A Project Report on

Online Grocery-Ordering System

Submitted to Manipal University, Jaipur

Towards the partial fulfillment for the Award of the Degree of

BACHELOR OF TECHNOLOGY

In Computers Science and Engineering

2020-2024

By

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Introduction

The main objective of the project on online grocery ordering system is to manage the details of grocery, item, item category, shopping cart, customer, order. It manages all the information about grocery item, category, shopping cart, customer, order. The project is built to cater to the needs of both the administrator and the user. The purpose of the project is to build an application program to reduce the manual work for collecting all the details pertaining to the said order and the customer who ordered it. It also enables the customers with a user-friendly access to order groceries at the convenience of their homes.

Motivation

The old manual system was suffering from a series of drawbacks. Since whole of the system was to be maintained with hand the process of keeping, maintaining and retrieving the information was very tedious and lengthy. The records were never used to be in a systematic order. There used to be a lot of difficulties in associating any particular transaction with a particular context.

Also, the customers now don't have to go to the stores to order groceries where they had to wait in long never-ending queues. With this online grocery ordering system, they can order things with just with a few clicks, at their doorstep.

Project Objective

The project aims to create an unalterable database to increase efficiency and sale of a particular store. This project aims to connect the groceries from the stores to the customers in their homes. This system has the following pros and cons:

Sr. No.	PROS	CONS
1.	Customers can order groceries from the convenience of their homes.	User needs to have technological background
2.	Data is stored at one place. Easy to trace for the administrator.	Delivery system needs to be implemented for a smooth experience. Scaling factor becomes an issue.
3.	Administrator can change the catalogue of things whenever he wants to.	

Methodology/ Planning of work:

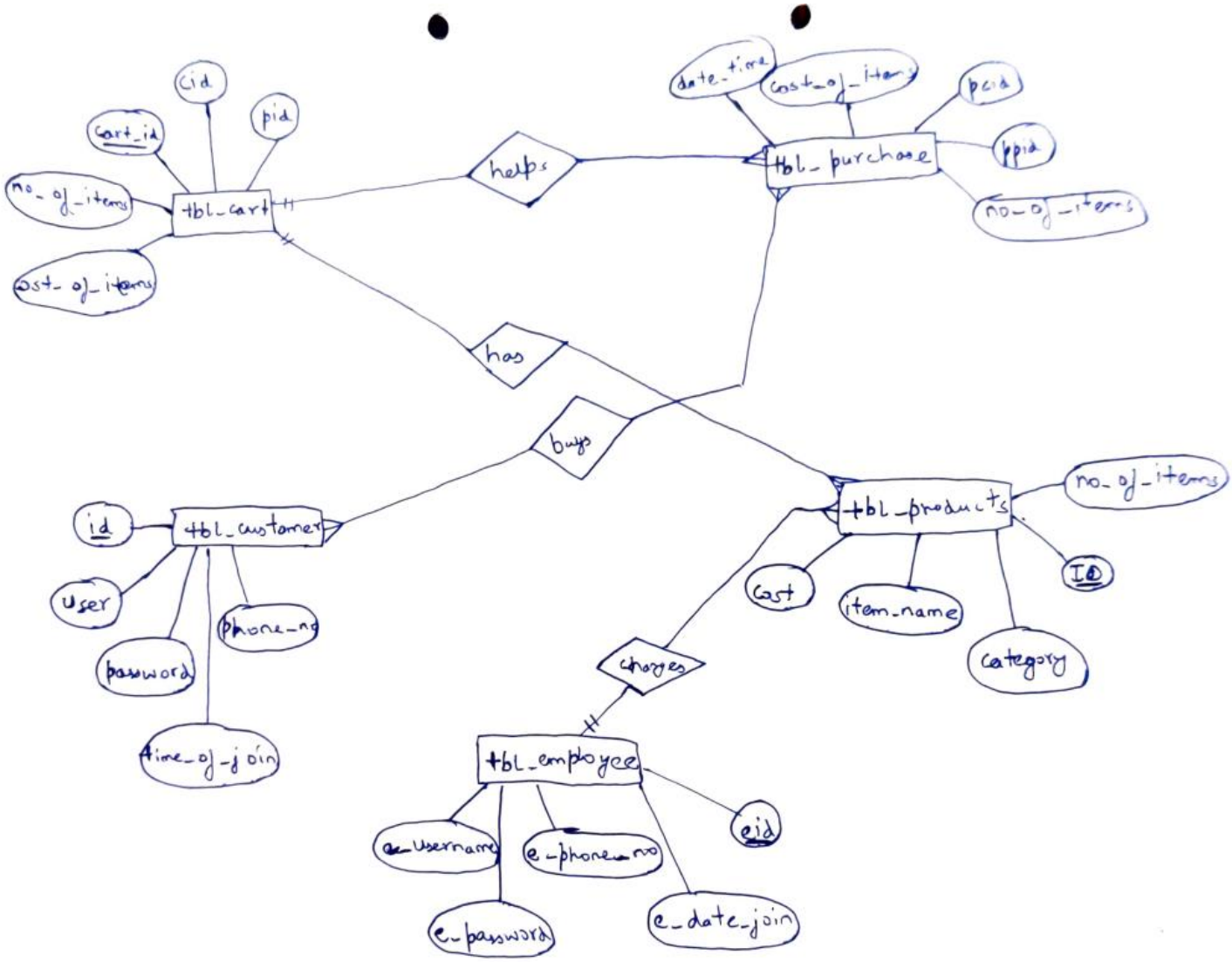
In order to tackle the problem, the work is divided into following phases:

- Visitors/Users can browse all the Categories and grocer Items.
- They also can order easily from the website.
- Admin can Manage Admin, Categories and Grocery Items.
- Admin can also Manage and Track their Order.

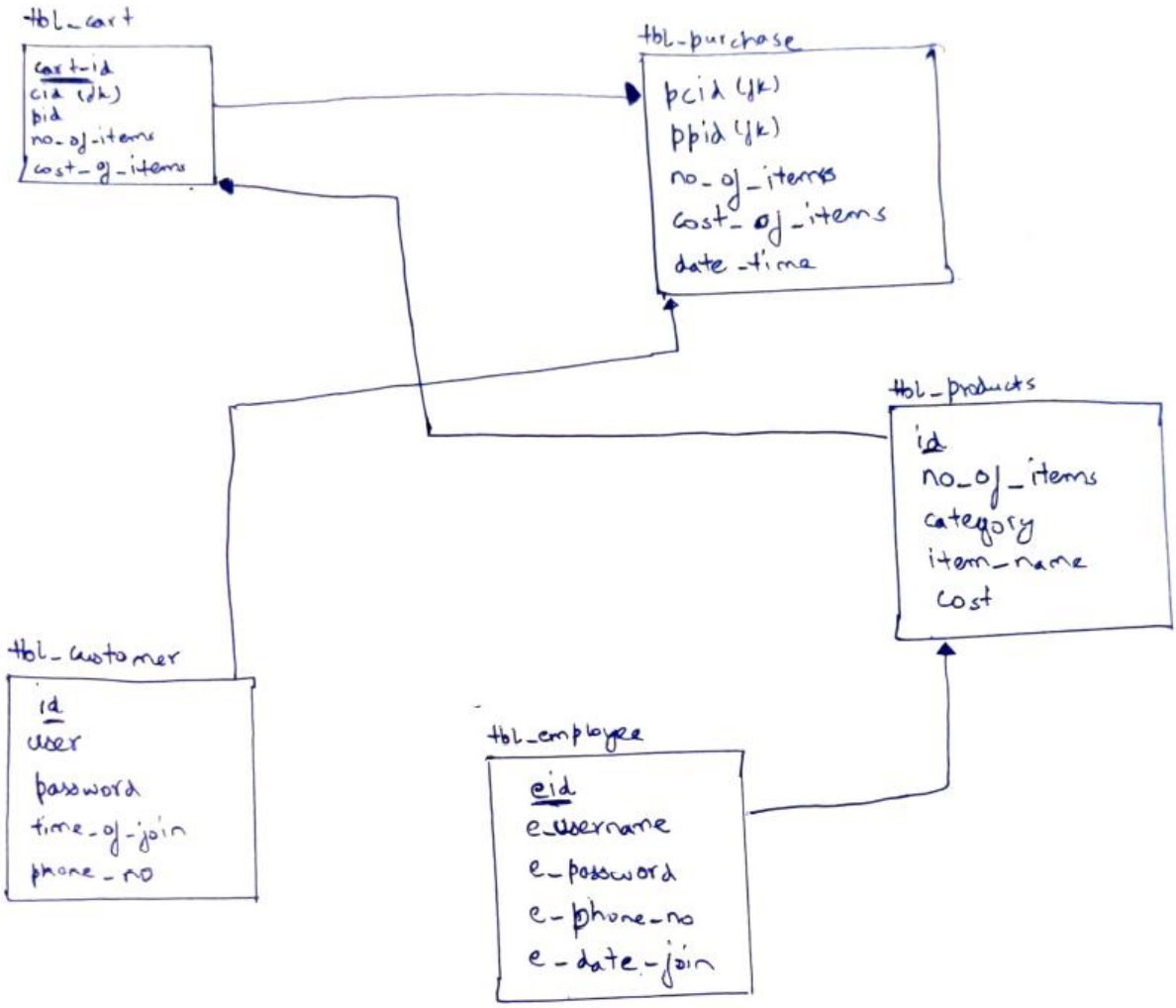
Facilities required for proposed work:

- XAMPP
- MYSQL
- APACHE
- HTML
- CSS
- PHP

Entity Relationship Diagram:



Relational Schema:



Tbl_cart:

```
CREATE TABLE `cart` (
 `cart_id` int(11) NOT NULL AUTO_INCREMENT,
 `cid` int(10) NOT NULL,
 `pid` int(10) NOT NULL,
 `no_of_items` int(10) NOT NULL,
 `cost_of_item` int(10) NOT NULL,
 PRIMARY KEY (`cart_id`),
 KEY `fk_references_cart_customer` (`cid`),
 KEY `pid` (`pid`) USING BTREE,
 CONSTRAINT `fk_references_cart_customer` FOREIGN KEY (`cid`) REFERENCES `customer`
(`ID`) ON DELETE CASCADE ON UPDATE CASCADE,
 CONSTRAINT `fk_references_cart_products` FOREIGN KEY (`pid`) REFERENCES `products` (`ID`)
ON DELETE CASCADE ON UPDATE CASCADE
) ENGINE=InnoDB AUTO_INCREMENT=51 DEFAULT CHARSET=latin1
```

Tbl_customer:

```
CREATE TABLE `customer` (
 `ID` int(10) NOT NULL AUTO_INCREMENT,
 `user` varchar(20) NOT NULL,
 `password` varchar(20) NOT NULL,
 `phone_no` bigint(10) NOT NULL,
 `Time_of_join` datetime NOT NULL,
 PRIMARY KEY (`ID`),
 UNIQUE KEY `ID` (`ID`),
 UNIQUE KEY `user` (`user`)
) ENGINE=InnoDB AUTO_INCREMENT=7 DEFAULT CHARSET=latin1
```

Tbl_employee:

```
CREATE TABLE `employee` (
 `e_username` varchar(20) NOT NULL,
 `e_password` varchar(20) NOT NULL,
 `e_phone_no` bigint(10) NOT NULL,
 `e_date_join` datetime NOT NULL,
 `eid` int(10) NOT NULL AUTO_INCREMENT,
 PRIMARY KEY (`eid`),
 UNIQUE KEY `e_username` (`e_username`)
) ENGINE=InnoDB AUTO_INCREMENT=3 DEFAULT CHARSET=latin1
```

Tbl_products:

```
CREATE TABLE `products` (
 `ID` int(10) NOT NULL AUTO_INCREMENT,
 `catogery` varchar(20) NOT NULL,
 `Item_name` varchar(20) NOT NULL,
 `cost` int(10) NOT NULL,
 `no_of_items` int(10) NOT NULL,
 PRIMARY KEY (`ID`),
 UNIQUE KEY `Item_name` (`Item_name`)
) ENGINE=InnoDB AUTO_INCREMENT=5 DEFAULT CHARSET=latin1
```

Tbl_purchase

```
CREATE TABLE `purchase` (
 `pcid` int(10) NOT NULL,
 `ppid` int(10) NOT NULL,
 `no_of_items` int(10) NOT NULL,
 `cost_of_items` int(10) NOT NULL,
 `date_time` datetime NOT NULL,
 KEY `fk_references_purchase_customer` (`pcid`),
 KEY `fk_references_purchase_products` (`ppid`),
 CONSTRAINT `fk_references_purchase_customer` FOREIGN KEY (`pcid`) REFERENCES `customer` (`ID`) ON DELETE NO ACTION ON UPDATE CASCADE,
 CONSTRAINT `fk_references_purchase_products` FOREIGN KEY (`ppid`) REFERENCES `products` (`ID`) ON DELETE NO ACTION ON UPDATE CASCADE
) ENGINE=InnoDB DEFAULT CHARSET=latin1
```

Database:

1 .CART:

The table 'Cart' stores all the details of the groceries.

	#	Name	Type	Collation	Attributes	Null	Default	Comments	Extra	Action
☐	1	**cart_id**	int(11)			No	*None*		AUTO_INCREMENT	Change Drop More
☐	2	**cid**	int(10)			No	*None*			Change Drop More
☐	3	**pid**	int(10)			No	*None*			Change Drop More
☐	4	**no_of_items**	int(10)			No	*None*			Change Drop More
☐	5	**cost_of_item**	int(10)			No	*None*			Change Drop More

Here the table satisfies all 3NF normal forms. As there are no partial dependencies or transitive dependencies. Multiple values do not exist.

2 .CUSTOMER :

This table stores the details of admin/user including the password and phone number.

	#	Name	Type	Collation	Attributes	Null	Default	Comments	Extra	Action
☐	1	**ID**	int(10)			No	*None*		AUTO_INCREMENT	Change Drop More
☐	2	**user**	varchar(20)	latin1_swedish_ci		No	*None*			Change Drop More
☐	3	**password**	varchar(20)	latin1_swedish_ci		No	*None*			Change Drop More
☐	4	**phone_no**	bigint(10)			No	*None*			Change Drop More
☐	5	**Time_of_join**	datetime			No	*None*			Change Drop More

Here the table satisfies all 3NF normal forms. As there are no partial dependencies or transitive dependencies. Multiple values do not exist.

3 .EMPLOYEE:

This table stores the details of all the employees.

	#	Name	Type	Collation	Attributes	Null	Default	Comments	Extra	Action
☐	1	**e_username**	varchar(20)	latin1_swedish_ci		No	*None*			Change Drop More
☐	2	**e_password**	varchar(20)	latin1_swedish_ci		No	*None*			Change Drop More
☐	3	**e_phone_no**	bigint(10)			No	*None*			Change Drop More
☐	4	**e_date_join**	datetime			No	*None*			Change Drop More
☐	5	**eid**	int(10)			No	*None*		AUTO_INCREMENT	Change Drop More

Here the table satisfies all 3NF normal forms. As there are no partial dependencies or transitive dependencies. Multiple values do not exist.

4. PRODUCTS:

This table stores the catalogue of various items along with price and quantity.

	#	Name	Type	Collation	Attributes	Null	Default	Comments	Extra	Action
☐	1	**ID**	int(10)			No	*None*		AUTO_INCREMENT	Change Drop More
☐	2	**catogery**	varchar(20)	latin1_swedish_ci		No	*None*			Change Drop More
☐	3	**Item_name**	varchar(20)	latin1_swedish_ci		No	*None*			Change Drop More
☐	4	**cost**	int(10)			No	*None*			Change Drop More
☐	5	**no_of_items**	int(10)			No	*None*			Change Drop More

Here the table satisfies all 3NF normal forms. As there are no partial dependencies or transitive dependencies. Multiple values do not exist.

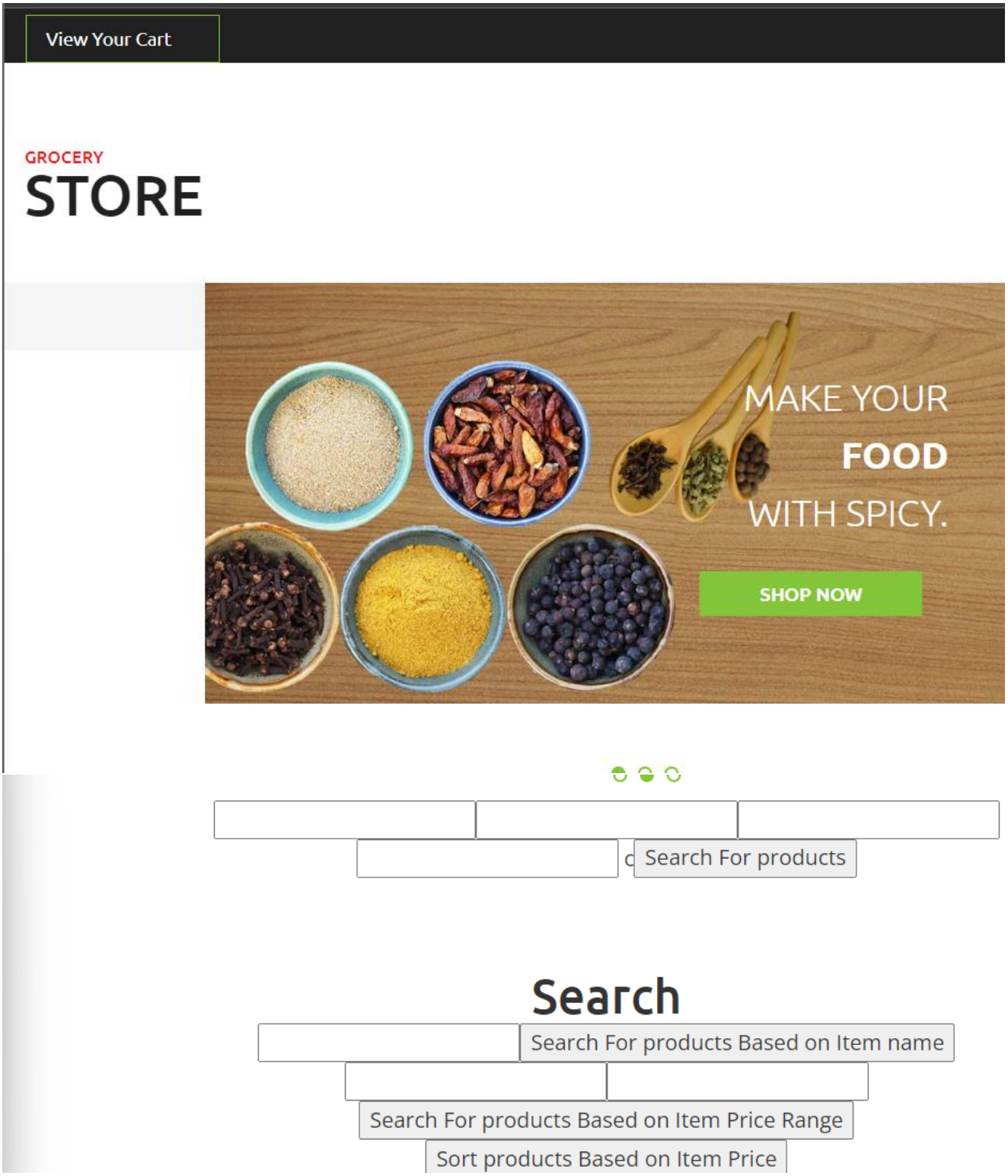
5. PURCHASE

It is a table that stores details of the purchased items and the cost of purchased items who ordered from the website.

	#	Name	Type	Collation	Attributes	Null	Default	Comments	Extra	Action
☐	1	**pcid**	int(10)			No	*None*			Change Drop More
☐	2	**ppid**	int(10)			No	*None*			Change Drop More
☐	3	**no_of_items**	int(10)			No	*None*			Change Drop More
☐	4	**cost_of_items**	int(10)			No	*None*			Change Drop More
☐	5	**date_time**	datetime			No	*None*			Change Drop More

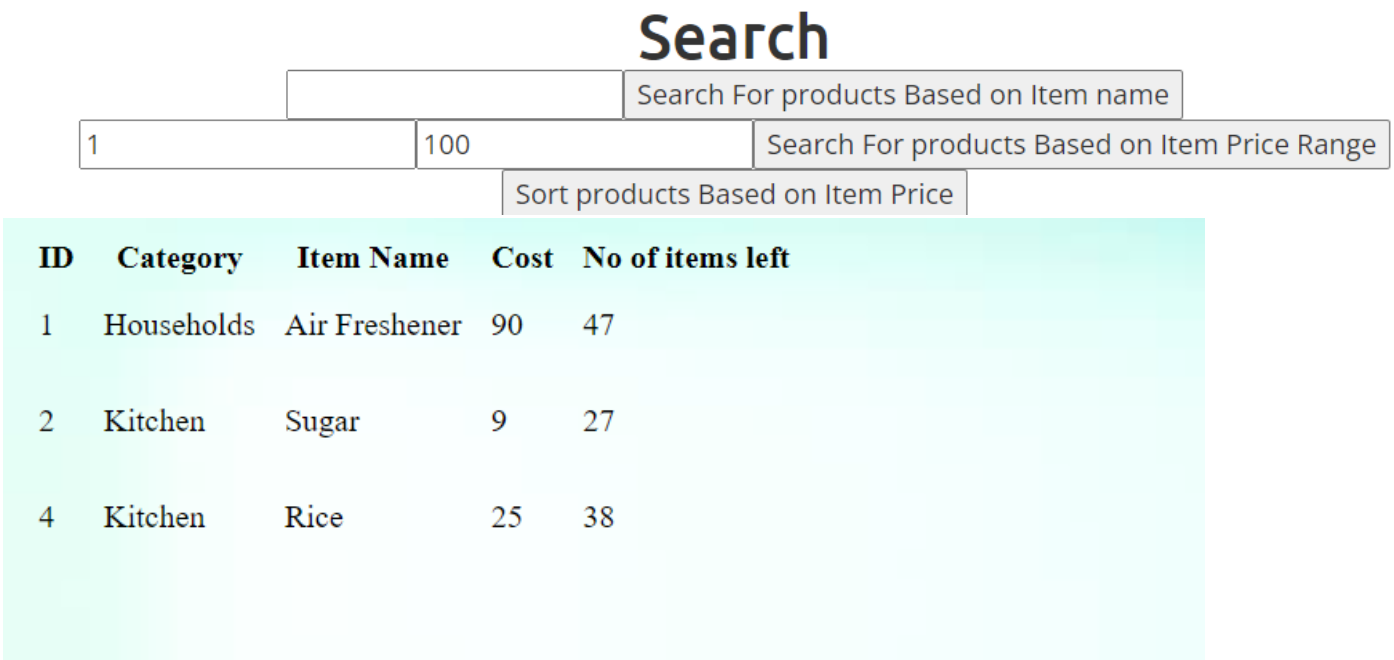
Here the table satisfies all 3NF normal forms. As there are no partial dependencies or transitive dependencies. Multiple values do not exist.

Project Demonstration:



Searching for products based on item name

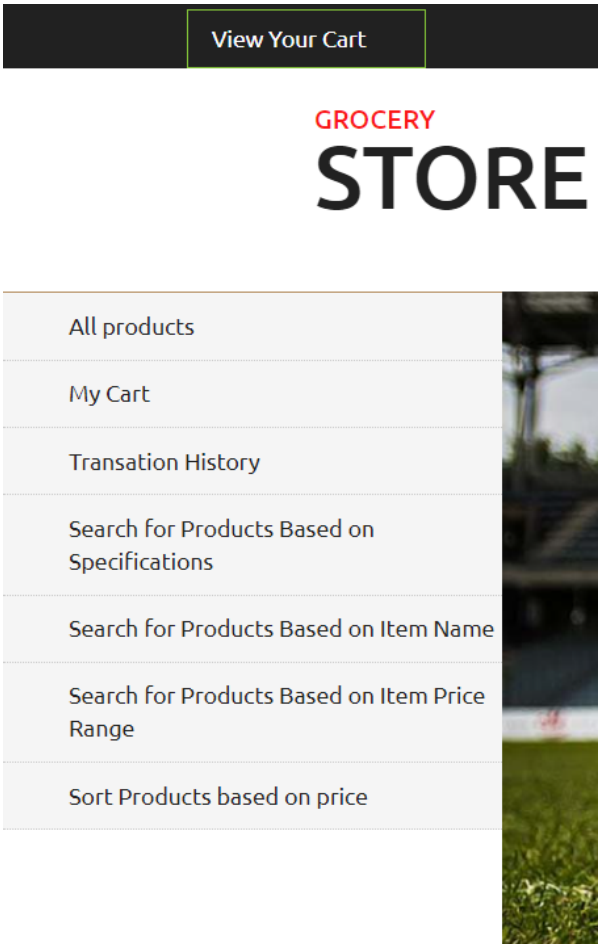
Searching for products based on price range



Searching for products based on Item Price

ID	Category	Item Name	Cost	No of items left
2	Kitchen	Sugar	9	27
4	Kitchen	Rice	25	38
1	Households	Air Freshener	90	47

Side options on the website



My Cart window

GROCERY
STORE

Home | My Cart

Product ID	No of items	cost of item	Total cost	Add item
1	2	90	180	+
2	1	9	9	+
4	2	25	50	+

TOTAL COST OF ALL ITEMS :239

CHECK OUT

Transaction History

Home | Transaction History

	Product ID	No of items	Cost of items	Date of purchase
1	2	180	2022-05-22 09:58:06
1	1	90	2022-05-22 12:35:06
2	3	27	2022-05-22 12:35:06
4	2	50	2022-05-22 12:35:06
1	1	90	2022-05-22 16:19:33
2	1	9	2022-05-22 16:19:33
4	3	75	2022-05-22 16:19:33
4	1	25	2022-05-23 04:53:50
2	1	9	2022-05-23 04:53:50
1	1	90	2022-05-23 04:53:50
1	2	180	2022-05-23 06:16:05
2	1	9	2022-05-23 06:16:05
4	2	50	2022-05-23 06:16:05

Conclusion:

The database will help keep track of all the transactions that take place. Also, It will store the information about the groceries and its categories. I would like to thank Dr. Rishi Gupta for his teachings which have helped us to make this project.

Bibliography/References:

- Oracle PL/SQL Database Programming Learner
- Oracle DP Database Programming with SQL
- W3SCHOOLS
- Avi Silberschatz, Henry F. Korth, S. Sudarshan, “Database System Concepts”, TMH, New Delhi, 7th Edition, 2019

Github Repo Link : Ronit-Grover/Online-Grocery-Order-and-Management-System: This project is based on Online Grocery Ordering and Management system which is made from HTML, CSS, JavaScript, MySQL, PhpMyAdmin (github.com)