

Design Document

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PROJECT-1: LIBRARY MANAGEMENT SYSTEM

- Project implemented using Nodejs, Express framework, Javascript and MySQL. I've built the application in Window's OS.

- The schema has been made as per the schema given on elearning.

- Since it is not possible to set default values of "timestamp" in mysql to 0. Therefore I have set the default value (for the field of due_date) as: set date in default value=2018-02-20 01:12:17

- The files are in library>views folder in ".jade" format • I have made a copy of my GUI (without functionality) in a ".html" format with the name library_main.html outside the library main folder.

- The routes as well as the connections that have been made with MySQL have can be seen in library>app.js

- I have used the following versions of the languages mentioned above: o Nodejs: 6.11.3 o "body-parser": "^1.18.2", o "cookie-parser": "~1.4.3", o "debug": "~2.6.9", o "express": "~4.15.5", o "jade": "~1.11.0", o "morgan": "~1.9.0", o "serve-favicon": "~2.4.5" o MySQL: 5.7.20

- Dependencies are given in package.json in library folder

- In order to run this application, after you install all the software mentioned above.

- Start sql server from command prompt by putting in the user id and password.

- In command prompt, go to directory where your project is located. Type the following in command prompt : SET DEBUG=library:* & npm start Go to "http://127.0.0.1:3000/" in your browser and run the project.

- Please note that tinyint value of paid=0 means fine not paid and paid=1 means fine has been paid

- Besides implementing the basic schema, I have also added card_id column in fines table to better map the database to the GUI. This column gives the borrower's card-id number

- Besides implementing the basic schema, I have also added checked_in col in fines table to better map the database to the GUI. This column gives 'y' to indicate that the book for

which fine is being displayed has been checked into the system. Checked_in value of 'n' means that the book has not yet been returned to the library.

- Besides implementing the basic schema, I have also created table named "searchbook" to facilitate the functionality of searching a book. The following is a description of the searchbook table:

•	+	-----	+	-----	+	-----	+	-----	+	-----	+		
•		Field		Type		Null		Key		Default		Extra	
•	+	-----	+	-----	+	-----	+	-----	+	-----	+		
•		ISBN		varchar(10)		NO			NULL				
•		TITLE		varchar(500)		YES			NULL				
•		AuthorName		varchar(50)		YES			NULL				
•		AuthorID		int(11)		NO			NULL				
•		BookAvailability		varchar(3)		NO			No				
•	+	-----	+	-----	+	-----	+	-----	+	-----	+		