

# Project Report



## DOLLAR STORE

**Website Name:**  
Dollar Store

**Contributors:**  
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# Project Description

Our project is a simple implementation of database used in a website. Our website offers a service which helps customers to order groceries in our online store. This website has two important roles which include users and admin. The first page of this system is a login page where customers and admin can login to our system. This system differentiates admin and general customers based on the information available in our database (which are user email and password). We also included user registration page so that new customers can register and make use of the service provided by this system. When a customer/admin login to our system, it will redirect to the next page accordingly. If a customer login to our system, he/she will be redirected to the home screen where they can view and buy the items. If admin logs in to our system he will be redirected to a different page which looks similar to the customer home page but has some more options like inserting an item, updating information about a product in the database. Admin page also has another option called archive inventory where admin can look through the item that were deleted by from the store. This delete option given to the admin is a soft delete i.e. if the admin deletes a product from this system, that product will not be deleted from the database. Every customer in this system can search and view products Any customer in this system can create, view and edit his/her personal shopping cart. Customers can also filter their search on products by name, department, brands, and price. They can also view detailed information of the selected product. Shopping cart option in this system lets the customers to add, delete products from their digital cart. Customers can also go through their purchase history after logging into their account.

## Usage

To run the website, follow below steps:

1. First create the Mongo Database named DollarStore and create 4 collections based on the Database Design in next section. Using the json files at location "/SampleData/DatabaseFiles/DollarStore/" to insert new data in the database.
2. Store Pictures (i.e item images and banners) in the folder "/public/items". If Mongodump is used, store pictures from "/SampleData/Pictures/" into views folder "/public/items". Also 6 banners are used by default for carousel i.e banners can be named banner1.jpg, banner2.jpg and soon. You can add more images in carousel.
3. Open terminal at DollarStore path and run nodserver via command "nodemon".
4. URL "localhost:4000" can be used in any browser to use the Dollar Store.

## Note

1. Register with username "admin@admin.com" to use the admin account.
2. Grocery images should be saved with item name i.e item-name.jpg
3. Delete button in the Home Page is used to soft delete the items. However, delete button in the Archive Inventory page of admin account is used to permanently remove the item from database.
4. There should be only two tags to the product and they should be in the format "Laundry,Tide".

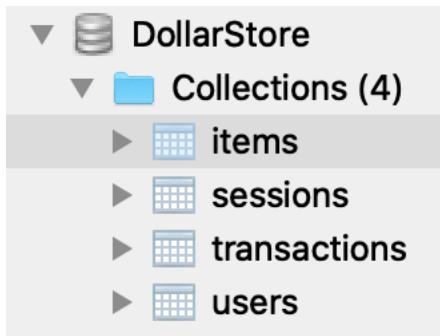
# Database Design

## Database Type

NoSQL(MongoDB)

## Database Name

DollarStore



## Collection List

### Transactions

After the user logs out, all the details related to that particular transaction along with that username is saved in this document. These documents are later used to display purchase history of that particular user.

db.getCollection('transactions').find({})		
🕒 transactions 0.001 sec.		
Key	Value	Type
▶ (1) ObjectId("5e90a99da5fc2d02e6826bb2")	{ 7 fields }	Object
▣ _id	ObjectId("5e90a99da5fc2d02e6826bb2")	ObjectId
▣ userId	admin@admin.com	String
▶ (1) items	[ 1 element ]	Array
▣ timestamp	2020-04-10 17:15:09.050Z	Date
▣ totalPrice	2.45	String
▣ deliveryAddress	851 Greenside Dr	String
▣ __v	0	Int32

## Items

Each document in Items collection represent an item in the Dollar Store.

**Available:** It is used for checking the availability of the item. When an item is soft deleted, it's available property is set to false.

**Tags:** They are used for filtering an item. 2 tags can be provided comma separated. For ex, "Laundry,Tide". In this example, "Laundry" is the Department and "Tide" is the Brand.

**Name and Description** are used for searching an item.

**TotalQuantity:** The number of quantity available in stock.

**PricePerItem:** Price of single quantity.

**ImagePath:** Path of the image of the item.

db.getCollection('items').find({})		
items 0.001 sec.		
Key	Value	Type
▼ (1) ObjectId("5e8fa348de7974b69808fbc9")	{ 9 fields }	Object
_id	ObjectId("5e8fa348de7974b69808fbc9")	ObjectId
available	true	Boolean
tags	[ 2 elements ]	Array
name	Heinz EZ Squeeze Ketchup 20 Oz	String
description	America's favorite ketchup is now available in an innov...	String
totalQuantity	98	Int32
pricePerItem	2.45	Double
imagePath	/items/Heinz EZ Squeeze Ketchup 20 Oz.jpg	String
__v	0	Int32

## Sessions

This document is basically used to store session variables and maintaining the cart data. It is automatically created when a user is logged in by "express-session" package.

**Expires:** When the session is expired.

**Session:** Session information

db.getCollection('sessions').find({})		
sessions 0.001 sec.		
Key	Value	Type
▼ (1) 3iYCXLepZXJaqCkGhMB17-ZfNwHzyFgC	{ 3 fields }	Object
_id	3iYCXLepZXJaqCkGhMB17-ZfNwHzyFgC	String
expires	2020-05-16 15:38:39.245Z	Date
session	{"cookie":{"originalMaxAge":null,"expires":null,"httpOn...}	String

## Users

This document saves the username and encrypted password of users. User with username “admin@admin.com” is considered as an admin user.

db.getCollection('users').find({})		
Key	Value	Type
users	0.001 sec.	
▼ (1) admin@admin.com	{ 3 fields }	Object
_id	admin@admin.com	String
password	\$2a\$10\$dPyPWjqjM5dvvv4xnPNWOuKRUAzKfrnY3q...	String
__v	0	Int32

## Languages/ Framework

We used MERN stack setup to develop this system. The term MERN stack refers to the following technologies:

### MongoDB

It's a cross platform document-oriented database program

### Express.js

It's a web application framework for Node.js.

### React

It's a JavaScript library for building user interfaces.

### Node.js

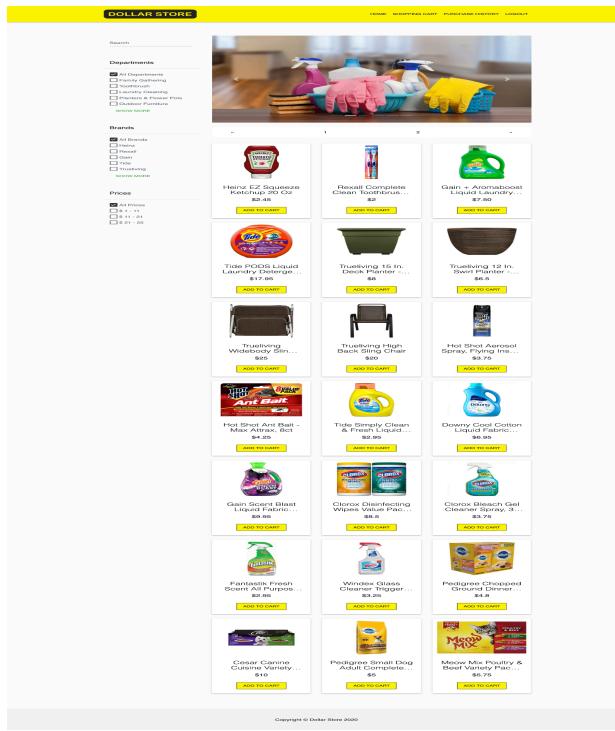
It's an open source, cross-platform JavaScript run-time environment that executes JavaScript code outside of the browser (server side).

In this project, for the server-side work we use Node.js and Express.js and connect it with MongoDB. Then we create some API's. We will use React to build user interfaces and connect our front-end to the backend.

# Main Functionalities

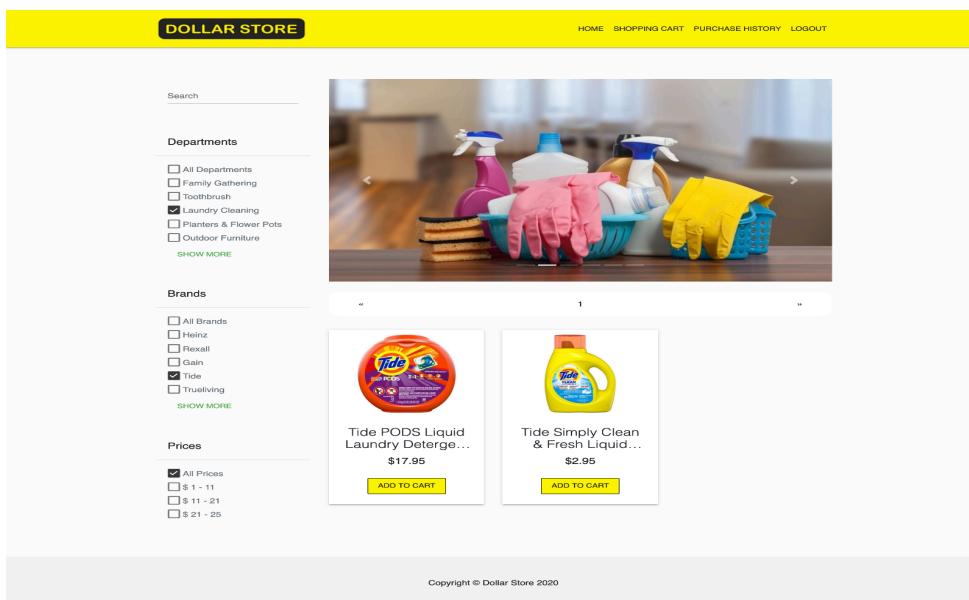
## Home

This page is the home page for general customer's once they login into this system. They can search and view the products that are available in the database.



## Home Filters

In this, user can categorize their search based on departments, Brands, and prices.



## Item Description

Customers can view the detailed information about a product present in the database when they click on the product in their search.

DOLLAR STORE

HOME SHOPPING CART PURCHASE HISTORY LOGOUT



### Product Details

**Product Name:**  
Tide PODS Liquid Laundry Detergent Pacs, Spring Meadow, 72 Count

**Description:**  
The new and improved Tide PODS laundry detergent pacs are super concentrated with 99 percent cleaning ingredients to rejuvenate even the grungiest clothes for bright, brighter colors, longer whites, wash after wash. Each Tide PODS is a 3-in-1 breakthrough laundry solution with highly concentrated detergent, stain remover and color protector, giving you more bang for your buck

**Price:**  
\$17.95

[ADD TO CART](#)

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## Shopping Cart

After shopping in this online store, customers can see their purchases in their shopping cart. Customers can add, delete, and edit their products in their shopping cart.

DOLLAR STORE

HOME SHOPPING CART PURCHASE HISTORY LOGOUT

### Shopping Cart

 <p>Heinz EZ Squeeze Ketchup 20 Oz Price: \$2.45 Quantity: 1</p> <p>- + <a href="#">REMOVE</a></p>	 <p>Tide PODS Liquid Laundry Detergent Pacs, Spring... Price: \$17.95 Quantity: 1</p> <p>- + <a href="#">REMOVE</a></p>	 <p>Meow Mix Poultry &amp; Beef Variety Pack - 12 CT Price: \$5.75 Quantity: 1</p> <p>- + <a href="#">REMOVE</a></p>
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Total Purchase: \$26.15

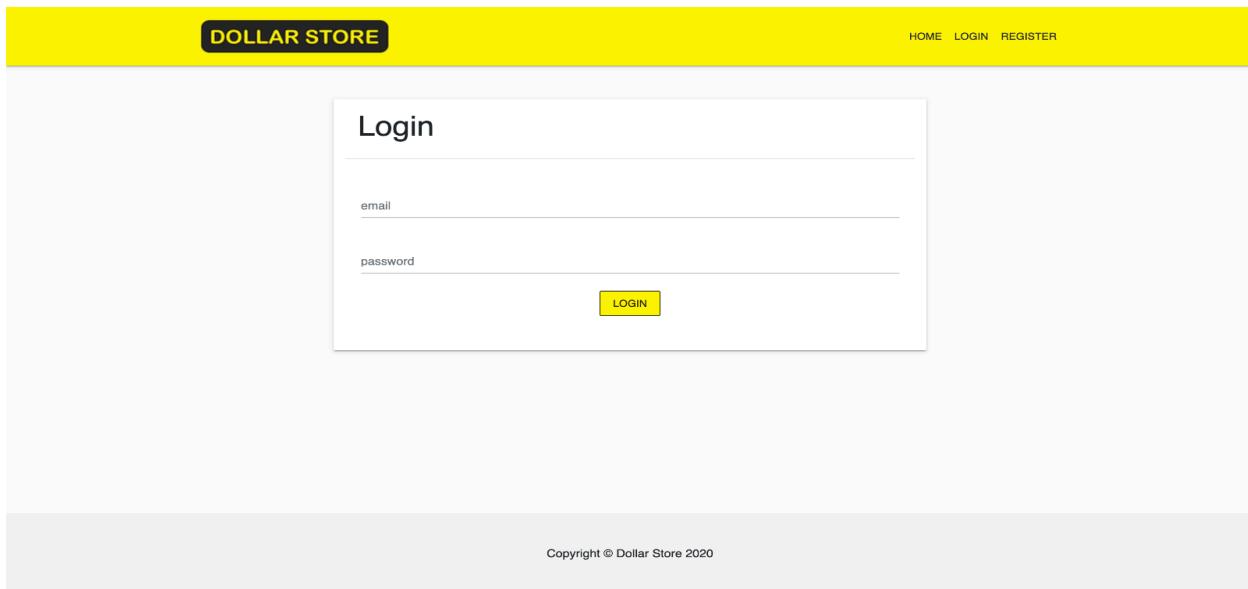
Delivery Address \_\_\_\_\_

[CHECK OUT & PAY](#)

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## Login

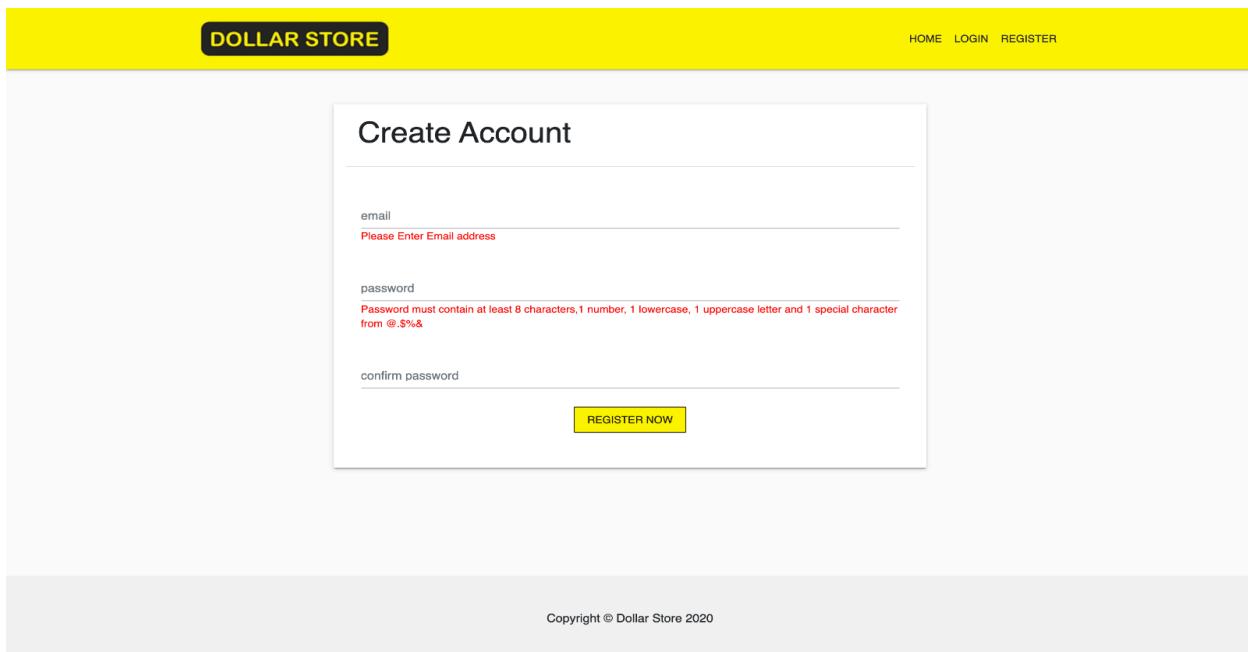
This is a common login page for both customers and admin.



The screenshot shows a login form on a website. At the top, there is a yellow header bar with the text "DOLLAR STORE" in white. To the right of the header are three links: "HOME", "LOGIN", and "REGISTER". Below the header, the main content area has a white background. In the center, the word "Login" is displayed in a bold, black font. Below it is a horizontal line. Underneath the line, there are two input fields: one for "email" and one for "password", both with placeholder text. To the right of the password field is a yellow rectangular button with the word "LOGIN" in white capital letters. At the bottom of the page, there is a light gray footer bar containing the copyright notice "Copyright © Dollar Store 2020".

## Registration

Customers who are new to this system can use our service once they get registered using this registration page.



The screenshot shows a registration form on a website. At the top, there is a yellow header bar with the text "DOLLAR STORE" in white. To the right of the header are three links: "HOME", "LOGIN", and "REGISTER". Below the header, the main content area has a white background. In the center, the text "Create Account" is displayed in a bold, black font. Below it is a horizontal line. There are three input fields: one for "email" with a red error message "Please Enter Email address" above it, one for "password" with a red error message "Password must contain at least 8 characters, 1 number, 1 lowercase, 1 uppercase letter and 1 special character from @.%&" above it, and one for "confirm password". To the right of the "password" field is a yellow rectangular button with the text "REGISTER NOW" in white capital letters. At the bottom of the page, there is a light gray footer bar containing the copyright notice "Copyright © Dollar Store 2020".

## Insert

Admin can add new products into the database using this insert feature in the system. When a new item is added, it will be shown to the customers in their home page.

**DOLLAR STORE**

HOME INSERT ITEMS ARCHIVE INVENTORY SHOPPING CART PURCHASE HISTORY LOGOUT

### Insert Item

Name \_\_\_\_\_

Description \_\_\_\_\_

Total Quantity \_\_\_\_\_

Price Per Item \_\_\_\_\_

Tags seperated by ',' \_\_\_\_\_

Available

No file chosen

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## Update

Admin can also update some information about a product that is present in the database by using the update feature present in this system.

**DOLLAR STORE**

HOME INSERT ITEMS ARCHIVE INVENTORY SHOPPING CART PURCHASE HISTORY LOGOUT

### Update Item

Heinz EZ Squeeze Ketchup 20 Oz  
America's favorite ketchup is now available in an innovative plastic bottle that uses up to 30% plar  
98  
2.45  
Family Gathering,Heinz

Available



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## Archive Inventory

It's a soft delete option given to admin to delete an item from the product listing. If the admin deletes an item/ product, it will not be completely deleted from the database.

The screenshot shows a web application interface titled "DOLLAR STORE" at the top. Below it, a navigation bar includes links for HOME, INSERT ITEMS, ARCHIVE INVENTORY, SHOPPING CART, PURCHASE HISTORY, and LOGOUT. The main content area is titled "Archive Inventory". A product card is displayed, featuring a dark-colored planter with a decorative swirl pattern. The product details are as follows:

- Name: Trueliving 16 In. Floral Swirl Planter - Assorted
- ID: 5e909aca5fc2d02e6826b89
- Description: Decorate your outdoor areas with a Trueliving ...
- Tags: Planters & Flower Pots, Trueliving
- Quantity: 100
- PricePerItem: \$10

At the bottom of the card are two buttons: "UPDATE" and "DELETE". The "DELETE" button is highlighted in red. At the very bottom of the page, there is a copyright notice: "Copyright © Dollar Store 2020".

## Work Division

### Nitesh Kumar

Team member Nitesh Kumar has done the project's login page, Registration page, also he has implemented two functionalities which are inserting a new product into the database and implementation of shopping cart in this system.

### Saketh Reddy Basika

Team member Saketh Reddy Basika implemented 3 functionalities which are updating product details that are present in the database, implementing archive inventory where admin can see what products were deleted to the customers, implementation of purchase history.

### Sandeep Reddy Gopu

Team member Sandeep Reddy Gopu worked on creating the home page for general customers and admin, he also implemented the item description page where customer can see the detailed explanation of a selected product.

Setting up the MERN stack environment, Database design, Project Report were discussed and done equally.