

Car Dealership Management System

1.DESCRPTION

The car dealership management system allows salespersons to maintain a record of the customers visiting the dealership as well as the vehicles currently available at the dealership.

The salesperson is able to add the details of a new customer to the database along with his/her sales id as reference.

The salesperson is also able to search for the details of a particular of a customer based on his/her customer id. This will display the details of the customer with the entered id.

There is also a delete customer functionality which can be used to delete the details of a customer when no longer required.

Salesperson is able to check available stock using the check inventory feature present in the system. This can then be used to show the customer a list of cars available at the dealership.

The salesperson is also able to search for a particular car based on its unique vehicle id. Which will display details such as make, model, colour and manufacturing year of the vehicle.

There is also a sale feature which allows a sale to be stored in records upon entering customer id, vehicle id and salesperson id, and deletes the sold vehicle from inventory of vehicles available

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2.FEATURES

The car dealership management system helps employees working at the dealership easily maintain a record of the customers visiting and vehicles available at the dealership.

- It allows salespersons to add new customer details with ease
- It allows salespersons to delete customer details easily
- It allows salespersons to search for a customer's details
- It allows salespersons to view all the customers registered with the dealership
- It allows employees to add new cars as they are acquired by the dealership
- It allows employees to check the available inventory
- It allows a salesperson to look up details of a particular car
- It allows the salesperson to delete the details of a particular vehicle once a sale is made
- It allows the salespeople to keep a track of all sales made with the date and time of sale. This is very useful for a company as it helps in accounting and calculating revenue, strong periods of sales etc.
- It allows existing salespersons to be removed from the dealership records once they leave the dealership. All existing customers linked to them shall also have to be deleted and issued fresh salespersons.
- It allows to view all salespersons employed with the company currently
- It allows a salesperson to view details of all customers linked to him/her upon entering salesperson ID. This is especially useful for a dealership to send promotions and link commissions of a sale to a particular salesperson.

User Interface

The home page consists of a simple login form which allows user login. Once correct password is entered a function dashboard allows users to navigate through the different functionalities provided.

Safety and Security

Throughout the development process, user safety and security to prevent misuse of the management of a company has been given utmost importance

- Login is carried out securely based on the salesperson ID as username and unique password set by each salesperson.

3. TECHNOLOGIES USED

- Node.JS
- Express
- MySQL
- HTML
- Javascript
- CSS

6. IMPLEMENTATION

Database Connection:

```
9  var con=mysql.createConnection({
10    host:"localhost",
11    user:"root",
12    password:"",
13    database:"dms"
14  });
```

Display Query:

```
1  var express = require('express');
2  var router = express.Router();
3  var mysql = require('mysql');
4
5  var con=mysql.createConnection({
6    host:"localhost",
7    user:"root",
8    password:"",
9    database:"dms"
10  });
11
12  /* GET home page. */
13  router.get('/', function(req, res, next) {
14    con.query("select * from customer",function(err,result,field){
15      res.render('dummy',{result:result});
16    });
17  });
18
19  module.exports = router;
```

Insert Query

```
var express = require('express');
var router = express.Router();
var mysql = require('mysql');

var con=mysql.createConnection({
  host:"localhost",
  user:"root",
  password:"",
  database:"dms"
});

/* GET home page. */
router.post('/', function(req, res, next) {
  var address=req.body.address;
  var phone=req.body.phone;
  var name=req.body.name;
  var sid= req.body.sid;
  console.log(name);
  con.query("insert into customer(caddress,cphone,cname,sid) values(?,?,?,?)",
    [[address,phone,name,sid],function(err,result,field){
      res.redirect('/pager2');
    }]);
});
module.exports = router;
```

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Search query

```
var express = require('express');
var router = express.Router();
var mysql = require('mysql');

var con=mysql.createConnection({
  host:"localhost",
  user:"root",
  password:"",
  database:"dms"
});

router.post('/', function(req, res, next) {
  var id =req.body.id;
  console.log(id);
  con.query("select * from customer where cid =?",[id],function(err,result,field){
    res.render('dummy',{result:result});
  });
});
module.exports = router;
```

Sale Query:

```
var express = require('express');
var router = express.Router();
var mysql = require('mysql');

var con=mysql.createConnection({
  host:"localhost",
  user:"root",
  password:"",
  database:"dms"
});
/* GET home page. */
router.post('/', function(req, res, next) {
  var cid=req.body.cid;
  var vid=req.body.vid;
  var sid=req.body.sid;
  console.log(cid);
  con.query("insert into deal(cid,vid,sid) values(?,?,?)",[cid,vid,sid],function(err,result,field){
  });
  con.query("delete from vehicle where vid = ?",[vid],function(err,result,field){
    res.redirect('/pager2');
  });
});
module.exports = router;
```

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Delete Query:

```
var express = require('express');
var router = express.Router();
var mysql = require('mysql');

var con=mysql.createConnection({
  host:"localhost",
  user:"root",
  password:"",
  database:"dms"
});

/* GET home page. */
router.post('/', function(req, res, next) {
  var id=req.body.id;

  console.log(id);
  con.query("delete from salesperson where sid = ?",[id],function(err,result,field){
  });
  con.query("delete from customer where sid=?",[id],function(err,result,field){
    res.redirect('/pager2');
  });
});
module.exports = router;
```

Output Screens/Views

Login page

← → ↻ ⓘ localhost:3000

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User Name :

Password :

Login

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Function Dashboard

The screenshot shows a web browser window with the URL `localhost:3000/pager2`. The page has a dark blue header with the text "Goa Motors" and "Database Management System". Below the header, there are three teal-colored boxes representing different service categories:

- Customer Services**
 - Add customer
 - Get Customer Details
 - Delete customer
 - Search for Customer
- Vehicle Services**
 - Add Vehicle
 - Check Stock of Vehicles
 - Search for Vehicle by id
 - Make Vehicle Sale
- Salesperson Services**
 - Check Salespeople employed
 - Delete a Salesperson
 - Check Customers associated with a salesperson

Add customer

The screenshot shows a web browser window with the URL `localhost:3000/addcustomer`. The page has a blue background. In the center, there is a rounded rectangle with a black border containing the following form:

Add Customer:

Name
Enter name

Address
Enter address

Phone number
Enter phone

Allot Salesperson ID:
Enter salesperson ID

Delete Customer

The screenshot shows a web browser window with the URL `localhost:3000/deletecustomer`. The page has a blue background. In the center, there is a rounded rectangle with a black border containing the following form:

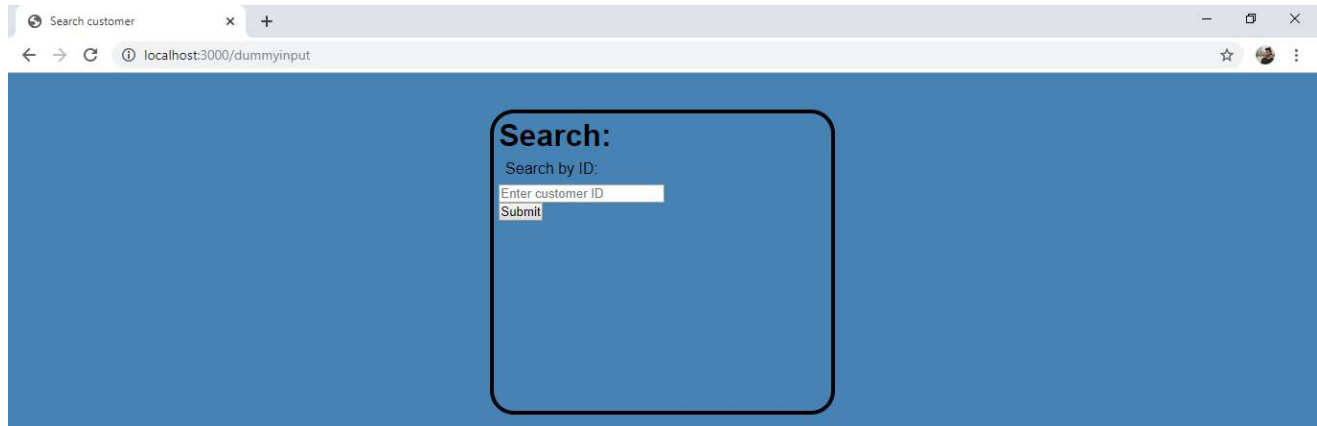
Delete Customer:

Delete by ID:
Enter customer ID

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Search for Customer



The screenshot shows a web browser window with the title "Search customer". The address bar displays "localhost:3000/dummyinput". The main content area has a blue background. A white rounded rectangle contains the text "Search:" followed by "Search by ID:". Below this is a text input field with the placeholder "Enter customer ID" and a "Submit" button.

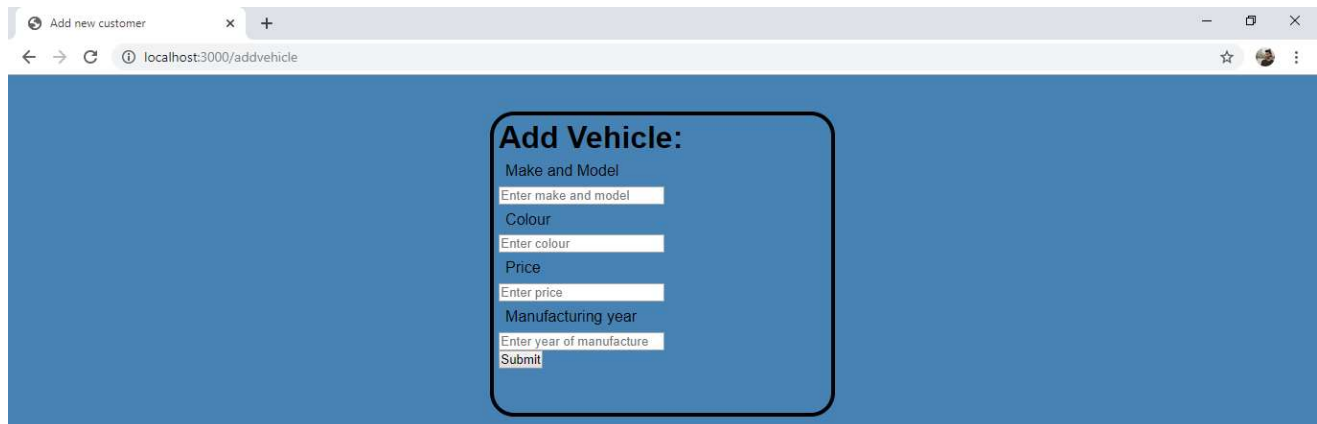
Display Customers



The screenshot shows a web browser window with the title "dummy" and address "localhost:3000/dummy". The content displays a list of five customers, each with their ID, name, phone number, address, and the salesperson allotted to them.

Customer id:2
Customer name:Bobby
Customer phone:875628572
Customer address:Bandra
Salesperson Allotted:1
Customer id:3
Customer name:Mo
Customer phone:68439874
Customer address:Margao
Salesperson Allotted:1
Customer id:4
Customer name:Virgil
Customer phone:461537126
Customer address:Tokyo
Salesperson Allotted:2
Customer id:5
Customer name:Sadio
Customer phone:38878173
Customer address:Panjim
Salesperson Allotted:4

Add Vehicle

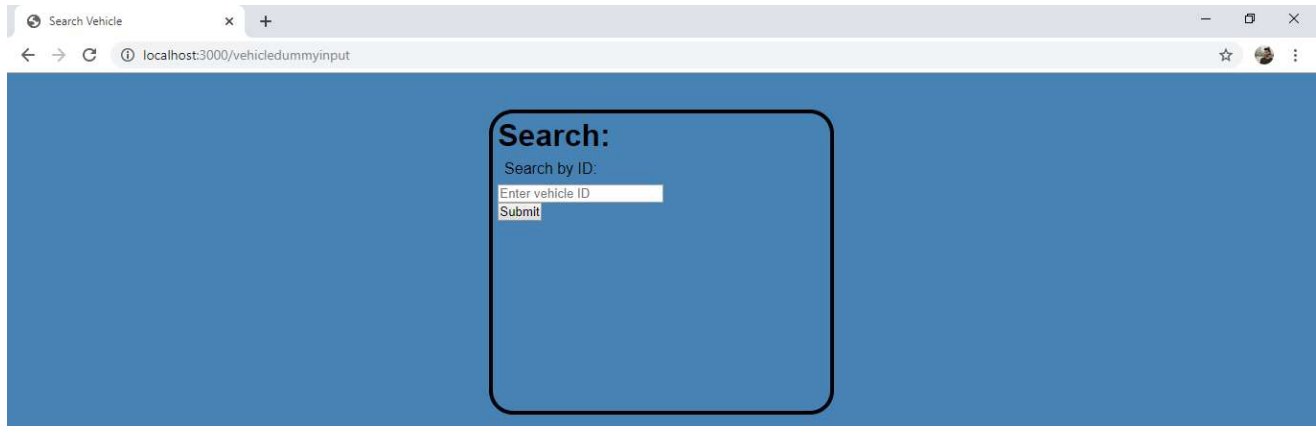


The screenshot shows a web browser window with the title "Add new customer" and address "localhost:3000/addvehicle". The main content area has a blue background. A white rounded rectangle contains the text "Add Vehicle:" followed by five input fields: "Make and Model", "Colour", "Price", and "Manufacturing year". Each field has a placeholder "Enter [field name]". Below the last field is a "Submit" button.

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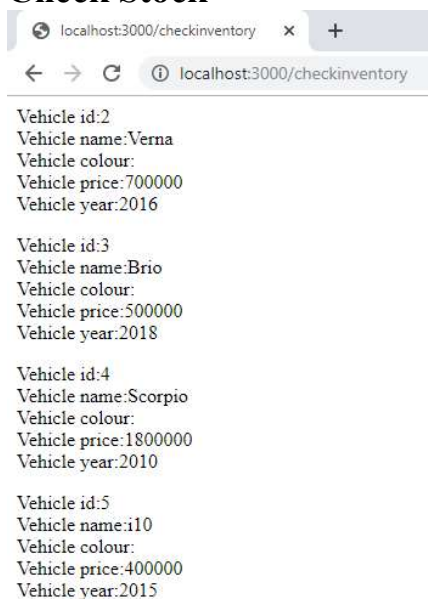
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Search vehicle



The screenshot shows a web browser window with the title "Search Vehicle". The address bar displays "localhost:3000/vehicledummyinput". The main content area has a blue background and a white rounded rectangle containing the "Search:" section. This section includes a label "Search by ID:", a text input field with the placeholder "Enter vehicle ID", and a "Submit" button.

Check Stock



The screenshot shows a web browser window with the title "localhost:3000/checkinventory". The address bar displays "localhost:3000/checkinventory". The main content area lists five vehicles with their details:

- Vehicle id:2
Vehicle name:Verna
Vehicle colour:
Vehicle price:700000
Vehicle year:2016
- Vehicle id:3
Vehicle name:Brio
Vehicle colour:
Vehicle price:500000
Vehicle year:2018
- Vehicle id:4
Vehicle name:Scorpio
Vehicle colour:
Vehicle price:1800000
Vehicle year:2010
- Vehicle id:5
Vehicle name:i10
Vehicle colour:
Vehicle price:400000
Vehicle year:2015

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Make Sale



The screenshot shows a web browser window with the title "Search customer". The address bar displays "localhost:3000/saleinput". The main content area has a blue background and a white rounded rectangle containing the "Make Sale :" section. This section includes four labels with corresponding text input fields: "Enter customer ID:", "Enter salesperson ID:", "Enter vehicle ID:", and "Enter ID of vehicle to be sold". A "Submit" button is located at the bottom of the form.

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Check salespersons employed



Salesperson id:1
Salesperson name: Jake
Salesperson Address:
Salesperson Phone: 1234567890
Salesperson Salary:

Salesperson id:2
Salesperson name: Dan
Salesperson Address:
Salesperson Phone: 5647382956
Salesperson Salary:

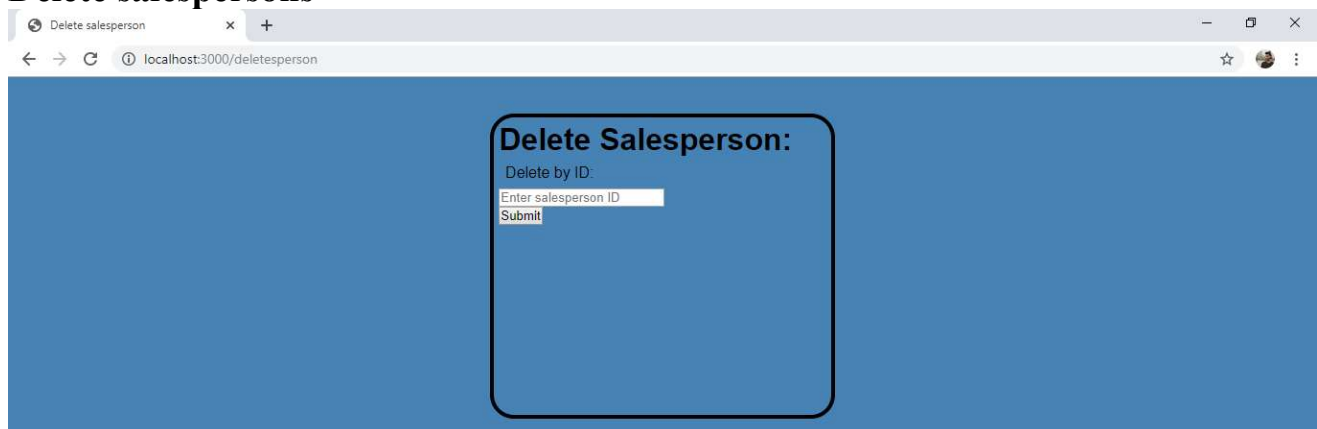
Salesperson id:3
Salesperson name: Samir
Salesperson Address:
Salesperson Phone: 6587384724
Salesperson Salary:

Salesperson id:4
Salesperson name: Wayne
Salesperson Address:
Salesperson Phone: 6576587265
Salesperson Salary:

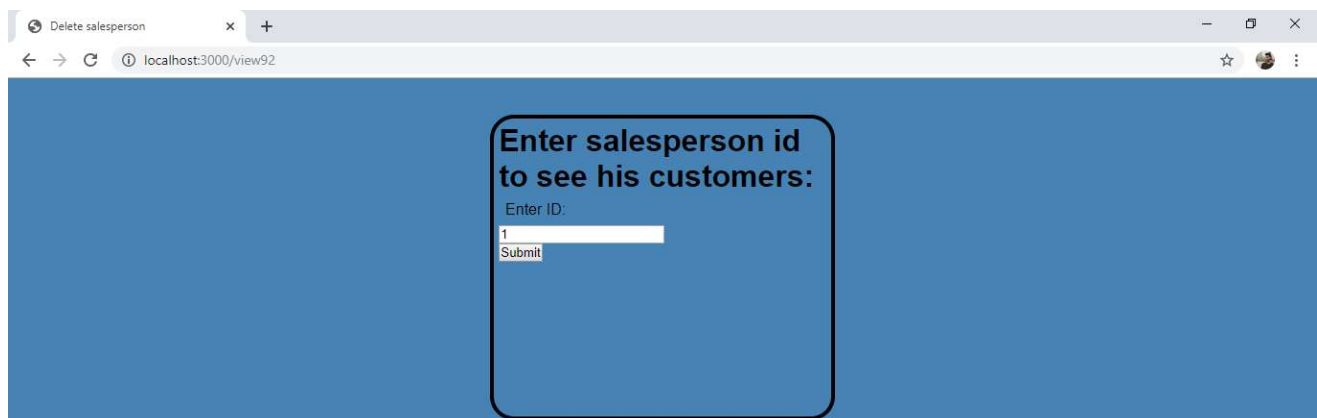
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Delete salespersons

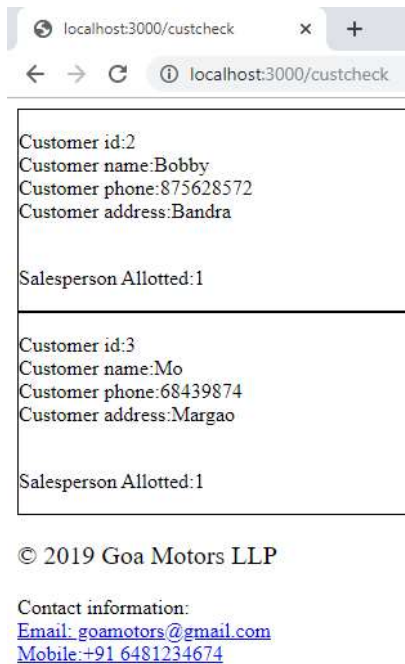


Check customers linked to a salesperson



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7. CONCLUSION

The application for a car dealership management system was carried out successfully.

8. REFERENCES

Fundamentals of Database Systems 5th edition Ramez Elsmari Shamkant B Navathe

<https://expressjs.com/en/guide>

<https://www.w3schools.com>

<https://www.freecodecamp.org/learn/>

9. REQUIREMENTS GATHERING

Extensive research was done on studying the functioning of the functioning of a car dealership and the functionalities that are required in implementing such a model so that it can be effectively used by the relevant industries. A brief study was also carried out about the current problems faced due to data redundancies and overlapping errors in the current Dealership Management System (DMS) model by reading articles, magazines and studying the functioning of such systems extensively on the internet and by interaction with people who use these systems on a daily basis and the details of how customers are assigned to salespersons and sales are made was duly noted.

Collection of data and ER diagrams and their mapping to tables was done after verification with ER diagrams and project data models of various DMS used in the industry

All the requirements were noted down and the most important ones were highlighted and given critical priority throughout the project to be understood clearly.

After the research, a detailed specification and requirement list was made to frame the guidelines for the implementation of the car dealership management system mini project in DBMS.