GLOBAL ACADEMY OF TECHNOLOGY

DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING
(Accredited by NBA 2019-2022)
Rajarajeshwari Nagar, Bengaluru – 560 098
Academic Year: 2020 - 21

DBMS LABORATORY WITH MINI PROJECT: 18CSL58

PROJECT SYNOPSIS

Title of Project	**Department Library Management System**		
USN	**Name**		
1. 1GA18CS055 **2. 1GA18CS148**	**1. Divya Bhat N** **2. Sharan S**		
Domain	**Web Development**	**Group No:**	**1**
Project Title	**Construction of Real Time Working Website for Management of Department Library**		
Under taken at	**Global Academy of Technology**		
Guide Name	**Prof. Reshma S**		

ABSTRACT:

"Knowledge learnt is never a waste". A Library plays the most vital part in an Educational Institution. A library is a main element that thrives students to learn more about a particular subject. Digitalization is the next sensation. To encourage/improve digitalization, this project stands as an initiation. Bidding adieu to the process of data storing of library history in registers, it is time to implement a digitalised version of the same.

The website to be produced is on Department Library Management. Here, there are 3 users. They are The Admin, The Teachers and The Students. The Admin has access to all the data and can make necessary changes or add in entries of new book arrivals. The Teachers and Students can create their own personal accounts and make reservations of books online and then borrow it later from the Department. The Student Information stored include their Name, USN, Email ID, Date of Birth and a track of all the recently borrowed books along with any defaults made. All the data and history of the person is stored using their unique member ID such as the USN. The website also allows online payments in case of any damage made to the books or for various other reasons. Finally, if the person wishes to quit, they can De-register by simply deactivating their account.

OBJECTIVES:

- To create a website for Department Library of College using HTML, CSS, Python and SQL.
- To ensure safe and unmanipulated storage of data and keep tracks of available books.
- To ensure all activities are recorded and are untampered with.
- To eradicate the use of registers for data storage, thereby making this environment friendly.
- To create a user-friendly interface that does not require specific training.
- To encourage Digitalization.

INTRODUCTION ABOUT WEB DEVELOPMENT:

Web Development refers to building, creating, and maintaining websites. Web publishing, Web designing, Web programming and Database Management are the included aspects of Web development.

Web development involves mainly 3 persons with different tasks:
Web Designer only designs web interfaces using HTML and CSS.
Web Developer maybe involved in web designing, but also writes web scripts in languages such as PHP or ASP.
Database Administrator designs the backend and is responsible for the complete structure of data stored in the database.

A Database Administrator has access to the web files and scripts and can modify the programming to improve the structure of data storage in the database ***whereas*** *A Web Developer or A Web Designer does not have access to the Data in the Database.*

ABOUT SQL

SQL is a language to operate databases; it includes database creation, deletion, fetching rows, modifying rows, etc. SQL is an **ANSI** (American National Standards Institute) standard language, but there are many different versions of the SQL language.

SQL is Structured Query Language, which is a computer language for storing, manipulating and retrieving data stored in a relational database.
SQL is the standard language for Relational Database System. All the Relational Database Management Systems (RDMS) like MySQL, MS Access, Oracle, Sybase, Informix, Postgres and SQL Server use SQL as their standard database language.
Also, they are using different dialects, such as:

- MS SQL Server using T-SQL
- Oracle using PS/SQL

SQL is widely popular because it offers the following advantages:

1. Allows users to access data in the relational database management systems.
2. Allows users to describe the data.
3. Allows users to define the data in a database and manipulate that data.
4. Allows to embed within other languages using SQL modules, libraries & pre-compilers.
5. Allows users to create and drop databases and tables.
6. Allows users to create view, stored procedure, functions in a database.
7. Allows users to set permissions on tables, procedures and views.

REQUIREMENT SPECIFICATION:

Minimum Hardware Requirement specification:

1. Pentium III or better processor
2. 256 MB RAM
3. 10GB hard disk
4. 10 – 50 Mbps of Stable Network

Minimum Software Requirement Specification:

1. Operating System (Windows-XP or Higher)
2. Efficient Search Engine
3. SQL Server Edition

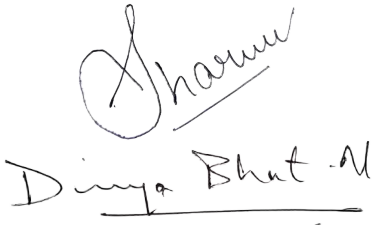
Functional and Non functional requirements:

Functional requirements:

1. Authentication – To ensure only owner is provided access
2. Searching for a Book or Article – To improve knowledge on a particular topic
3. Book marking a Book or Article – To prevent repeated searching of facinationg topics
4. Reservation of Books – To ensure confirmation on book borrowal
5. Account Details – To provide liberty to update personal information

Non-Functional requirements:

1. Performance – System efficiency must be fast and accurate for unexpected error handling
2. Safety – Must be 2 servers, one main server and one backup server
3. Security – Authentication and Validation of of members using their unique Member ID
4. Access – Complete access only to Admin and only Personal Account access to members



Signature of Student **Signature of Guide**