Project Design Phase-I

Solution Architecture
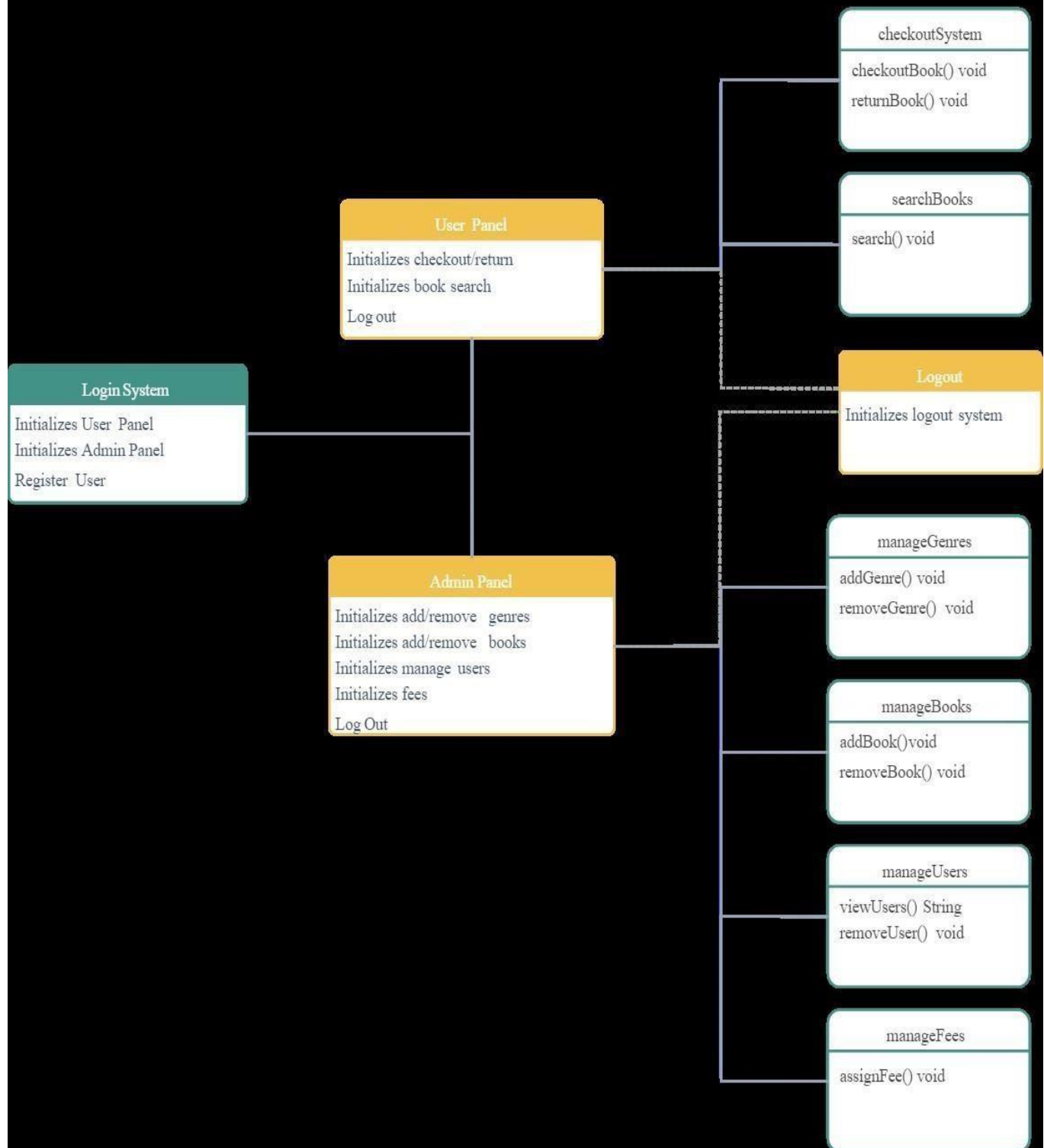
Date	28 October 2023
Team ID	NM2023TMID11814
Project Name	Blockchain Powered Library Management
Maximum Marks	4 Marks

Solution Architecture:

Solution architecture is a complex process – with many sub-processes – that bridges the gap between business problems and technology solutions. Its goals are to:

- Find the best tech solution to solve existing business problems.

- Describe the structure, characteristics, behavior, and other aspects of the software to project stakeholders.

- Define features, development phases, and solution requirements.

- Provide specifications according to which the solution is defined, managed, and delivered.

Library Management   System

checkoutSystem

checkoutBook() void
returnBook() void

searchBooks

search() void

User Panel

Initializes checkout/return
Initializes book search
Log out

Login System

Initializes User Panel
Initializes Admin Panel
Register User

Logout

Initializes logout system

Admin Panel

Initializes add/remove   genres
Initializes add/remove books
Initializes manage users
Initializes fees
Log Out

manageGenres

addGenre() void
removeGenre() void

manageBooks

addBook()void
removeBook() void

manageUsers

viewUsers() String
removeUser() void

manageFees

assignFee() void

Prerequisite

1 download node.js : Node.js

2 download vs code: **Li4nk**

3 download metamask : https://metamask.io/

Steps to complete the project Step 1:-

1. Open the Zip file and download the zip file.

Extract all zip files **Step**

2 :

1. Open vs code in the left top select open folder. Select extracted file and open . 2.

Select the projectname.sol file and copy the code.

3. Open the remix ide platform and create a new file by giving the name of projectname.sol and paste the code which you copied from vs code.

4. Click on solidity compiler and click compile the projectname.sol

5. Deploy the smart contract by clicking on the deploy and run transaction.

6. select injected provider - MetaMask. In environment

7. Click on deploy. Automatically MetaMask will open and give confirmation. You will get a pop up click on ok. 8. In the Deployed contract you can see one address copy the address.

9. Open vs code and search for the connector.js. In contract.js you can paste the address at the bottom of the code. In export const address.

10. Save the code.

Step 3:

open file explorer

1. Open the extracted file and click on the folder. 2.

Open src, and search for utiles.

3. You can see the frontend files. Select all the things at the top in the search bar by clicking alt+ A. Search for cmd

4. Open cmd enter commands npm install npm bootstrap npm start npm install –force

    npm install –g truffle truffle migrate npm start

5. It will install all the packages and after completing it will open {LOCALHOST IP ADDRESS} copy the address and open it to chrome so you can see the frontend of your project.