

Internet Technologies

Lab Assignment - 1

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19MCME05

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1 Question PDF Answers

The screenshots in this section will be addressing all the requirements sir asked in the Question pdf

1.1 Buyer and Shopkeeper Tables(1.a)

- ♣ I have two separate tables for buyers and shopkeepers.

```
Activities Terminal Nov 5 16:47
bhuvan@sunnyGo: ~/uoh/sem5/IT/labAss
MariaDB [itLabAss]> show tables;
+-----+
| Tables_in_itLabAss |
+-----+
| buyer
| cart
| cartView
| grocery_items
| shopkeeper
| transactions
+-----+
6 rows in set (0.001 sec)

MariaDB [itLabAss]> desc buyer;
+-----+-----+-----+-----+-----+
| Field | Type   | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+
| username | varchar(30) | NO | PRI | NULL |
| passwd | varchar(40) | NO | UNI | NULL |
| emailID | varchar(50) | YES | | NULL |
| buyer_name | varchar(40) | YES | | NULL |
| address | varchar(500) | YES | | NULL |
+-----+-----+-----+-----+-----+
5 rows in set (0.003 sec)

MariaDB [itLabAss]> desc shopkeeper;
+-----+-----+-----+-----+-----+
| Field | Type   | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+
| username | varchar(30) | NO | PRI | NULL |
| passwd | varchar(50) | NO | | NULL |
| shopkeeper_name | varchar(30) | YES | | NULL |
+-----+-----+-----+-----+-----+
3 rows in set (0.003 sec)
```

- ♣ A buyer can sign up to my E-Grocery Store, if he/she want's to buy goods. Whereas a shopkeeper can be added by admin only. I didn't have shopkeeper sign up form in the main page because for security reasons, a buyer can sign up as shopkeeper and can change the information.
- ♣ The url I provided for a buyer is <http://localhost:8080/ITLabAssignment/Client>. If the buyer already logged and session is not expired then the buyer will be redirected to <http://localhost:8080/ITLabAssignment/shop.jsp>. If the buyer is new user or the session expired then the buyer will be redirected to <http://localhost:8080/ITLabAssignment/main.jsp> where the buyer can **Sign Up** if the buyer is a new user, or the buyer can **Login** if the buyer is my customer.
The <http://localhost:8080/ITLabAssignment/main.jsp> page will look like as follows,

Activities Firefox ESR Nov 5 17:10

E-Grocery Store + localhost:8080/ITLabAssignment/main.jsp

NLEGS Shop SignUp Login Contact

Welcome to our e-grocery Store. You need not stand in a line to take your items home, we will deliver your items to your home. You just have to sign up and add items to your Cart and check. Isn't that easy?



Upto 50% Off On Prepared foods

localhost:8080/ITLabAssignment/main.jsp#signup Activities Firefox ESR Nov 5 17:11

E-Grocery Store + localhost:8080/ITLabAssignment/main.jsp

Caption Text

Delivery

- We deliver your items at your doorstep
- Free delivery for orders above 500/-

Member Ship offers

- 6 months member ship at just 499/-
- Higher discount on selected items

Contact:

Thank you for visiting us web site.
Hope you had/having the smooth experience.
For more information, kindly do not hesitate to contact us:

- Name: Uppalapu Bala Bhuvan Varma
- Email: 19mcm05@uohyd.ac.in
- Phone no: 9618538149
- Position: Website handler

- ♣ When user clicks **Sign Up** the sign up form will pop up,

The screenshot shows a Firefox browser window with a yellow 'Sign Up Form' dialog box overlaid on the main content. The dialog box has a title 'Sign Up Form' with a close button 'x'. It contains five input fields:

- User Name: Enter your username
- Password: atleast 8 characters
- Email: example@gmail.com
- Name: Name of the Buyer
- Address: enter your address, eg: plotno:xxx, yyyy colony, near zzzz, Hyderabad

A green 'SignUp' button is at the bottom of the dialog.

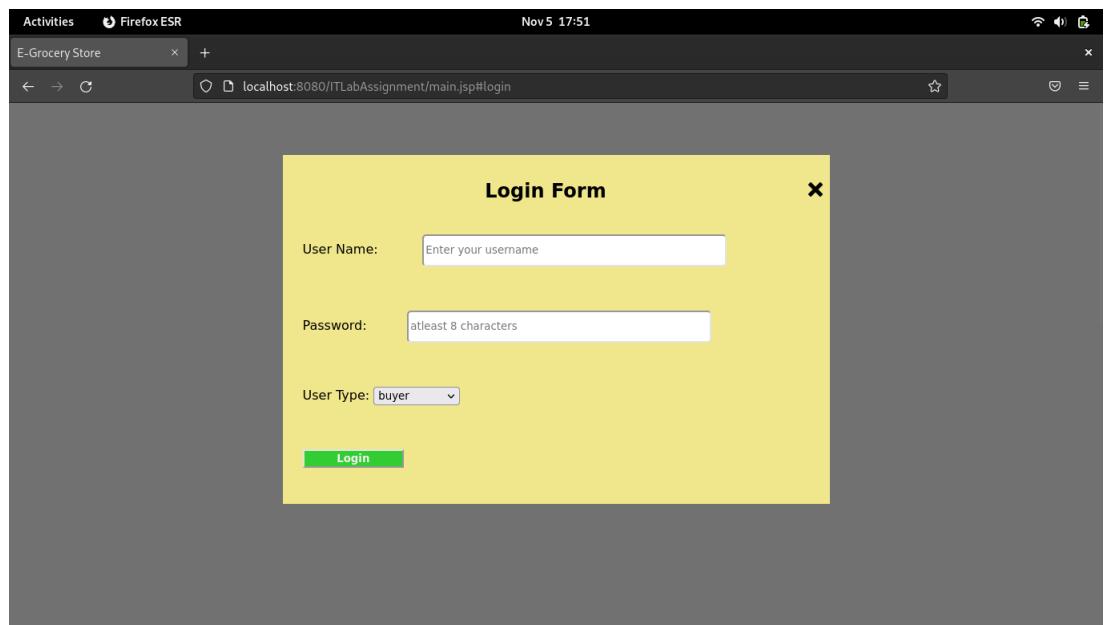
- ♣ The buyer can register here. If all the fields are correctly filled, form validation is done using Java Script. I will provide the screenshots of javascript validation at the end of this pdf. On registering I will store the buyer information in the **buyer** table in the Data Base.
- ♣ The shopkeeper registration is done by admin. The URL to Admin page is known to admin only. The admin can add shopkeeper by adding his information in the following form,

The screenshot shows a Firefox browser window with the title bar "Activities Firefox ESR" and the address bar "localhost:8080/ITLabAssignment/Admin.jsp". The main content area displays a dark-themed web application with a header "NLEGS". Below the header, there's a modal dialog titled "Add Shop Keeper" with three input fields: "User Name" (placeholder "Enter your username"), "Password" (placeholder "atleast 8 characters"), and "Name" (placeholder "Name of the Shop Keeper"). At the bottom of the modal is a green "Add" button. Above the modal, there are two buttons: "Add Shopkeeper" and "Delete ShopKeeper". The footer of the page has a green bar with the text "Contact:".

- ♣ Both buyer and shopkeeper will **Login** using a single form, there he/she has to select whether he/she is a shopkeeper or a buyer. Accordingly I will check the respective table in the database for the matching username and password. If the information he/she entered is correct. It will direct to the shop.jsp page, according to the user type, i.e **Buyer** or **Shopkeeper** the relevant things will be shown.

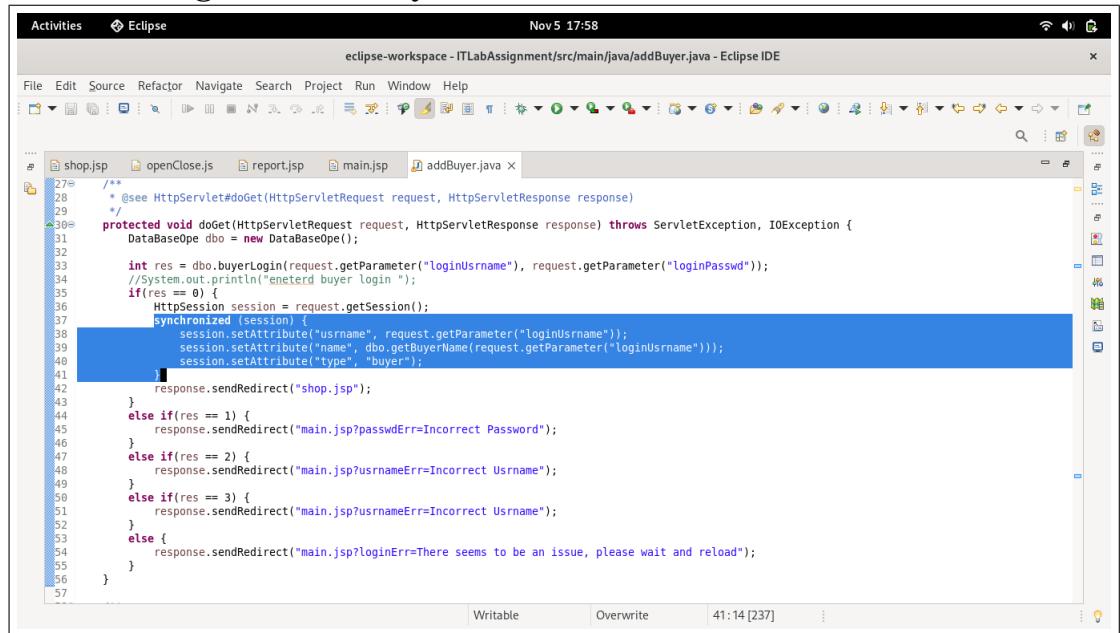
For eg: A shopkeeper will not buy items, so he doesn't have access to add to cart option. However shopkeeper can add new items, update items, get report etc. Similarly, a Buyer will not be able to see update, add items, report buttons.

However he can add items to the cart and checkout.



1.2 Sessions (1.b)

★ I used `request.getSession()` to simulate session management. I add the session after verifying the user entered information in login form with that of DataBase and they match. The following is the screenshot of the code where I used **sessions**. The following is the for buyer,



The screenshot shows the Eclipse IDE interface with the title bar "Activities Eclipse" and the date "Nov 5 17:58". The active window is titled "eclipse-workspace - ITLabAssignment/src/main/java/addBuyer.java - Eclipse IDE". The menu bar includes File, Edit, Source, Refactor, Navigate, Project, Run, Window, Help. The toolbar has various icons for file operations. The code editor displays Java code for handling a buyer login. A blue rectangular selection highlights the following code block:

```
    ...
27  /*
28  * @see HttpServlet#doGet(HttpServletRequest request, HttpServletResponse response)
29  */
30 protected void doGet(HttpServletRequest request, HttpServletResponse response) throws ServletException, IOException {
31     DataBaseOpe dbo = new DataBaseOpe();
32
33     int res = dbo.buyerLogin(request.getParameter("loginUsername"), request.getParameter("loginPasswd"));
34     //System.out.println("entered buyer login ");
35     if(res == 0) {
36         HttpSession session = request.getSession();
37         synchronized (session) {
38             session.setAttribute("username", request.getParameter("loginUsername"));
39             session.setAttribute("name", dbo.getBuyerName(request.getParameter("loginUsername")));
40             session.setAttribute("type", "buyer");
41         }
42         response.sendRedirect("shop.jsp");
43     }
44     else if(res == 1) {
45         response.sendRedirect("main.jsp?passwdErr=Incorrect Password");
46     }
47     else if(res == 2) {
48         response.sendRedirect("main.jsp?usrnameErr=Incorrect Username");
49     }
50     else if(res == 3) {
51         response.sendRedirect("main.jsp?usrnameErr=Incorrect Username");
52     }
53     else {
54         response.sendRedirect("main.jsp?loginErr=There seems to be an issue, please wait and reload");
55     }
56 }
57
```

The status bar at the bottom shows "Writable", "Overwrite", "41:14 [237]", and a timestamp "41:14 [237]".

★ The sessions for shopkeeper is following,

```

Activities Eclipse Nov 5 18:02
eclipse-workspace - ITLabAssignment/src/main/java/AddShopKeeper.java - Eclipse IDE
File Edit Source Refactor Navigate Search Project Run Window Help
shop.jsp openClose.js report.jsp main.jsp addBuyer.java login.java AddShopKeeper.java
...
super();
// TODO Auto-generated constructor stub
}

/**
 * @see HttpServlet#doGet(HttpServletRequest request, HttpServletResponse response)
 */
protected void doGet(HttpServletRequest request, HttpServletResponse response) throws ServletException, IOException {
    // TODO Auto-generated method stub
    ShopKeeper sk = new ShopKeeper();
    int ans = sk.login(request.getParameter("loginUsername"),request.getParameter("loginPasswd"));
    if(ans == 0) {
        HttpSession session = request.getSession();
        synchronized (session) {
            session.setAttribute("username", request.getParameter("loginUsername"));
            session.setAttribute("name", sk.getShopkeeperName(request.getParameter("loginUsername")));
            session.setAttribute("type", "shpkp");
        }
        response.sendRedirect("shop.jsp");
    } else if(ans == 1) {
        response.sendRedirect("main.jsp?usrnameErr=Incorrect User Name");
    } else if(ans == 2) {
        response.sendRedirect("main.jsp?passwdErr=Incorrect Password");
    } else {
        response.sendRedirect("main.jsp?loginErr=Error at Server Side. Please try again.");
    }
}
...

```

- ★ The user can enter the shop page with out logging in. But he/she cannot do anything, other than going through the grocery items. They cannot add to cart, update, etc.

Activities Google Chrome Nov 6 11:33

localhost:8080/ITLabAssignment/shop.jsp

NLEGS

Hello, Welcome User

Show-Items: 10

Item	Name	Description	Stock Available	Price	Category	Cart
	snack	Good Day Biscuit	Butter Cookies 53 gm	27	10.0	
	snack	Good Day Biscuit	Butter Cookies 120 gm	34	30.0	

- ★ When a client logged in as a buyer then he can add to cart and check the cart etc.

Activities Google Chrome Nov 6 11:34
 localhost:8080/ITLabAssignment/shop.jsp

NLEGS Logout Contact

Hello, Welcome Back Bhuvan
 Add Items to your Cart

Show-Items: 10 search by item name

Item	Name	Description	Stock Available	Price	Category	Cart
	snack	Good Day Biscuit	Butter Cookies 53 gm	27	10.0	<input type="button" value="1"/> <input type="button" value="Add"/>
	snack	Good Day Biscuit	Butter Cookies 120 gm	34	30.0	<input type="button" value="1"/> <input type="button" value="Add"/>

- ★ When a client logged in as a Shopkeeper, then he/she can update items, add items, get report etc.

Activities Google Chrome Nov 6 11:35
 localhost:8080/ITLabAssignment/shop.jsp

NLEGS Logout Contact

Hello, Welcome Back Killua

Show-Items: 10 search by item name

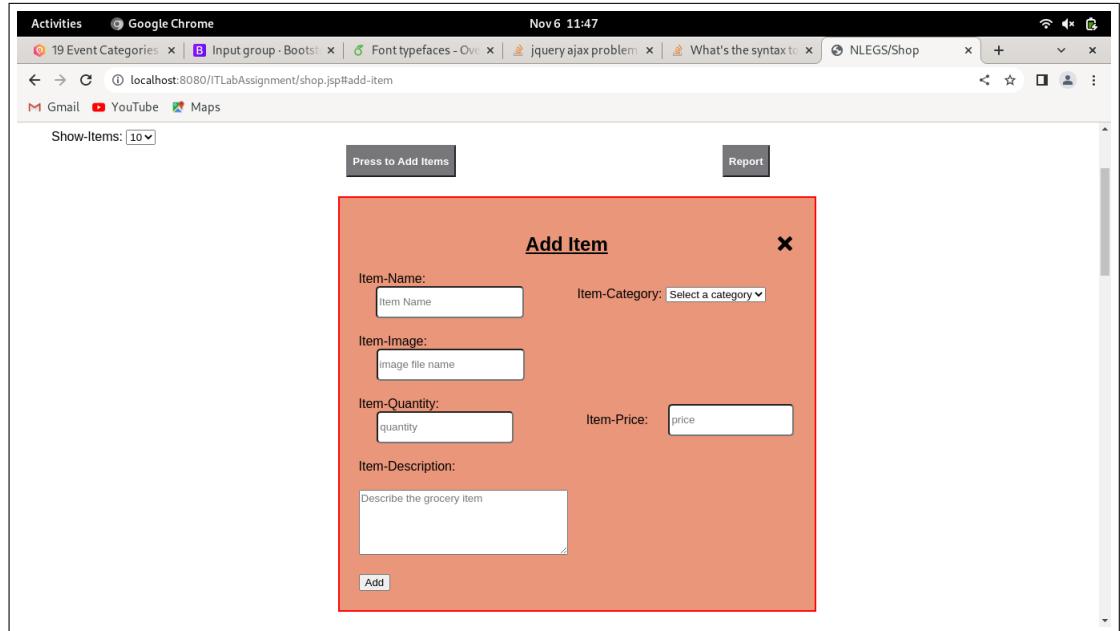
Item	Name	Description	Stock Available	Price	Category	Cart
	snack	Good Day Biscuit	Butter Cookies 53 gm	27	10.0	<input type="button" value="1"/> <input type="button" value="Update"/>
	snack	Good Day Biscuit	Butter Cookies 120 gm	34	30.0	<input type="button" value="1"/> <input type="button" value="Update"/>

- ★ To display their name, on the shop page I used sessions. If he/she didn't login they just **User** is displayed.

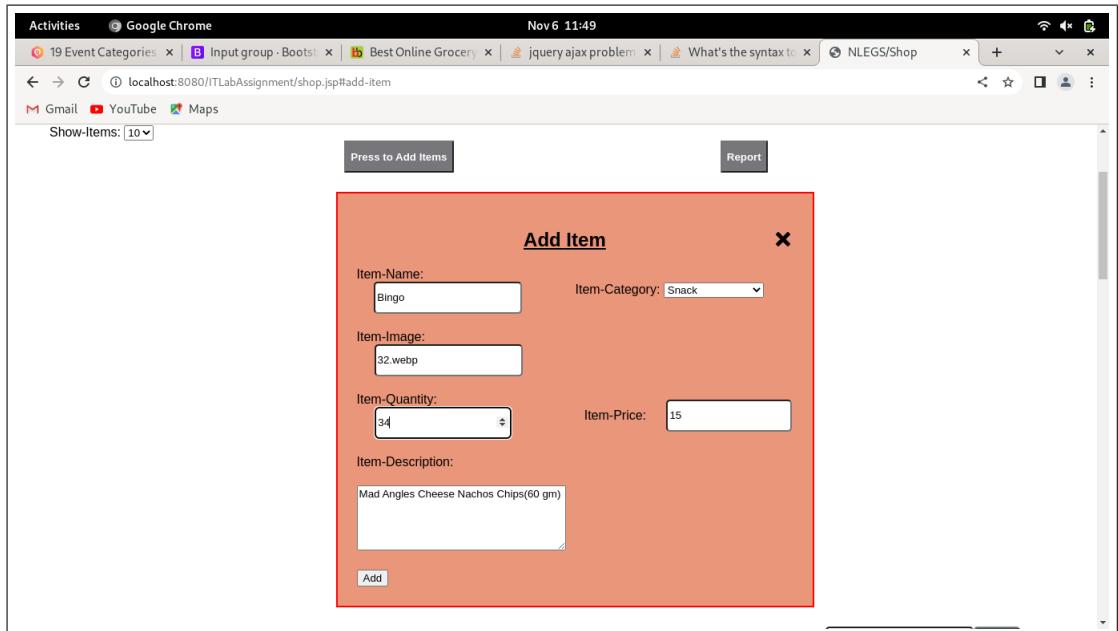
1.3 Shopkeeper(1.c)

As you can see from shopkeeper login screenshot in previous subsection, the shopkeeper can add new items or update the stock of the current items .

↳ Clicking the **Press to Add items** button, will display a form. Submitting the form will prompt a respective message in the page.



↳ Entering the values in the field.



- On submitting the form, A response message is printed on the screen. I also searched for bingo to show the added item in my list.

Successfully Added the item.							
Item	Name	Description	Stock Available	Price	Category	Cart	
	Snack	Bingo	Mad Angles - Pizza Flavour, Corn-Based Crunchy Chips, Perfect For Snacking	68	10.0	<input type="button" value="1"/> <input type="button" value="Update"/>	
	Snack	Bingo	Mad Angles Cheese Nachos Chips(60 gm)	34	15.0	<input type="button" value="1"/> <input type="button" value="Update"/>	

- The grocery item details is stored in Data Base in **grocery_items** table. Where **item_id** is the primary key.

```

Activities Terminal Nov 6 11:56
bhuvan@sunnyGo: ~/uoh/sem5/IT/labAss
MariaDB [itLabAss]> show tables;
+-----+
| Tables_in_itLabAss |
+-----+
| buyer
| cart
| cartView
| grocery_items
| shopkeeper
| transactions
+-----+
6 rows in set (0.001 sec)

MariaDB [itLabAss]> desc grocery_items;
+-----+-----+-----+-----+-----+-----+
| Field | Type   | Null | Key | Default | Extra       |
+-----+-----+-----+-----+-----+-----+
| item_id | int(11) | NO   | PRI | NULL    | auto_increment |
| item_category | varchar(30) | YES  |     | NULL    |                |
| item_name | varchar(40) | NO   |     | NULL    |                |
| item_desc | varchar(500) | YES  |     | NULL    |                |
| item_stock | int(11)  | NO   |     | NULL    |                |
| item_price | decimal(7,2) | NO   |     | NULL    |                |
| item_img | varchar(200) | YES  |     | NULL    |                |
+-----+-----+-----+-----+-----+-----+
7 rows in set (0.004 sec)

MariaDB [itLabAss]>

```

1.4 Buyer (1.d)

The displaying items, searching, showing items in cart. I implemented these things using AJAX

- Immediately after loading the shop page, by default the buyer can see 10 items per page.

The screenshots demonstrate the implementation of an AJAX-based shopping cart system. The first screenshot shows a list of snacks with two items visible. The second screenshot shows a list of snacks with four items visible. The third screenshot shows a list of personal care items with four items visible. Each item has a thumbnail, name, description, stock available, price, category, and an 'Add' button.

Item	Name	Description	Stock Available	Price	Category	Cart
	snack	Good Day Biscuit Butter Cookies 53 gm	27	10.0		<input type="button" value="1"/> <input type="button" value="Add"/>
	snack	Good Day Biscuit Butter Cookies 120 gm	34	30.0		<input type="button" value="1"/> <input type="button" value="Add"/>
	snack	Good Day Biscuit Pista Badam Cookies 53 gm	59	10.0		<input type="button" value="1"/> <input type="button" value="Add"/>
	snack	Lays Potato Chips Hot & Sweet Chilly Flavour	57	10.0		<input type="button" value="1"/> <input type="button" value="Add"/>
	Snack	Lays Potato Chips - Calm Cream & Onion Flavour	63	15.0		<input type="button" value="1"/> <input type="button" value="Add"/>
	Snack	Bingo Mad Angles - Pizza Flavour, Corn-Based Crunchy Chips, Perfect for Snacking	68	10.0		<input type="button" value="1"/> <input type="button" value="Add"/>
	Personal Use	Medimix Soap Bathing Soap - Ayurvedic Soap with 18 herbs	47	65.0		<input type="button" value="1"/> <input type="button" value="Add"/>
	Personal Use	TRESEmmé Hair Fall Defense Pro Collection Shampoo - with Keratin Protein, Upto 97% Less Hair Breakage After 1 Wash	59	300.0		<input type="button" value="1"/> <input type="button" value="Add"/>
	Personal Use	Himalaya Shampoo Anti-Hair Fall Shampoo	40	278.0		<input type="button" value="1"/> <input type="button" value="Add"/>
	Personal Use	Dove Shampoo Nutritive Solutions Daily Shine Shampoo - For Dull Hair	50	599.0		<input type="button" value="1"/> <input type="button" value="Add"/>

→ He can select items per page. The options I have given are 5, 10 15, and 20. On selecting 5.

The screenshot shows a web browser window with the title 'NLEGS' at the top. Below it, a message says 'Hello, Welcome Back Bhuvan' and 'Add Items to your Cart'. A dropdown menu 'Show-Items: 5' is selected. There is a search bar with placeholder 'search by item name' and a 'Search' button. The main content area displays a table of snack items:

Item	Name	Description	Stock Available	Price	Category	Cart
	snack	Good Day Biscuit	Butter Cookies 53 gm	27	10.0	<input type="button" value="1"/> Add
	snack	Good Day Biscuit	Butter Cookies 120 gm	34	30.0	<input type="button" value="1"/> Add
	snack	Good Day Biscuit	Pista Badam Cookies 53 gm	59	10.0	<input type="button" value="1"/> Add
	snack	Lays	Potato Chips Hot & Sweet Chilly Flavour	57	10.0	<input type="button" value="1"/> Add
	Snack	Lays	Potato Chips - Calm Cream & Onion Flavour	63	15.0	<input type="button" value="1"/> Add

At the bottom, there are navigation links: «, 1, 2, 3, 4, 5, 6, 7, ».

Contact:

Thank you for visiting us web site.

- He can search for items by their names. The search is case-insensitive. On searching for **maggi** and see that currently show 5 items per page option is selected .

The screenshot shows a Firefox browser window with the address bar set to `localhost:8080/ITLabAssignment/shop.jsp`. The page title is "NLEGS". The main content area displays a search result for "Hello, Welcome Back Bhuvan" with the sub-instruction "Add Items to your Cart". A dropdown menu "Show-Items: 5" is visible. A search input field contains "maggi" and a "Search" button. Below this, a table lists five items from the "Prepared Food" category, all labeled "Maggi". The items are:

Item	Name	Description	Stock Available	Price	Category	Cart
	Prepared Food	Maggi	2-Minute Instant Masala Noodles - Made With Quality Spices, Goodness Of Iron(560 gm pouch)	70	97.0	<input type="button" value="1"/> Add
	Prepared Food	Maggi	2 Minute Instant Noodles - Veggie Masala, Made With Quality Spices, Rich In	80	47.0	<input type="button" value="1"/> Add
	Prepared Food	Maggi	Cheese Macaroni Pazzta (70 gm)	68	28.0	<input type="button" value="1"/> Add
	Prepared Food	Maggi	Pazzta Masala Penne (65 gm)	76	28.0	<input type="button" value="1"/> Add
	Prepared Food	Maggi	Pazzta Instant Pasta - Cheesy Tomato Twist (64 gm)	64	28.0	<input type="button" value="1"/> Add

At the bottom of the table, there is a navigation bar with links for «, 1, 2, ».

Contact:

Thank you for visiting us web site.

→ On selecting page 2, we get the list from next page.

	Prepared Food	Maggi	Pazzta Instant Pasta - Mushroom Penne(64 gm)	54	28.0	<input type="button" value="1"/> <input type="button" value="Add"/>
	Prepared Food	Maggi	Nutri-Licious Masala Veg Atta Noodles - Herbs & Spice Blend, Iron & Fibre Rich(260 gm pouch)	42	86.0	<input type="button" value="1"/> <input type="button" value="Add"/>
	Prepared Food	Maggi	Pichkoo - Rich Tomato Ketchup, Tangy Flavour(80 gm pouch)	25	15.0	<input type="button" value="1"/> <input type="button" value="Add"/>
	Prepared Food	Maggi	Rich Tomato Ketchup - Versatile Condiment, For Savoury, Salted Snacks	22	122.0	<input type="button" value="1"/> <input type="button" value="Add"/>

« 1 2 »

1.5 Buyer Cart (1.e)

I am storing the cart along with user information in a table in Data Base.

- ⇒ Clicking the cart symbol in the navigation bar, will display cart. Currently the cart is empty.

The screenshot shows a web browser window for Firefox ESR. The address bar indicates the URL is `localhost:8080/ITLabAssignment/shop.jsp#cart`. The page title is "NLEGS". A "Logout" link and a "Contact" link are visible in the top right. A modal window titled "Your Cart!" is open, displaying a message "Hello, Welcome to NLEGS! Add Items to your cart." Below the message is a search bar with the placeholder "Search". A dropdown menu "Show-Items: 10" is also present. The main content area shows a table of items in the cart:

Item	Name	Description	Stock A	CheckOut
	snack	Good Day Biscuit Butter Cookies 53 gm	27	10.0 <input type="button" value="1"/> <input type="button" value="Add"/>
	snack	Good Day Biscuit Butter Cookies 120 gm	34	30.0 <input type="button" value="1"/> <input type="button" value="Add"/>

- ⌚ Adding an item and checking the cart again will show added items in cart.

The screenshot shows a Firefox browser window with the URL `localhost:8080/ITLabAssignment/shop.jsp?msg=1 successfully added to cart.#cart`. The page title is "NLEGS". A modal window titled "Your Cart!" displays a single item: "JELLY FISH PACK" (Qty: 4, Price: 388.0) with a "Delete" button. Below the modal, a green bar says "1 successfully". At the bottom, there are "CheckOut" and "search" buttons. The main content area shows a table of items, with one row highlighted for "Butter Cookies" (Qty: 1, Price: 10.0) with an "Add" button.

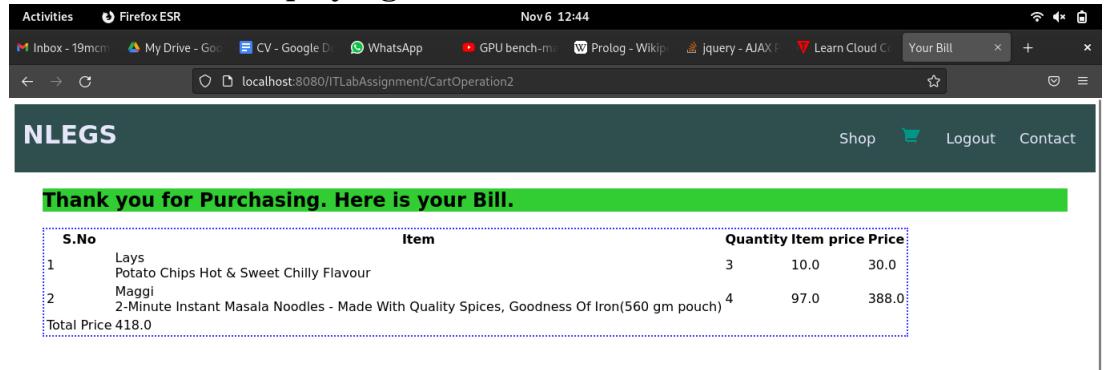
Item	Name	Description	Stock Available	Price	Category	Cart
	snack	Good Day Biscuit Butter Cookies 53 gm	27	10.0		<input type="button" value="1"/> Add

- ⌚ Adding another item and will reflect the cart. We can delete the items also.

The screenshot shows a Firefox browser window with the same URL and title. The "Your Cart!" modal now contains two items: "Lays" (Qty: 3, Price: 30.0) and "JELLY FISH PACK" (Qty: 4, Price: 388.0), each with a "Delete" button. A green bar says "1 successfully". The main content area shows the same table of items, with the "Butter Cookies" row still highlighted and its "Add" button visible.

Item	Name	Description	Stock Available	Price	Category	Cart
	snack	Good Day Biscuit Butter Cookies 53 gm	27	10.0		<input type="button" value="1"/> Add

- On checking out, we are redirected to a new page where the bill details are displaying.



The screenshot shows a Firefox browser window with the title bar indicating 'Nov 6 12:44'. The address bar shows the URL 'localhost:8080/ITLabAssignment/CartOperation2'. The main content area has a dark header with 'NLEGS' on the left and navigation links 'Shop', 'Logout', and 'Contact' on the right. Below the header, a green banner says 'Thank you for Purchasing. Here is your Bill.' A table follows, showing the purchase details:

S.No	Item	Quantity	Item price	Price
1	Lays Potato Chips Hot & Sweet Chilly Flavour	3	10.0	30.0
2	Maggi 2-Minute Instant Masala Noodles - Made With Quality Spices, Goodness Of Iron(560 gm pouch)	4	97.0	388.0
Total Price		418.0		

- I used `Connection.setAutoCommit(false)` and `Connection.commit()`. To make sure the database connections happens while checking out happen atomically. I implemented transaction in java servlet. Please look at my **CartOperation2** servlet.

1.6 Transactions table(1.f)

I created transactions table in the Data Base where I will store all the transactions of the buyers.

- ▷ The schema of transactions table is as follows,

```
Activities Terminal Nov 6 14:22
bhuvan@sunnyGo: ~/uoh/sem5/IT/labAss
MariaDB [itLabAss]> show tables;
+-----+
| Tables_in_itLabAss |
+-----+
| buyer           |
| cart            |
| cartView        |
| grocery_items   |
| shopkeeper      |
| transactions    |
+-----+
6 rows in set (0.001 sec)

MariaDB [itLabAss]> desc transactions;
+-----+-----+-----+-----+-----+-----+
| Field      | Type       | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| buyer_username | varchar(30) | NO   |   | NULL    |       |
| item_id     | int(11)    | NO   |   | NULL    |       |
| qty_bought   | int(11)    | NO   |   | NULL    |       |
| item_price   | decimal(7,2) | NO   |   | NULL    |       |
| tot_price    | decimal(8,2) | NO   |   | NULL    |       |
| trans_date   | date       | YES  |   | NULL    |       |
+-----+-----+-----+-----+-----+-----+
6 rows in set (0.004 sec)

MariaDB [itLabAss]>
```

- ▷ I synchronized the sessions and as well as Connection.setAutoCommit(false) and Connection.commit() to avoid race conditions and maintain the atomicity of instructions related to cart checkout. Please go through **addBuyer.java**, **AddShopKeeper.java**, and **Cart-Operation2.java** files in my project.

1.7 ShopKeeper Forms(1.g)

I have relevant forms for shopkeeper. He can get reports by pressing the Report button in shop page.

⇒ By pressing the report button, report form will be displayed. The shopkeeper can enter,

1. Buyer Username, and can get all the orders/transactions done by that particular user.
2. Specific dates, and get all the orders/transactions between the dates.
3. Both Buyer Username and Specific Dates. To get transactions of that particular user between the given dates.

⇒ The transactions that happened until now are

```
MariaDB [itLabAss]> select * from transactions;
+-----+-----+-----+-----+-----+
| buyer_usrname | item_id | qty_bought | item_price | tot_price | trans_date |
+-----+-----+-----+-----+-----+
| Bala          | 5       | 3           | 15.00    | 45.00     | 2022-11-05 |
| Bala          | 1       | 3           | 10.00    | 30.00     | 2022-11-05 |
| Bala          | 2       | 4           | 30.00    | 120.00    | 2022-11-05 |
| Bala          | 1       | 3           | 10.00    | 30.00     | 2022-11-05 |
| Bala          | 1       | 3           | 10.00    | 30.00     | 2022-11-06 |
| Bala          | 4       | 3           | 10.00    | 30.00     | 2022-11-06 |
| Bala          | 16      | 3           | 97.00    | 291.00    | 2022-11-06 |
| Bala          | 4       | 3           | 10.00    | 30.00     | 2022-11-06 |
| Bala          | 16      | 4           | 97.00    | 388.00    | 2022-11-06 |
| Bala          | 1       | 3           | 10.00    | 30.00     | 2022-11-06 |
| Monkey D Luffy | 2       | 2           | 30.00    | 60.00     | 2022-11-06 |
| Monkey D Luffy | 3       | 3           | 10.00    | 30.00     | 2022-11-06 |
| Monkey D Luffy | 7       | 5           | 65.00    | 195.00    | 2022-11-06 |
+-----+-----+-----+-----+-----+
13 rows in set (0.001 sec)

MariaDB [itLabAss]>
```

⇒ Getting the report of transactions that happened between 06-11-2022 to 14-11-2022.

The screenshot shows a web application interface. At the top, there is a navigation bar with various links and a search bar. Below it, a modal dialog box titled "Report" is open, prompting the user for "Buyer User Name", "from Date" (set to 06/11/2022), and "to Date" (set to 14/11/2022). A "Get Report" button is at the bottom of the dialog. Below the dialog, there is a table header with columns: Item, Name, Description, Stock Available, Price, Category, and Cart. Underneath the header, a table displays transaction data. The table has a green header row and contains the following data:

User	Item ID	Quantity	Total Price	Transaction Date
Bala	1	3	30.0	2022-11-06
Bala	4	3	30.0	2022-11-06
Bala	16	3	291.0	2022-11-06
Bala	4	3	30.0	2022-11-06
Bala	16	4	388.0	2022-11-06
Bala	1	3	30.0	2022-11-06
Monkey D Luffy	2	2	60.0	2022-11-06
Monkey D Luffy	3	3	30.0	2022-11-06
Monkey D Luffy	7	5	195.0	2022-11-06

At the bottom of the page, there is a "Contact" section with a "Thank you" message, contact information, and a list of team members:

Contact:

Thank you for visiting us web site.
Hope you had/having the smooth experience.
For more information, kindly do not hesitate to contact us:

- Name: Uppalapu Bala Bhuvan Varma
- Email: 19mcme05@uohyd.ac.in
- Phone no: 9618538149
- Position: Website handler

⇒ Getting the report of transactions done by a user with user-name **Monkey D Luffy** 06-11-2022 to 14-11-2022.

The screenshot shows a web browser window with two main sections. The top section displays a modal dialog titled "Report" with fields for "Buyer User Name" (set to "Monkey D Luffy"), "from Date" (empty), "to Date" (empty), and a "Get Report" button. The bottom section shows a table of transaction history with columns: Item, Name, Description, Stock Available, Price, Category, and Cart. A second browser window below it shows the URL `localhost:8080/ITLabAssignment/report.jsp?buyerUsername=Monkey+D+Luffy&fromDate=&toDate=`. The table data is as follows:

User	Item ID	Quantity	Total Price	Transaction Date
Monkey D Luffy	2	2	60.0	2022-11-06
Monkey D Luffy	3	3	30.0	2022-11-06
Monkey D Luffy	7	5	195.0	2022-11-06

- ⇒ Getting the report of transactions done by buyer with user-name **Bala** and happened between 06-11-2022 to 07-11-2022.

The screenshot shows a Firefox browser window with the URL `localhost:8080/ITLabAssignment/shop.jsp#report`. A modal dialog box titled "Report" is displayed, asking for "Buyer User Name" (Bala), "from Date" (06/11/2022), and "to Date" (07/11/2022). Below the dialog is a shopping cart table:

Item	Name	Description	Stock Available	Price	Category	Cart
	snack	Good Day Biscuit	Butter Cookies 53 gm	21	10.0	<input type="button" value="1"/> <input type="button" value="Update"/>

The screenshot shows a Firefox browser window with the URL `localhost:8080/ITLabAssignment/report.jsp?buyerUsername=Bala&fromDate=2022-11-06&toDate=2022-11-07`. The page title is "NLEGS". It displays a table of transactions:

User	Item ID	Quantity	Total Price	Transaction Date
Bala	1	3	30.0	2022-11-06
Bala	4	3	30.0	2022-11-06
Bala	16	3	291.0	2022-11-06
Bala	4	3	30.0	2022-11-06
Bala	16	4	388.0	2022-11-06
Bala	1	3	30.0	2022-11-06

Contact:

Thank you for visiting us web site.
Hope you had/having the smooth experience.
For more information, kindly do not hesitate to contact us:

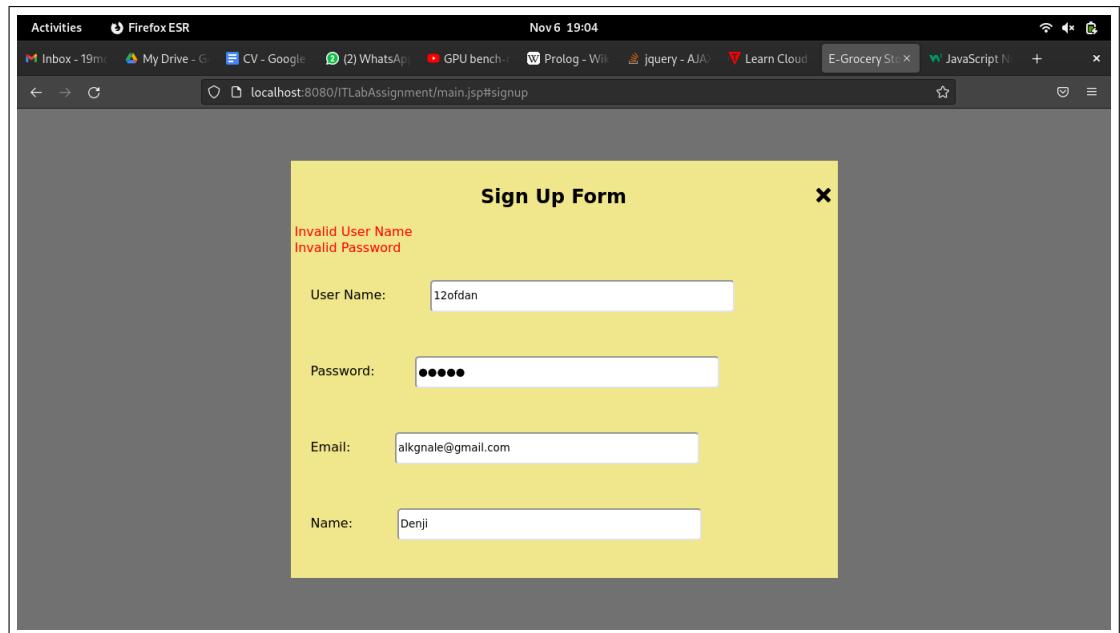
- Name: Uppalapu Bala Bhuvan Varma
- Email: 19mcme05@uohyd.ac.in
- Phone no: 9618538149
- Position: Website handler

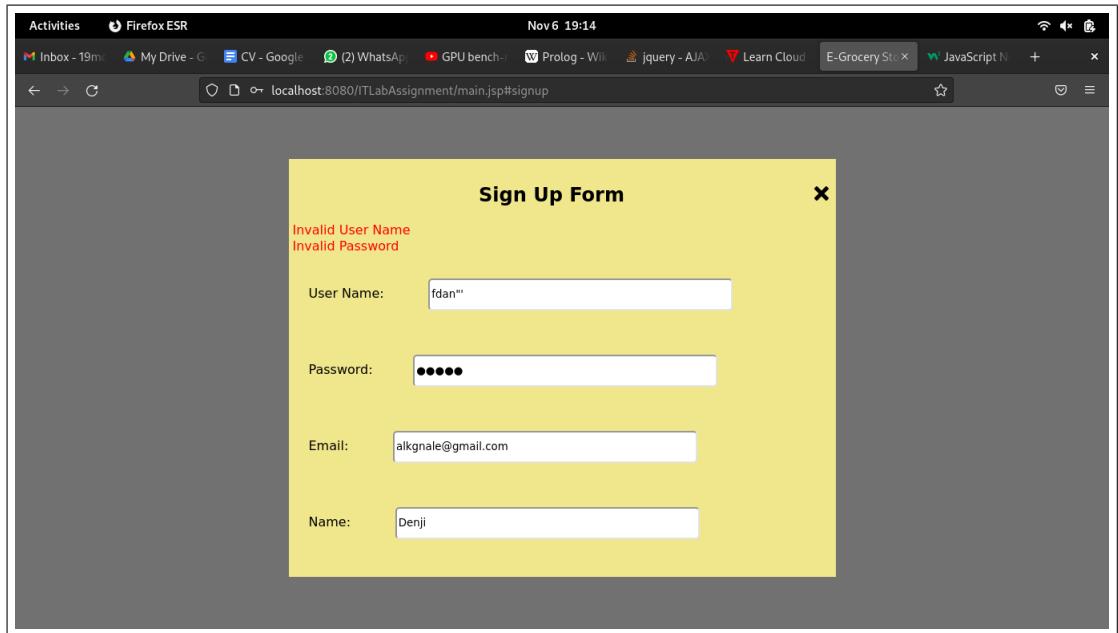
- ⇒ Please note that both dates are inclusive.

2 Non-functional Requirements

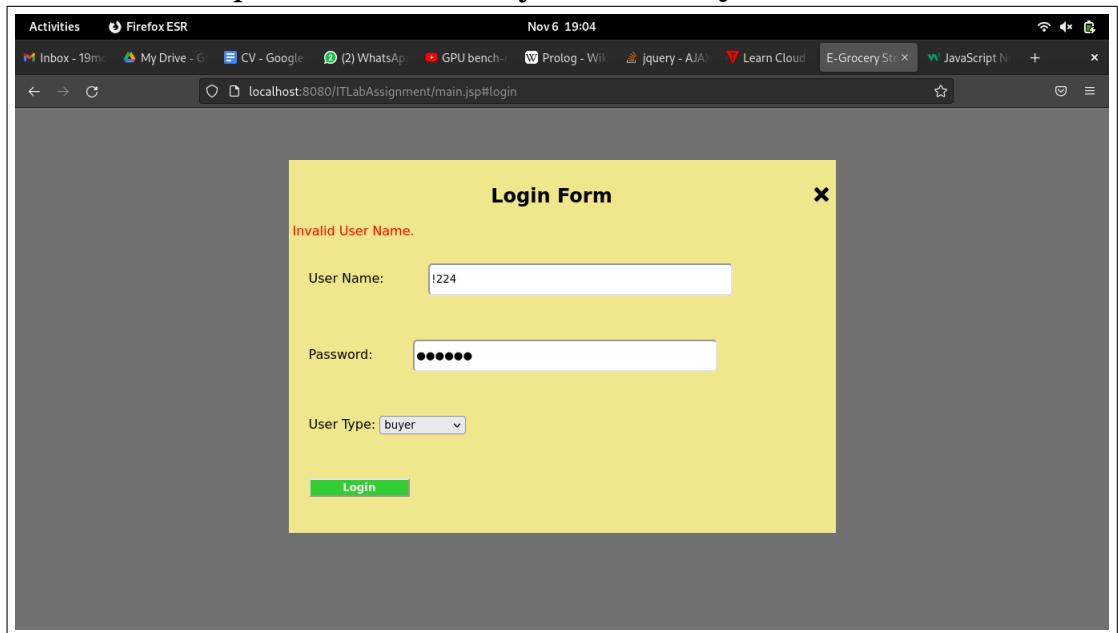
2.1 Java Script Validation

- ♣ All relevant forms like signUp and Login are validated using JavaScript only. And some checking with DataBase is also done in server side. i.e If they used valid characters then I checked buyer and shopkeeper tables respectively.
- ♣ In Buyer Sign Up form, I am checking the following.
 1. A username should always start with either alphabet or underscore. Quotes (‘,’), colon, semicolon, addition, subtraction, multiplication, division, these characters are not allowed to use in username. For eg: 123 is invalid, F12 is valid, _13’ is invalid.
 2. The password must have 8 characters atleast. All characters are allowed in password.
 3. The Name should consists of alphabet, and white spaces only. No numbers and special characters are allowed.





- ♣ In Login form, I am checking only username.No need to check password and user type selection, because I am allowing any characters in password. And by default **buyer** is selected.



♣ In Add Item Form, I am checking for the following.

1. Item Quantity, it should be positive integers.
2. Item Price, it should be number(only digits) and postive number.
3. Item Category, shopkeeper should select the category.

♣ On violating above three fields, I will display the message.

The screenshot shows a Firefox browser window with the title bar "Activities Firefox ESR" and the status bar "Nov 6 19:03". The address bar displays "localhost:8080/ITLabAssignment/shop.jsp#add-item". Below the address bar is a toolbar with buttons for "Press to Add Items" and "Report".

The main content area contains a red modal dialog titled "Add Item". Inside the dialog, there are several input fields and error messages:

- Item-Name:** Maggi
- Item-Category:** Select a category (dropdown menu)
- Item-Image:** 31.webp
- Item-Quantity:** -34
- Item-Price:** -3jao
- Item-Description:** It is good Maggi

Three error messages are displayed at the top of the dialog:
Please select a category
Please Enter a valid quantity.
Please Enter a Valid Price.

At the bottom left of the dialog is a "Add" button.

- ♣ If the Buyer enters non-positive quantity at the add to cart. I will display the err.

Item	Name	Description	Stock Available	Price	Category	Cart
Butter Cookies 53g	snack	Good Day Biscuit	Butter Cookies 53 gm	21	10.0	<input type="text" value="-2"/> A enter a positive quantity <input type="button" value="Add"/>
Butter Cookies 120g	snack	Good Day Biscuit	Butter Cookies 120 gm	32	30.0	<input type="text" value="1"/> <input type="button" value="Add"/>
Pista Badam Cookies 53g	snack	Good Day Biscuit	Pista Badam Cookies 53 gm	56	10.0	<input type="text" value="1"/> <input type="button" value="Add"/>

2.2 CSS

- I have two css files, **style1.css** and **style2.css**. I had to use two because sometimes eclipse is not reading css from files. So I had to switch between them all the time. Please go through it.
- I have similar type of navbar, i.e header across all pages. I also have same footer across all pages. I wrote all html in JSP files. I have a **footer.html** file which I included in all pages JSP pages using `<%@ include file="footer.html" %>`. Please go through JSP files and footer.html file.

I think I covered all the points sir asked in the pdf. If I miss anything, please ask me. Because this is a big project, I might have forgot to include.