

GRAPHIC ERA DEEMED TO BE

UNIVERSITY

PROJECT REPORT

ON

ONLINE LIBRARY MANAGEMENT SYSTEM

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PROBLEM STATEMENT –

Online Library Management System is a system which maintains the information about the books present in the library, their authors, the members of library to whom books are issued,

library staff and all. Maintenance of all this information manually is a very complex task. Owing to the advancement of technology, organization of an Online Library becomes much simple. The Online Library Management has been designed to computerize and automate the operations performed over the information about the members, book issues and returns and all other operations. This computerization of library helps in many instances of its maintenances. It reduces the workload of management as most of the manual work done is reduced.

MOTIVATION-

This website provides a computerized version of library management system which will benefit the students as well as the staff of the library. It makes entire process online where student can search books, staff can generate reports and do book transactions. It also has a facility for student login where student can login and can see status of books issued as well request for book or give some suggestions

SOFTWARE AND HARDWARE REQUIREMENTS-

1. SOFTWARE REQUIREMENTS –

Development tools and Programming language- HTML is used to write the whole code and develop webpages with css for styling work and java script for sever side scripting.

HTML-

HTML or Hyper Text Markup Language is the main markup language for creating web pages and other information that can be displayed in a web browser. HTML is written in the form of HTML elements consisting of tags enclosed in angle brackets, within the web page content. HTML tags most commonly come in pairs like <h1> </h1>. although some tags represent empty elements and so are unpaired, for example- . The purpose of a web browser is to read HTML documents and compose them into visible or audible web pages. The browser does not display the HTML tags, but uses the tags to interpret the content of the page. HTML elements form the building blocks of all websites. It provides a means to create structured documents by denoting structural semantics for text such as headings, paragraphs, lists, links, quotes and other items.

CSS-

Cascading Style Sheets(CSS) is a style sheet language used for describing the look and formatting of a document written in a markup language. While most often used to style web pages and interfaces written in HTML

JAVASCRIPT-

JavaScript(JS) is a dynamic computer programming language. It is most commonly used as part of web browsers, whose implementations allow client side scripts to interact with the user, control the browser, communicate asynchronously, and alter the document content that is displayed. It is also being used in server-side programming, game development and the creation of desktop and mobile applications. JavaScript is a prototype-based scripting language with dynamic typing and has first-class functions.

MONGODB-

MongoDB is source available cross-platform document oriented database program. Classified as a NOSQL database program, MongoDB uses JSON- like documents with optional schemas. MongoDB is developed by MongoDB Inc. MongoDB concepts are needed to create and deploy a highly scalable and performance-oriented database.

NODE.JS-

Node.js is an open-source, cross-platform JavaScript run-time environment that executes JavaScript code outside of a browser. Node.js lets developers use JavaScript to develop wide variety of applications like network applications, command line tools, web api, web applications.

HARDWARE REQUIREMENTS-

4 GB RAM

10 GB free space

Operating system- Windows 10 is used as the operating system as it is stable and supports

more features and is more user friendly.

TECHNOLOGIES USED-

Frontend

1. HTML5
2. CSS3
3. BOOTSTRAP 4
4. jQuery

Backend

1. MongoDB
2. Express.js
3. Node.js
4. Passport.js

INSTALL DEPENDENCIES-

Open git bash or command line tools at application file and run following npm command-

'npm install passport passport-local passport-local-mongoose body-parser connect-flash ejs express express-sanitizer express-session method-override mongoose multer sharp uuid – save'

RUNNING DEPENDENCIES-

- create a ``.env`` file in app directory
- add ``SESSION_SECRET=<your session secret>`, `ADMIN_SECRET=<your admin secret>`` and ``DB_URL=<your mongodb url>`` into that file.
- run ``npm run dev``
- App will open at [http://localhost:3000].

FUNCTIONALITIES-

Whole app is divided into three modules:

- Admin
- User
- Browse books

ADMIN MODULE FUNCTIONALITIES-

- Sign up
- Login
- Logout
- Track all users activities

- Add books
- Update books
- Delete books
- Search books by category, title, author, ISBN
- Find users by FirstName, LastName, email and username
- Delete user account
- Restrict individual user if violate any terms and conditions
- Send notification to all/individual/filtered user
- Browse books showcase
- Update admin profile and password
- Add new admin
- Delete currently logged in admin profile

USER MODULE FUNCTIONALITIES-

- Sign up
- Login
- Logout

- Track own activities
- Issue books
- Renew books
- Return books
- Pay fines (not ready yet, will be added asap)
- Browse books showcase
- Add, edit and delete comment on any books comment section
- Upload/Update profile picture
- Update profile and password
- Delete account

BROWSE MODULE FUNCTIONALITIES-

This module can be accessed by anyone

- Show all books
- Find books on filtered search

RESULT-

Thus the mini project for Online E-Book Management System has been successfully executed and codes are generated.

