], "../upload_eb
ook/".$_FILES['ebook']['name']);
$b_pdf = "upload_ebook/".$_FILES['ebook']['name'];
        $b_nm=$_POST['name'];
        $b_cat=$_POST['cat'];
        $b_desc=$_POST['description'];
        $b_edition=$_POST['edition'];
        $b_publisher=$_POST['publisher'];
        $b_isbn=$_POST['isbn'];
        $b_pages=$_POST['pages'];
        $query="insert into

```

```

book(b_nm,b_subcat,b_desc,b_edition,b_publisher,b_isbn,b_page
,b_price,b_img,b_pdf)
values('$b_nm','$b_cat','$b_desc','$b_edition','$b_publisher'
,'$b_isbn',$b_pages,'$b_img','$b_pdf');"
        mysqli_query($conn,$query) or
        die($query."Can't Connect to Query...");
        header("location:addbook.php");
    }
}
else
{
    header("location:index.php");
}
?>

```