Contents

List of Tables .................................................................................................................. 2
List of Figures .................................................................................................................... 3
Company Profile ............................................................................................................. 4
Chapter 1 : Introduction ............................................................................................... 7
  1.1 Existing System : ........................................................................................................ 8
  1.2 Need For The New System : .................................................................................. 8
  1.3 Objective of the New System : ................................................................................ 8
  1.4 Problem Definition : ............................................................................................. 9
  1.5 Project Profile : ...................................................................................................... 11
  1.6 Advantages and Limitations of the Proposed System : ........................................ 12
Chapter 2 : Requirement Determination & Analysis ................................................... 13
  2.1 Requirement Determination .................................................................................. 14
  2.2 Targeted Users ...................................................................................................... 15
Chapter 3 : System Design ......................................................................................... 16
  3.1 Flow Chart ............................................................................................................. 17
  3.2 E-R Diagram .......................................................................................................... 18
  3.3 Use Case Diagram .................................................................................................. 19
  3.4 Activity Diagram .................................................................................................... 23
  3.5 Data Dictionary ...................................................................................................... 26
Chapter 4 : Development ............................................................................................ 30
  4.1 Coding Standards ................................................................................................. 31
Chapter 5 : Conclusion .................................................................................................. 33
Chapter 6 : Learning During the Project Work & Work Experience ......................... 35
Chapter 7 : Screen Layouts Of Library Management .................................................. 37
  7.1 Screen Layouts Of User Side ................................................................................ 38
  7.2 Screen Layouts Of Admin Side .............................................................................. 48
List of Tables

[ Table 1 : Company Profile ] ................................................................. 4
[ Table 2 : Project Profile ] ..................................................................... 11
[ Table 3 : System Requirements ] .......................................................... 14
[ Table 4 : Software Requirements ] ....................................................... 14
[ Table 5 : Use Case Specification ] ........................................................ 22
[ Table 6 : Admin Table ] ..................................................................... 26
[ Table 7 : PopUp Table ] ..................................................................... 26
[ Table 8 : Request New Book ] ............................................................... 26
[ Table 9 : Author ] ............................................................................. 27
[ Table 10 : Books ] ............................................................................ 27
[ Table 11 : Students ] .......................................................................... 28
[ Table 12 : Issued Book ] ..................................................................... 28
[ Table 13 : Category ] .......................................................................... 29
List of Figures

[ Figure 1 : Flow Chart ] ........................................................................................................... 17
[ Figure 2 : E-R Diagram ] ........................................................................................................... 18
[ Figure 3 : Use Case User Side ] ................................................................................................. 20
[ Figure 4 : Use Case Admin Side ] ............................................................................................. 21
[ Figure 5 : Activity Diagram User Side ] ..................................................................................... 24
[ Figure 6 : Activity Diagram Admin Side ] ................................................................................... 25
[ Figure 7 : User Home Page ] .................................................................................................... 38
[ Figure 8 : User Signup Page ] ................................................................................................ 39
[ Figure 9 : User Dashboard Page ] ............................................................................................. 40
[ Figure 10 : Book Categories Page ] ......................................................................................... 41
[ Figure 11 : Authors Page ] ........................................................................................................ 42
[ Figure 12 : Books Page ] ........................................................................................................... 43
[ Figure 13 : User Profile Page ] .................................................................................................. 44
[ Figure 14 : User Change Password Page ] ............................................................................... 45
[ Figure 15 : Issued Book Page ] .................................................................................................. 46
[ Figure 16 : Request For New Book Page ] ................................................................................ 47
[ Figure 17 : Admin Login Page ] ................................................................................................ 48
[ Figure 18 : Admin Dashboard ] .................................................................................................. 49
[ Figure 19 : Add Categories Page ] ............................................................................................ 50
[ Figure 20 : Manage Categories Page ] ...................................................................................... 51
[ Figure 21 : Add Authors Page ] .................................................................................................. 52
[ Figure 22 : Manage Authors Page ] ........................................................................................... 53
[ Figure 23 : Add Books Page ] ..................................................................................................... 54
[ Figure 24 : Manage Books Page ] .............................................................................................. 55
[ Figure 25 : Issued New Book Page ] .......................................................................................... 56
[ Figure 26 : Manage Issued Book Page ] .................................................................................... 57
[ Figure 27 : Show Request Page ] ............................................................................................... 58
[ Figure 28 : Registered Student Page ] ..................................................................................... 59
[ Figure 29 : Edit PopUp Page ] .................................................................................................... 60
[ Figure 30 : Edit Change Password Page ] .................................................................................. 61
Company Profile

<table>
<thead>
<tr>
<th>Name</th>
<th>Codizious Technologies</th>
</tr>
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<tbody>
<tr>
<td>Address</td>
<td>306, Balaji Hall, Maha Pooja Dham Chowk BRTS Stop, 150 ft Ring Road, Padmi Society, Mavdi, Rajkot, Gujarat 360005</td>
</tr>
<tr>
<td>Email</td>
<td><a href="mailto:info@codizious.com">info@codizious.com</a></td>
</tr>
<tr>
<td>Contact No.</td>
<td>8160519719</td>
</tr>
<tr>
<td>Website</td>
<td><a href="http://www.codizious.com">www.codizious.com</a></td>
</tr>
</tbody>
</table>

[ Table 1 : Company Profile ]

### About Codizious Technology

- Codizious technologies is a IT Development and consulting firm as well as offshore services provider, with corporate business offices and development center located in Rajkot, India. Founded in 2016, our firm is dedicated to developing effective outsourcing partnerships with clients in order to reduce their IT costs, improve process management and reduce time-to-market for new product ideas.

- We provide end-to-end web and mobile app solutions in a variety of industry verticals, including gaming, finance, real estate, travel, medical, sports, high-end technology, retail and others.


- We help our business clients in their business expansion plans by designing and developing websites or mobile applications, which show the products and services of the company. According to the requirements of the clients. We just need to know your specific requirement, and we shall design the website and mobile application or other services that you order us to do. Whether small or big. We appreciate your every order.
• **Available Services**
  
  o **Graphics Design**
    - Creative Graphics Designing Firm in India Offers Top Quality Solutions.
    - Logo Designing, Stationary Design, Brochure Designing, Web Design, PSD to XHTML.
  
  o **Web Development**
    - Give a Professional look to Your Website with Ample Usage of Web Development Services
  
  o **Mobile Development**
    - Get Mobile Application Development Services From India at Competitive Rates
  
  o **Hire Professionals**
    - Codizious's Dedicated Team Model(DTM) offers clients an easy & cost effective solution for engaging different kinds of technical groups & resources.
  
  o **Internet Marketing**
    - Search Engine Optimization and Marketing that Make Your Brand
    - Search Engine Optimization, Social Media Optimization, Pay Per Click, 10XSEO
  
  o **Content Writing**
    - Professional Content Writing Service for Efficient and Effective Communication with the Online Customers

• **Our Mission & Vision**
  
  o **Our mission** is to cross all the barriers and reach the top most level in IT field. Codizious technologies has grown considerably and we have 100+ clients until now. Our perseverance through challenging situations has brought us here. We will strive to create a niche in the market. We appreciate the trust that clients put in us to improve their business.
  
  o **Our Vision** is to be respected and trusted as a world-class web & app development company delivering exceptional enterprise web & mobile applications.
Abstract of Project

Library management system is a project which aims in developing a computerized system to maintain all the daily work of library. This project has many features which are generally not available in normal library management systems like facility of user login. It also has a facility of admin login through which the admin can monitor the whole system and admin can also use this system for manage the library. It has also a facility where student after logging in their accounts can see list of books issued and its issue date and return date and also the students can request the librarian to add new books by filling the book request form and student can also search books using books name or author name or ISBN number and also student can manage their profile admin can take quick inventory report and student can requested for new book and admin can approved or declined requested book request admin can also send reminder using email and sms.

Overall this project of ours is being developed to help the students as well as staff of library to maintain the library in the best way possible and also reduce the human efforts.
Chapter 1 : Introduction
1. Introduction:

The project titled Library Management System is Library management software for monitoring and controlling the transactions in a library. The project “Library Management System” is developed in PHP, which mainly focuses on basic operations in a library like adding new member, new books, and updating new information, searching books and members and facility to borrow and return books.

1.1 Existing System:

In our existing system all the transaction of books are done manually, So taking more time for a transaction like borrowing a book or returning a book and also for searching of Authors and books. Another major disadvantage is that to preparing the list of books borrowed and the available books in the library will take more time, currently it is doing as a one day process for verifying all records. So after conducting the feasibility study we decided to make the Digital Library management system to be computerized.

1.2 Need For The New System:

✓ Reliable:

Softlink provides 24/7 monitoring of your hosted system, so there is no need to worry about server crashes or timeouts.

✓ Secure:

Organization that manage sensitive and confidential Information. Also assign security privileges to different users within your organization.

1.3 Objective of the New System:

The project is to create a system for library management. The system will allow performance of the actions needed in order to manage the library in a simple and comfortable way. The actions will include addition/removal of books, addition/removal of members, member and book searches, and much more. The system in parallel to the user actions keeps a basic security level which prevents access or modifications of data by users which don't posses the proper permissions.
1.4 Problem Definition:

- Project Title: Library Management

  - In the library management have many problems
  - Student cannot find books easily.

  - If a book is not available then student have to submit application in hardcopy but if by chance that application is missing by library staff in that case student cannot received books.

  - User have to stand in row for issued the books

  - Students have waster his/her time for search and issued the books.


  - Library staff gives more human efforts for maintained the library.

  - Librarian has faced more difficulties to maintain the books location as well as books stocks.

  - Library staff has to verify student profile or details before the issue new books.

- Modules Description

  **User functionality**

  - Dashboard
  - Student User can search the book where it located in library
  - Student can show issued and returns book history
  - Student can request for new book
  - Student can show all request that is raised by students
  - Student can manage their profile
  - Student can view the issued booked records
Admin functionality

- Dashboard
- Admin can add new category
- Admin can manage books category
- Admin can add authors
- Admin can manage authors
- Admin can add books
- Admin can manage books
- Admin can Show books stock Report
- Admin can show all books
- Admin can import CSV file for adding books in the bulk
- Admin can issue new books
- Admin can return new books
- Admin can borrowed books
- Admin can show lost books
- Admin can show the list of returned books
- Admin can send sms/email reminder of the students
- Admin can show registered student list
- Admin can manage registered the student list
- Admin can add new student
- Admin can add member type
- Admin can add class/occupation
- Admin can setting the web system
- Admin can take the database backup
- Admin show requested books

Admin can manage their profile
### 1.5 Project Profile:

<table>
<thead>
<tr>
<th>Project Title</th>
<th>DIGITAL LIBRARY MANAGEMENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Duration</td>
<td>JANUARY 2018 TO MARCH 2018</td>
</tr>
<tr>
<td>Developed By</td>
<td>Rana Urvashiba K.</td>
</tr>
<tr>
<td></td>
<td>Sanchaniya Namrata P.</td>
</tr>
<tr>
<td>Enrollment No</td>
<td>165023693070</td>
</tr>
<tr>
<td></td>
<td>165023693085</td>
</tr>
<tr>
<td>Front End Tool</td>
<td>PHP</td>
</tr>
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<td>Back End Tool</td>
<td>MySQL</td>
</tr>
<tr>
<td>Language</td>
<td>PHP</td>
</tr>
<tr>
<td>Operating System</td>
<td>WINDOWS 10</td>
</tr>
<tr>
<td>Guide By</td>
<td>Dr. Hetal Thaker</td>
</tr>
<tr>
<td>Submitted To</td>
<td>Atmiya Institute of Technology &amp; Science</td>
</tr>
</tbody>
</table>

[Table 2: Project Profile]
1.6 Advantages and Limitations of the Proposed System:

- **Advantages:**
  - Simple & Easy to Use: The Library Management Software is simple, user-friendly, and can be easily integrated with your existing system.
  - Our software admin can add members, add books, search members, search books, update information, edit information, borrow and return books in quick time.
  - User friendly interface: Fast access to database, Less error, More Storage Capacity, Search facility, Look and Feel, Environment, Quick transaction.
  - All the manual difficulties in managing the Library have been rectified by implementing computerization.
  - Highly Secure, Scalable & Reliable: Benefit from scalable infrastructure, role-based secure access, high performance and reliable to ensure seamless access to library database.

- **Disadvantages:**
  - Library Management System have a Very large Library that will be default to update.
  - If software is corrupted, whole data will be collapsed.
Chapter 2 : Requirement Determination & Analysis
2. Requirement Determination & Analysis

2.1 Requirement Determination

- **System Requirements**:

<table>
<thead>
<tr>
<th>Requirement</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operating System</td>
<td>Windows, Unix/Linux</td>
</tr>
<tr>
<td>CPU/Processor</td>
<td>32-bit, 64-bit x86 CPU</td>
</tr>
<tr>
<td>RAM</td>
<td>1 GB</td>
</tr>
<tr>
<td>Hard Disk</td>
<td>50 GB</td>
</tr>
</tbody>
</table>

[ Table 3: System Requirements ]

- **Software Requirements**:

<table>
<thead>
<tr>
<th>Requirement</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Server Type</td>
<td>Windows Based</td>
</tr>
<tr>
<td>Services Required</td>
<td>o Apache</td>
</tr>
<tr>
<td></td>
<td>o MySQL – Back End Tools (Database)</td>
</tr>
<tr>
<td></td>
<td>o PHP – Front End Tools</td>
</tr>
<tr>
<td>Browser</td>
<td>Any browser</td>
</tr>
</tbody>
</table>

[ Table 4: Software Requirements ]
2.2 Targeted Users

- City government (Mayor and councillors) city departments and staff
- Community and cultural stakeholders (including Neighbourhood Action Teams)
- Community partners
- All participants in consultations
- Library users
- Library associations
- Media Internal Audiences
- Library staff – management, front line and support departments
Chapter 3 : System Design
3.1 Flow Chart

[Figure 1: Flow Chart]
3.2 E-R Daigram

[ Figure 2: E-R Daigram ]
3.3 Use Case Diagram

Use case is a functionality the users need from the system. A use case diagram depicts the relationships among the actors and use cases. It is usually used for requirements analysis. The components in a use case diagram include:

- **Actors:**
  Actors represent external entities of the system. These can be people or things that interact with the system that is being modeled.

- **Use Cases:**
  Use cases are functional parts of the system. Many actors can share use cases. If we find a use case that is not associated with any actor, this may be a unnecessary functionality.

- **Associations:**
  Associations are shown between actors and use cases, by drawing a solid line between them. This only represents that and actor uses the use case.

There are also two kinds of relationships between use cases:

- **Includes:**
  Use cases that are associated with actors can be very general. Sometimes they "include" more specific functionality. Includes relationship is represented by dashed arrows that point to the included functionality. Beside the arrow is <<includes>>.

- **Extends:**
  An extension use case is an insertion to the base use case. Extends relationship is represented by dashed arrows that point to the base functionality. Beside the arrow is <<extends>>.
• Use Case Diagram [User Side]

[ Figure 3 : Use Case User Side ]
Library Management System

- Use Case Diagram [Admin Side]

[Figure 4: Use Case Admin Side]
### Use Case Specification

<table>
<thead>
<tr>
<th>Use Case</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Login</td>
<td>The user has to Sign In, in order to start s/he’s work.</td>
</tr>
<tr>
<td>Registration</td>
<td>New User needs to register first in to System database and manual to get access of his/her account.</td>
</tr>
<tr>
<td>Update Account</td>
<td>User can Update profile.</td>
</tr>
<tr>
<td>Delete User</td>
<td>System Administrator can delete users.</td>
</tr>
<tr>
<td>Add Authors</td>
<td>System Administrator can Add Authors.</td>
</tr>
<tr>
<td>Manage Authors</td>
<td>System Administrator can Manage Authors.</td>
</tr>
<tr>
<td>Add Books</td>
<td>System Administrator can Add Books.</td>
</tr>
<tr>
<td>Manage Books</td>
<td>System Administrator can Manage the Books.</td>
</tr>
<tr>
<td>Add Categories</td>
<td>System Administrator can Add Books Categories.</td>
</tr>
<tr>
<td>Manage Categories</td>
<td>System Administrator can Manage Books Categories.</td>
</tr>
<tr>
<td>Update Pop-Up</td>
<td>System Administrator can Manage Or Update Pop-Up Text Message.</td>
</tr>
<tr>
<td>Manage Register User</td>
<td>Administrator Can Manage the User Registration.</td>
</tr>
</tbody>
</table>
3.4 Activity Diagram

Activity diagram is another important diagram in UML to describe dynamic aspects of the system. Activity diagram is basically a flow chart to represent the flow from one activity to another activity. The activity can be described as an operation of the system. So the control flow is drawn from one operation to another. This flow can be sequential, branched or concurrent.

Purpose:

The basic purposes of activity diagrams are similar to other four diagrams. It captures the dynamic behavior of the system. Other four diagrams are used to show the message flow from one object to another but activity diagram is used to show message flow from one activity to another.

Activity is a particular operation of the system. Activity diagrams are not only used for visualizing dynamic nature of a system but they are also used to construct the executable system by using forward and reverse engineering techniques. The only missing thing in activity diagram is the message part.

It does not show any message flow from one activity to another. Activity diagram is some time considered as the flow chart. Although the diagrams looks like a flow chart but it is not. It shows different flow like parallel, branched, concurrent and single.

So the purposes can be described as:

- Draw the activity flow of a system.
- Describe the sequence from one activity to another.
- Describe the parallel, branched and concurrent flow of the system.
• Activity Diagram [User Side]

[Figure 5: Activity Diagram User Side]
- Activity Diagram [Admin Side]
3.5 Data Dictionary

**Admin Table**

<table>
<thead>
<tr>
<th>Field Name</th>
<th>Data Type</th>
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<th>Description</th>
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<tbody>
<tr>
<td>Id</td>
<td>Int</td>
<td>No</td>
<td>Primary key</td>
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<tr>
<td>FullName</td>
<td>Varchar</td>
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<td>Store the full name</td>
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<tr>
<td>AdminEmail</td>
<td>Varchar</td>
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<td>Store the admin email</td>
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<tr>
<td>UserName</td>
<td>Varchar</td>
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<td>Store the admin username</td>
</tr>
<tr>
<td>Password</td>
<td>Varchar</td>
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<td>Store the admin password</td>
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<td>updationDate</td>
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<td>Store the updation date</td>
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</table>

[Table 6 : Admin Table]

**PopUp Table**

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<th>Description</th>
</tr>
</thead>
<tbody>
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<td>Primary key</td>
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<td>Popup</td>
<td>Varchar</td>
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[Table 7 : PopUp Table]

**Request New Book Table**

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<tbody>
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<td>Primary key</td>
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<td>Student_id</td>
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<td>Store the student id</td>
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<tr>
<td>Bookname</td>
<td>Varchar</td>
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<td>Store the book name</td>
</tr>
<tr>
<td>Authorname</td>
<td>Varchar</td>
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<td>Store the author name</td>
</tr>
<tr>
<td>Aprice</td>
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<td>Yes</td>
<td>Store the approximant book price</td>
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</table>

[Table 8 : Request New Book]
### Author Table

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<tr>
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<th>Description</th>
</tr>
</thead>
<tbody>
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<td>No</td>
<td>Primary key</td>
</tr>
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<td>Varchar</td>
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<td>Store the author name</td>
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<td>Img</td>
<td>Varchar</td>
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<td>Store the book image</td>
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<td>CreationDate</td>
<td>Timestamp</td>
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<td>Store the creation date</td>
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<tr>
<td>UpdationDate</td>
<td>Timestamp</td>
<td>Yes</td>
<td>Store the updation date</td>
</tr>
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</table>

[Table 9: Author]

### Books Table

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<td>No</td>
<td>Primary key</td>
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<td>Store the book name</td>
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<td>Catid</td>
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</tr>
<tr>
<td>AuthorId</td>
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<td>Yes</td>
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<td>Store the book stock</td>
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<td>Stock the available stock</td>
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<td>Varchar</td>
<td>Yes</td>
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</tr>
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<td>RegDate</td>
<td>Timestamp</td>
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<td>Store the register date</td>
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<tr>
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[Table 10: Books]
## Students Table

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<td>Primary key</td>
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<td>StudentId</td>
<td>Varchar</td>
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<td>Store the Student id</td>
</tr>
<tr>
<td>FullName</td>
<td>Varchar</td>
<td>Yes</td>
<td>Store the student full name</td>
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<tr>
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<td>Varchar</td>
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[ Table 11: Students ]

## Issued Book Table

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</tr>
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<tr>
<td>IssuesDate</td>
<td>Timestamp</td>
<td>Yes</td>
<td>Store the issue date</td>
</tr>
<tr>
<td>ReturnDate</td>
<td>Timestamp</td>
<td>Yes</td>
<td>Store the return date</td>
</tr>
<tr>
<td>ReturnStatus</td>
<td>Int</td>
<td>Yes</td>
<td>Store the returns status</td>
</tr>
<tr>
<td>Fine</td>
<td>Int</td>
<td>Yes</td>
<td>Store the fine amount</td>
</tr>
</tbody>
</table>

[ Table 12: Issued Book ]
## Category Table

<table>
<thead>
<tr>
<th>Filed Name</th>
<th>Data Type</th>
<th>Null</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Id</td>
<td>Int</td>
<td>No</td>
<td>Primary key</td>
</tr>
<tr>
<td>CategoryName</td>
<td>Varchar</td>
<td>Yes</td>
<td>Store the category name</td>
</tr>
<tr>
<td>Status</td>
<td>Int</td>
<td>Yes</td>
<td>Store the status</td>
</tr>
<tr>
<td>CreationDate</td>
<td>Timestamp</td>
<td>Yes</td>
<td>Store the creation date</td>
</tr>
<tr>
<td>UpdationDate</td>
<td>Timestamp</td>
<td>Yes</td>
<td>Store the updation date</td>
</tr>
</tbody>
</table>

[ Table 13 : Category ]
Chapter 4 : Development
4.1 Coding Standards

Every company follows a different coding standard based on their best practices. Coding standard is required because there may be many developers working on different modules so if they will start inventing their own standards then source will become very un-manageable and it will become difficult to maintain that source code in future.

Here are several reasons why to use coding specifications:

- Your peer programmers have to understand the code you produce. A coding standard acts as the blueprint for all the team to decipher the code.
- Simplicity and clarity achieved by consistent coding saves you from common mistakes.
- If you revise your code after some time then it becomes easy to understand that code.
- Its industry standard to follow a particular standard to being more quality in software.

There are few guidelines which can be followed while coding in PHP:

- **Indenting and Line Length** – Use an indent of 4 spaces and don't use any tab because different computers use different setting for tab. It is recommended to keep lines at approximately 75-85 characters long for better code readability.

- **Control Structures** – These include if, for, while, switch, etc. Control statements should have one space between the control keyword and opening parenthesis, to distinguish them from function calls. You are strongly encouraged to always use curly braces even in situations where they are technically optional.

- **Function Calls** – Functions should be called with no spaces between the function name, the opening parenthesis, and the first parameter; spaces between commas and each parameter, and no space between the last parameter, the closing parenthesis, and the semicolon.

- **Comments** – C style comments (/\* \*/ and standard C++ comments (/\/) are both fine. Use of Perl/shell style comments (#) is discouraged.
• **PHP Code Tags** – Always use `<?php ?>` to delimit PHP code, not the `<? ?>` shorthand. This is required for PHP compliance and is also the most portable way to include PHP code on differing operating systems and setups.

• **Variable Names** :-
  - Use all lower case letters
  - Use '_' as the word separator.
  - Global variables should be prepended with a 'g'.
  - Global constants should be all caps with '_' separators.
  - Static variables may be prepended with 's'.

• **Make Functions Reentrant** – Functions should not keep static variables that prevent a function from being reentrant.

• **Short Methods or Functions** – Methods should limit themselves to a single page of code.

  Over all intention should be to be consistent throughout of the code programming and it will be possible only when you will follow any coding standard.
Chapter 5 : Conclusion
5. Conclusion

Our project is only a humble venture to satisfy the needs in a library. Several user friendly coding have also adopted.

After doing this project work, We learn many things those We cannot learn as student as we all know that academic work and real industrial work has big difference.

First, We learn to analyze the problem for that we have taken the many opinions.

Then We are in designing phase so learn to make the design user friendly.

We are so lucky that in this way we can help many people and We provide the way to live the creativity and such a projects which may helpful in environment and enhancement of human beings and human society.

Still learning process has never die, We will learn and improve this project in many ways.

This System shall prove to be a powerful System in satisfying all the requirements of the organization.

The objective of software planning is to provide a frame work that enables the manger  to make reasonable estimates made within a limited time frame at the beginning of the software project and should be updated regularly as the project progresses. Last but not least it is no the work that played the ways to success.
Chapter 6 : Learning During the Project
Work & Work Experience
6. Learning During the Project Work & Work Experience

The Industrial Development Project was a part of MCA’s academic calendar by GTU. So, I did an IDP in Rajkot Region and the company name is “Codizious Technologies, RAJKOT.” It was a good learning experience for me, especially in the aspect of the working culture at the industry level in the IT Company.

During the project time span, I’ve come across with lots of new things. Moreover, the most important and necessary experience was that how the work is done in the industry according to the deadline and the customer requirements as well.

The Company from where I’ve completed my training was a product based. So, I could gain that experience of building the new things, product or something like innovative projects.

Although I did get the fair amount of idea of the working process of a small mid scale IT company of India, but one thing I must not leave to mention that the training of mine was not of learning the programming only, but the most important part of it was how the work is done under pressure and how the environment is totally different from our computer laboratory session in the college. So, the scenario at the IT industry is much more different than what we think as a student at our regular academic curriculum.

As a student we all have the habit or something like that in our mind that training means there were some special personal to train us the programming, but the scenario is almost reverse, at least it was in the Company where I’ve taken my training.

Although there were not much of a difficulty as far as the development was concerned, but I did realize that the amount of work we do at the academic level is helps only at the base level further you have to apply your innovative ideas into your project.

As far as the learning experience of a programming is concerned, I learned some basic and most important Software Engineering principles including the coding convention standards and principles which suits at the business level.

But honestly, I was quite lucky that I had my team leader in the form of a brilliant mind and a gentleman named Mr. Alpesh Rathod. I did learn some crucial aspects of the development at the highest level from him and share some of his experiences of the programming. All in all it was a good learning curve for me as it was my first real step into the IT industry.
Chapter 7 : Screen Layouts Of Library Management
7.1 Screen Layouts Of User Side

Home Page

[ Figure 7 : User Home Page ]

Login Page at the user side

After entering login ID and Password user can login
User can Sign up then login In the Library Management System.
Dashboard Page

[ Figure 9 : User Dashboard Page ]

This screen shows the Menu of the Library Management System.
This page shows the Book Categories which was uploaded by administrator.
Authors

[ Figure 11 : Authors Page ]

This page shows the Authors which was uploaded by administrator.
This page shows the Books which was uploaded by administrator.
My Profile

User can update or change your profile after login the system.
Change Password

User can also change the password. User can enter first current password then enter new password and last step enter confirm password. User Password will be changed.

[ Figure 14 : User Change Password Page ]
Issued Books

User can show the how many books are issued. Shows the issued books history.
Request For New Book

This page shows user can request for new books from administrator.
7.2 Screen Layouts Of Admin Side

Admin Login Page

[ Figure 17 : Admin Login Page ]

This page shows the administrator login page.
Admin can enter user name and password then admin can manage the system.
Admin Dashboard

[ Figure 18 : Admin Dashboard ]

This page shows the admin dashboard.

In this page admin can show the how many book are issued, how many books are returned by the user side.

In this page how many user are registered, how many authors, how many categories Added.
This page shows the administrator can create the new books category.
This page shows the administrator can manage [Edit/Delete] the books categories. Also search the book Category.
Add Authors

[ Figure 21 : Add Authors Page ]
In this page administrator can add the author name and author image.

Manage Authors

[Figure 22: Manage Authors Page]
In this page administrator can manage authors.
Admin can change edit or delete the authors name or images.

Add Books

[ Figure 23 : Add Books Page ]
Administrator can add new book in this page. Administrator book add which in the category. Author name, ISBN number, Price, Total Book stock, Total available stock and click the add button.

Manage Books

In this page Administrator can manage the books. Edit Or Delete books by the Administrator.
This page shows the issue new book page.
This page shows the administrator how to manage the issued book.
This page shows the show request page.

Student can pass the request your admin. Admin can show this request page.
This page shows the howmany students or users are registered in this system.
Edit Pop-Up

This page shows the Edit PopUp page.
System Administrator can change or manage the PopUp Text.
Admin Change Password

[ Figure 30 : Edit Change Password Page ]
This page shows the admin change password page.
In this page admin can change your user name or password.

Chapter 8 : Bibliography
8. Bibliography

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