A
PROJECT REPORT ON

Garage Management System

SUBMITTED IN
PARTIAL FULFILLMENT OF

DIPLOMA IN ADVANCED COMPUTING (PG-DAC)

BY

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UNDER THE GUIDENCE OF

Mr. Digvijay Bhunje

AT

SUNBEAM INSTITUTE OF INFORMATION TECHNOLOGY, PUNE

SUNBEAM INSTITUTE OF INFORMATION TECHNOLOGY, PUNE.

CERTIFICATE

This is to certify that the project

Garage Management System

Has been submitted by

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Tushar Pawar
Kiran Padangale

In partial fulfillment of the requirement for the Course of **PG Diploma in Advanced Computing (PG-DAC AUG2015)** as prescribed by The **CDAC** ACTS, PUNE.

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Date: 23-JAN-2021

Mr. Digvijay Bhunje
Project Guide

Alumni Mentor

ACKNOWLEDGEMENT

The successful completion of a project is generally not an individual effort. It is an outcome of cumulative efforts of a number of persons, each having its own importance to the objective. This section is a value of thanks and gratitude towards all those persons who have directly or indirectly contributed in their own special way towards the completion of the project. For their invaluable comments and suggestions, we wish to thank them all.

We owe our gratitude and appreciation to our guide Mr. Digvijay Bhunje whose help, stimulating suggestions and encouragement, helped us to coordinate our project especially in writing this report.

We would also like to express our gratitude towards Sunbeam faculty and management for their Extended Support.

Our thanks and appreciations also go to my friends in developing the project and people who have willingly helped me out with their abilities.

ABSTRACT

We generally rely on the small and medium scale garages for servicing of our vehicles. However, such automobile garages don't have the benefits of computerization as much as the large size service centers have. Our web system attempts to provide this advantage to such garages so that they can maintain records of the work details of each servicing and also manage better relation with their customers through various offers to the clients. Notification about servicing completion can be provided to the customers. So if network of number of garage on system is increased, it becomes easier to manage them. Being a web based system; it can be accessed quite easily by all users from PCs.

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INTRODUCTION

Garage Management System is a windows application which aims to enables the user to keep track of all the activities of a garage. It is a web based application which helps the user to manage the stocks available in the garage, check for repair estimates, delivery etc. It maintains vehicle service history and mechanic shop time. Our web system attempts to provide this advantage to such garages so that they can maintain records of the work details of each servicing and also manage better relation with their customers through various offers to the clients. It also manages the inventory of the vehicle parts. It shall maintain the database of all the vehicles that are serviced and shall be able to send service notification to customers based on the service dates. It has secured access to admin. The admin shall be able to keep track of different users like supervisor, receptionist, principal etc. It is a smart web UI which could assist the garage owners to keep track of all the events in the garage.

PROJECT OVERVIEW AND SUMMARY

PURPOSE

The purpose of this project is to provide car or any other automobile servicing system more effectively than the existing system. There are some disadvantages of the existing service center management systems. These disadvantages are overcome by the automobile service center management system. And it can be made handily available to every person. Previously people could not get help or locate the service centers conveniently in case of their car break-down or any other emergencies. Thus GMS is proposed to assist people and fulfill their requirements easily.

This project enables the user to keep track of all the activities of a garage. It is a web based application which helps the user to manage the stocks available in the garage, check for repair estimates, delivery etc. It maintains vehicle service history and mechanic shop time. It also manages the inventory of the vehicle parts. It shall maintain the database of all the vehicles that are serviced and shall be able to send service notification to customers based on the service dates. It has secured access to admin. The admin shall be able to keep track of different users like supervisor, receptionist, principal etc. It is a smart web UI which could assist the garage owners to keep track of all the events in the garage.

SCOPE

- ✓ Currently vehicle servicing management has become a tedious job.
- ✓ Small and medium scale garage, service centers have to manage data about customers, services offered to them.
- ✓ It is difficult for small scale businesses to maintain data for longer time as they are using paper based system.
- ✓ Customers also need to find nearest garage which provide authentic service.
- ✓ Using this system they will be able to maintain customer and services data.
- ✓ Also multiple services centers which are using the same system will be able to synchronize their work.
- ✓ We are also solving the problem from customer's end by making ease of choice. They can choose the service center nearby their location.

USER CLASSES AND CHARACTERISTICS

In this software, there is an Admin. Admin can add new vendors to the system which is another module of software. Vendors can add new Employees which is also another part of system. Employees can create job card for customer. Customer can use the software for registering to the system. Customer can book the servicing and can opt for pick and drop service.

TECHNOLOGIES USED

MySQL

Angular

Spring Boot with JPA

REQUIREMENTS

FUNCTIONAL REQUIREMENTS

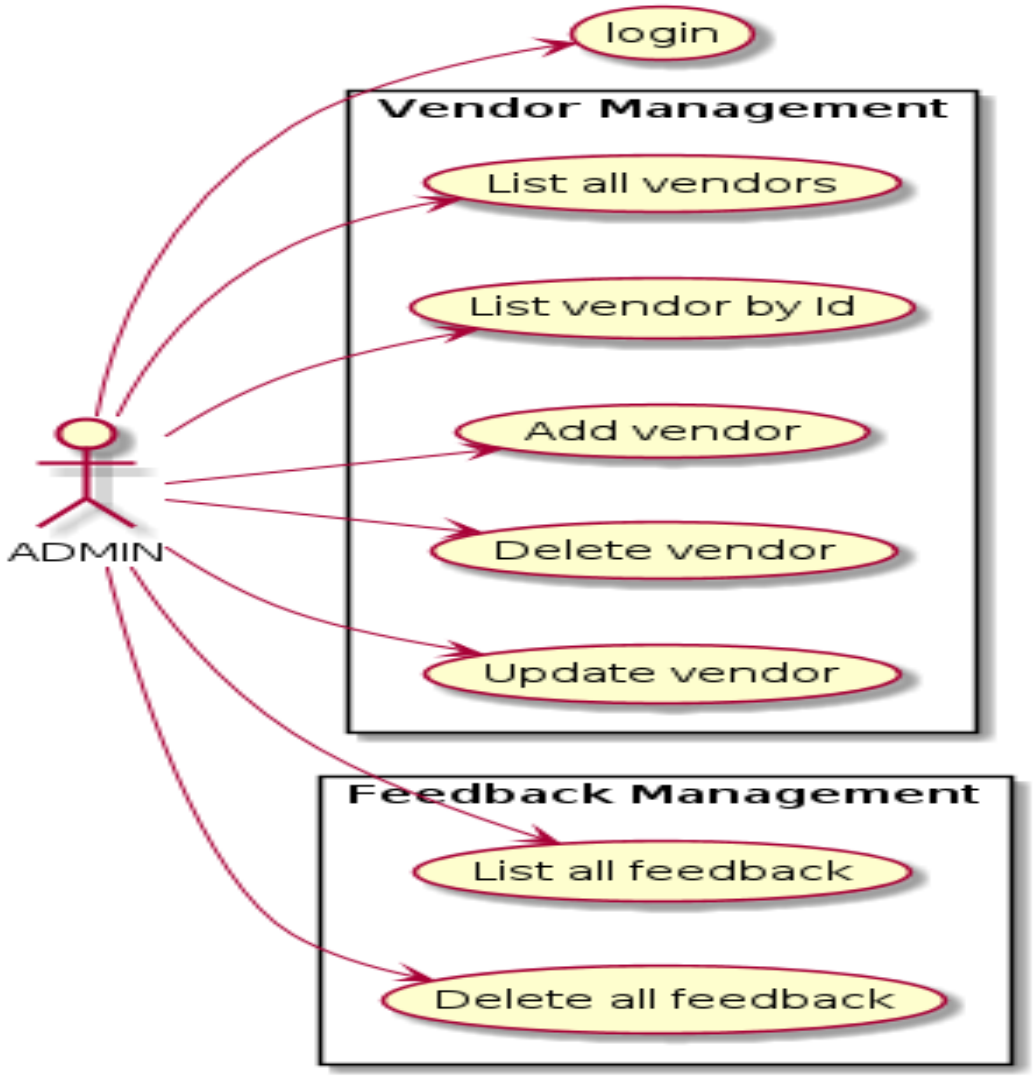
The major functionality of this product is divided into four categories.

- Administrative Functions.
- Vendor Functions.
- Employee Functions.
- Customer Functions.

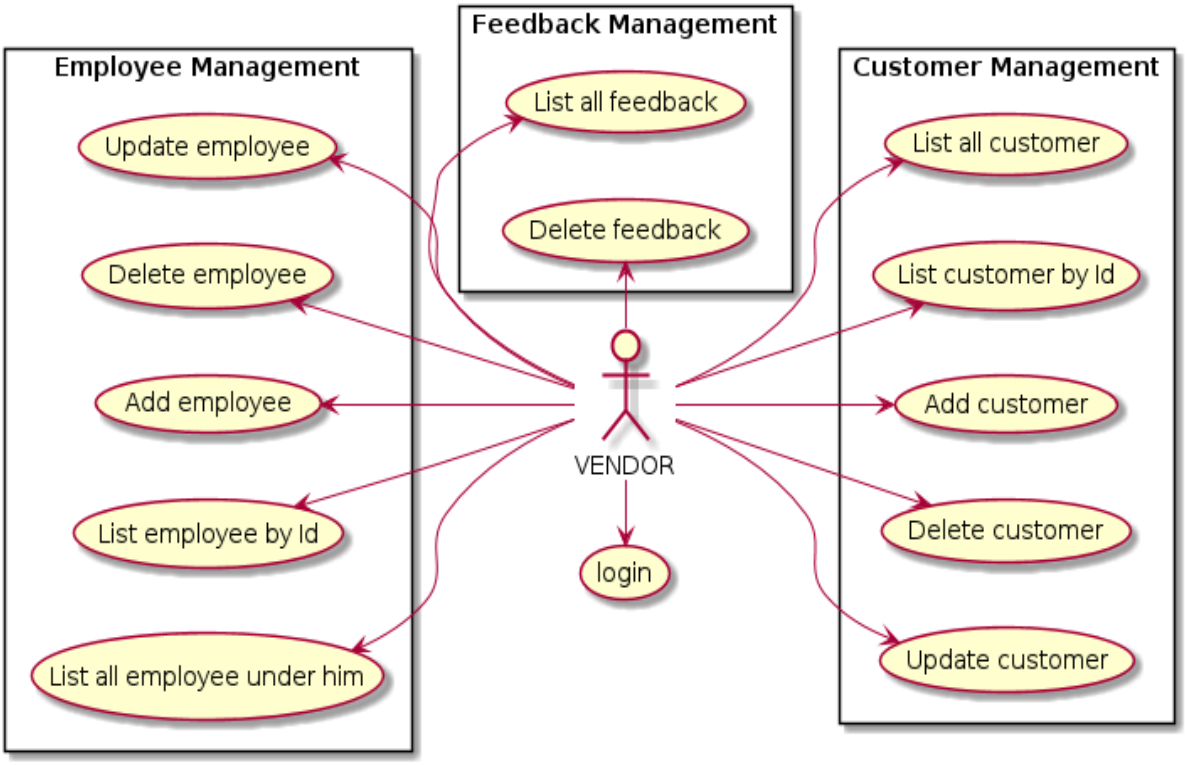
In this application each and every user must having their own Email ID and Password, using these Email ID and Password only they can directly enter into their corresponding Login forms.

System analysis will be performed to determine if it is feasible to design information based on policies and plans of the organization and on user requirements and to eliminate the weaknesses of the present system.

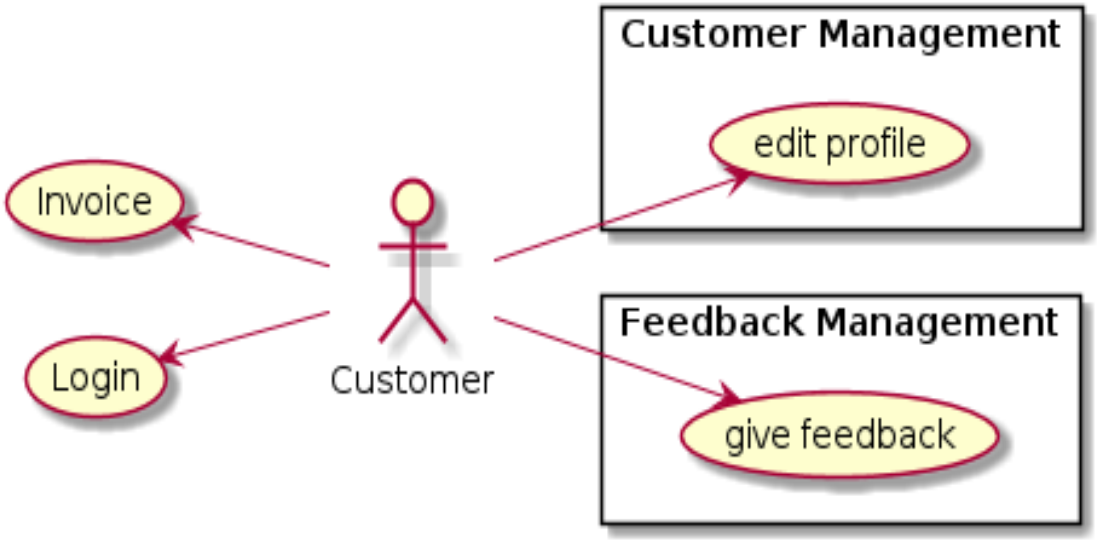
1. **Administrative Functions.**



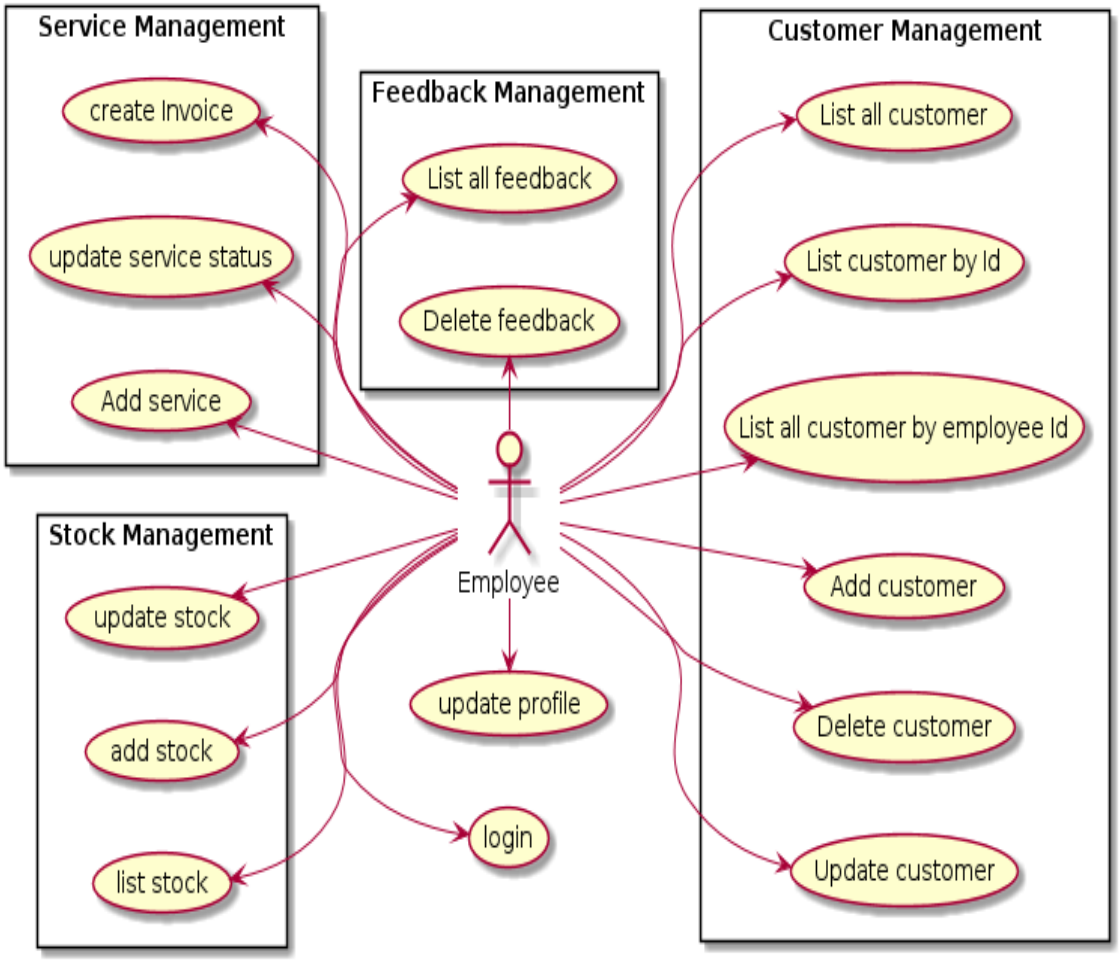
2. Vendor Functions.



3. Customer Functions.

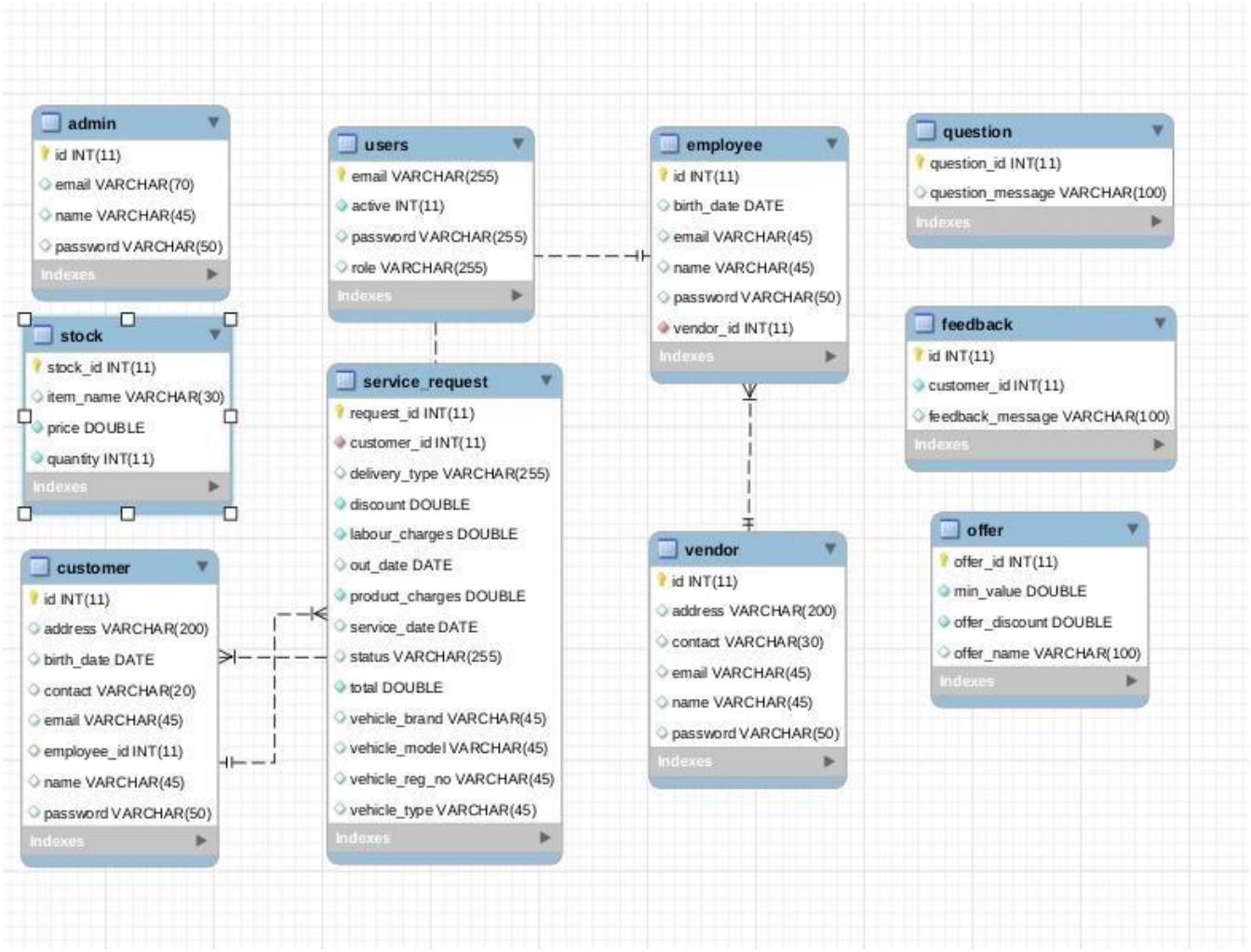


4. Employee Functions

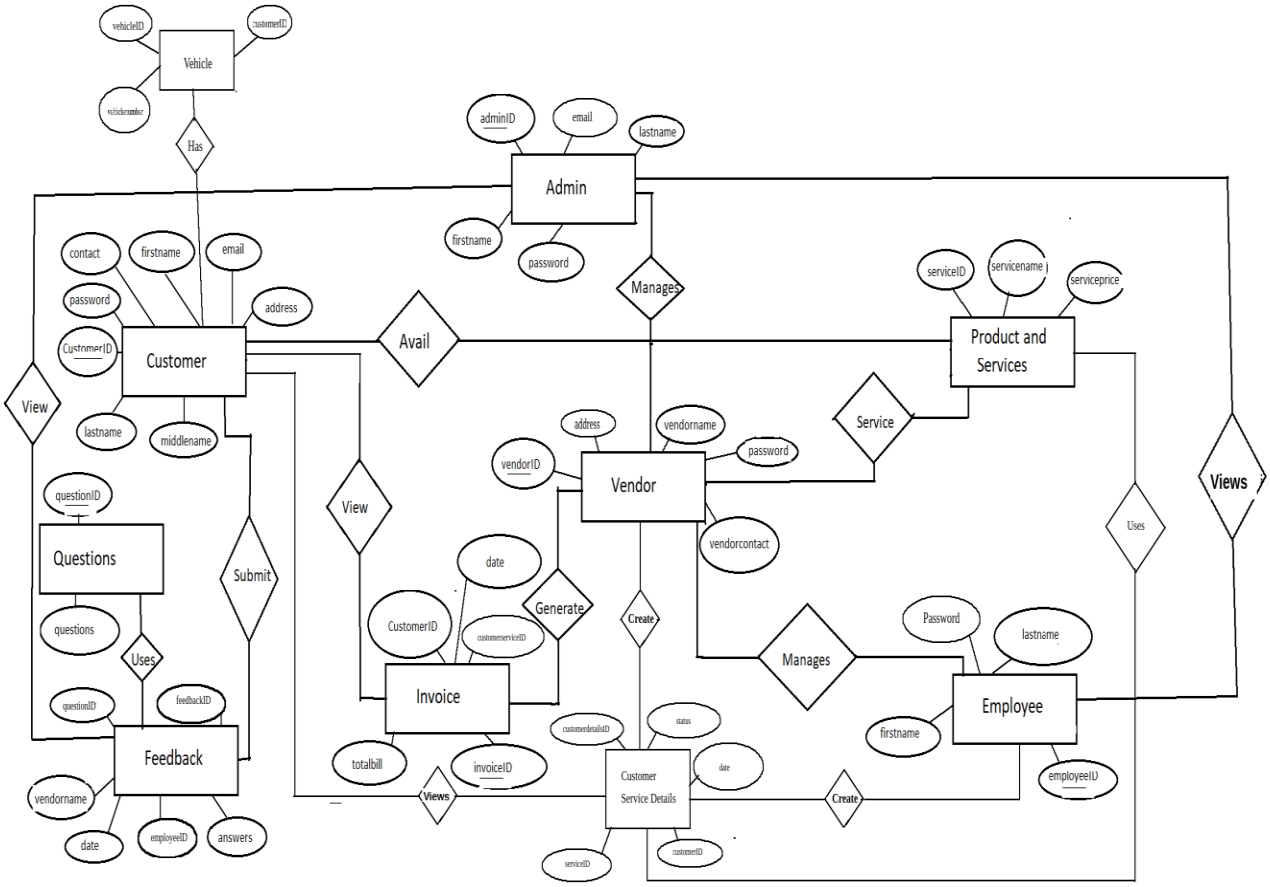


PROJECT DESIGN

CLASS-DIAGRAM



ER-DIAGRAM


vehicleID
customerID
Vehicle
vehiclenumber
Has
adminID
email
lastname
Admin
firstname
password
Manages
contact
firstname
email
password
address
CustomerID
Customer
Avail
serviceID
servicename
serviceprice
Product and Services
View
lastname
middlename
address
vendorname
password
vendorID
Vendor
Service
Views
questionID
Questions
Submit
View
date
Generate
Create
CustomerID
customerserviceID
Invoice
Uses
questions
Uses
Password
lastname
Manages
Employee
questionID
feedbackID
Feedback
totalbill
invoiceID
Views
customerdetailsID
status
Customer Service Details
date
Create
firstname
employeeID
vendorname
date
employeeID
answers
serviceID
customerID

DATABASE DESIGN

1. Users Table

Field	Type	Null	Key	Default	Extra
email	varchar(255)	NO	PRI	NULL	
active	varchar(70)	NO		NULL	
password	int(11)	YES		NULL	
role	varchar(255)	YES		NULL	

2. Admin

Field	Type	Null	Key	Default	Extra
id	int(11)	NO	PRI	NULL	auto_increament
email	varchar(70)	YES		NULL	
name	varchar(45)	YES		NULL	
password	varchar(50)	YES		NULL	

3. Vendor

Field	Type	Null	Key	Default	Extra
id	int(11)	NO	PRI	NULL	auto_increament
address	varchar(200)	YES		NULL	
contact	varchar(30)	YES		NULL	
email	varchar(45)	YES		NULL	
name	varchar(45)	YES		NULL	
password	varchar(50)	YES		NULL	

4. Employee

Field	Type	Null	Key	Default	Extra
id	int(11)	NO	PRI	NULL	auto_increament
birth_date	date	YES		NULL	
email	varchar(45)	YES		NULL	
name	varchar(45)	YES		NULL	
password	varchar(50)	YES		NULL	
vendor_id	int(11)	NO	MUL	NULL	

5. Customer

Field	Type	Null	Key	Default	Extra
id	int(11)	NO	PRI	NULL	auto_increament
address	varchar(200)	YES		NULL	
birth_date	date	YES		NULL	
contact	varchar(20)	YES		NULL	
email	varchar(45)	YES		NULL	
employee_id	int(11)	NO	MUL	NULL	
name	varchar(45)	YES		NULL	
password	varchar(50)	YES		NULL	

6. Feedback

Field	Type	Null	Key	Default	Extra
id	int(11)	NO	PRI	NULL	auto_increament
customer_id	int(11)	NO		NULL	
feedback_message	varchar(100)	YES		NULL	

7. Question

Field	Type	Null	Key	Default	Extra
question_id	int(11)	NO	PRI	NULL	auto_increament
feedback_message	varchar(100)	YES		NULL	

8. Offer

Field	Type	Null	Key	Default	Extra
offer_id	int(11)	NO	PRI	NULL	auto_increament
min_value	double	NO		NULL	
offer_discount	double	NO		NULL	
offer_name	varchar(100)	YES		NULL	

9. Service Request

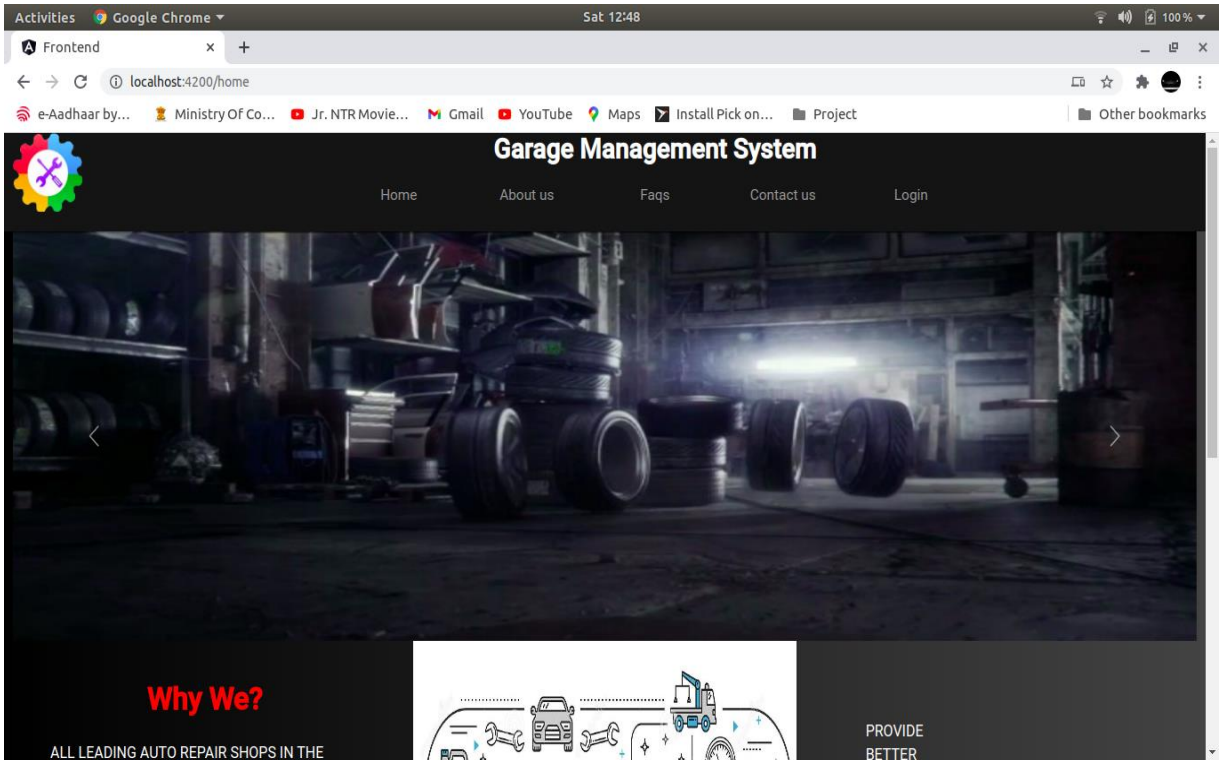
Field	Type	Null	Key	Default	Extra
request_id	int(11)	NO	PRI	NULL	auto_increament
customer_id	int(11)	NO	MUL	NULL	
delivery_type	varchar(255	YES		NULL	
discount	double	NO		NULL	
labour_charges	double	NO		NULL	
out_date	date	YES		NULL	
product_charges	double	NO		NULL	
service_date	date	YES		NULL	
status	varchar(255)	YES		NULL	
total	double	NO		NULL	
vehicle_brand	varchar(45)	YES		NULL	
vehicle_model	varchar(45)	YES		NULL	
vehicle_reg_no	varchar(45)	YES		NULL	
vehicle_type	varchar(45)	YES		NULL	

10.Stock

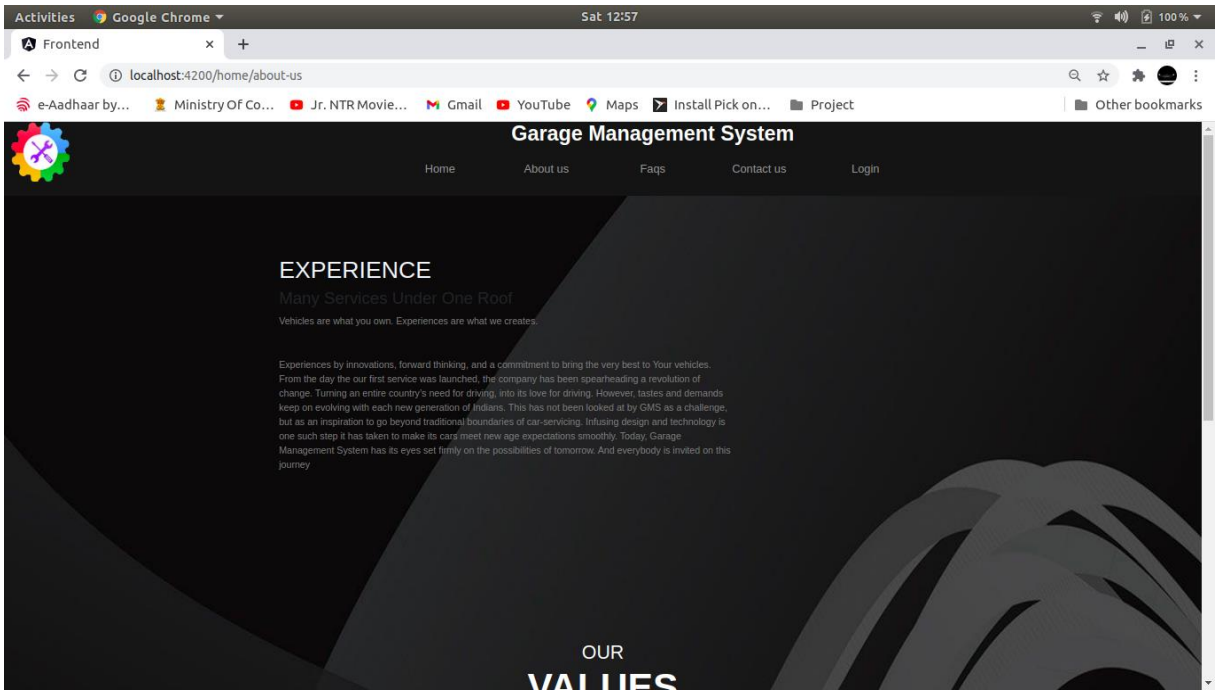
Field	Type	Null	Key	Default	Extra
stock_id	int(11)	NO	PRI	NULL	auto_increament
item_name	varchar(30)	YES	UNI	NULL	
price	double	NO		NULL	
quantity	int(11)	NO		NULL	

PROJECT SCREENSHOTS

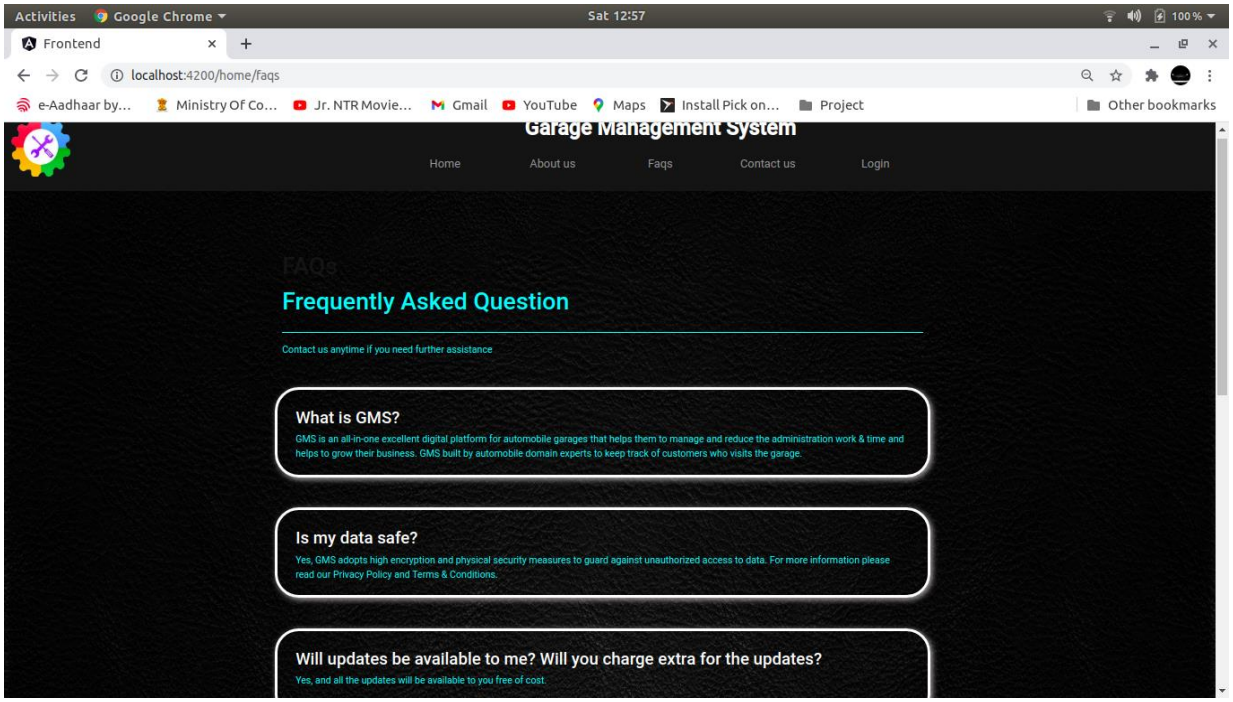
Website Home



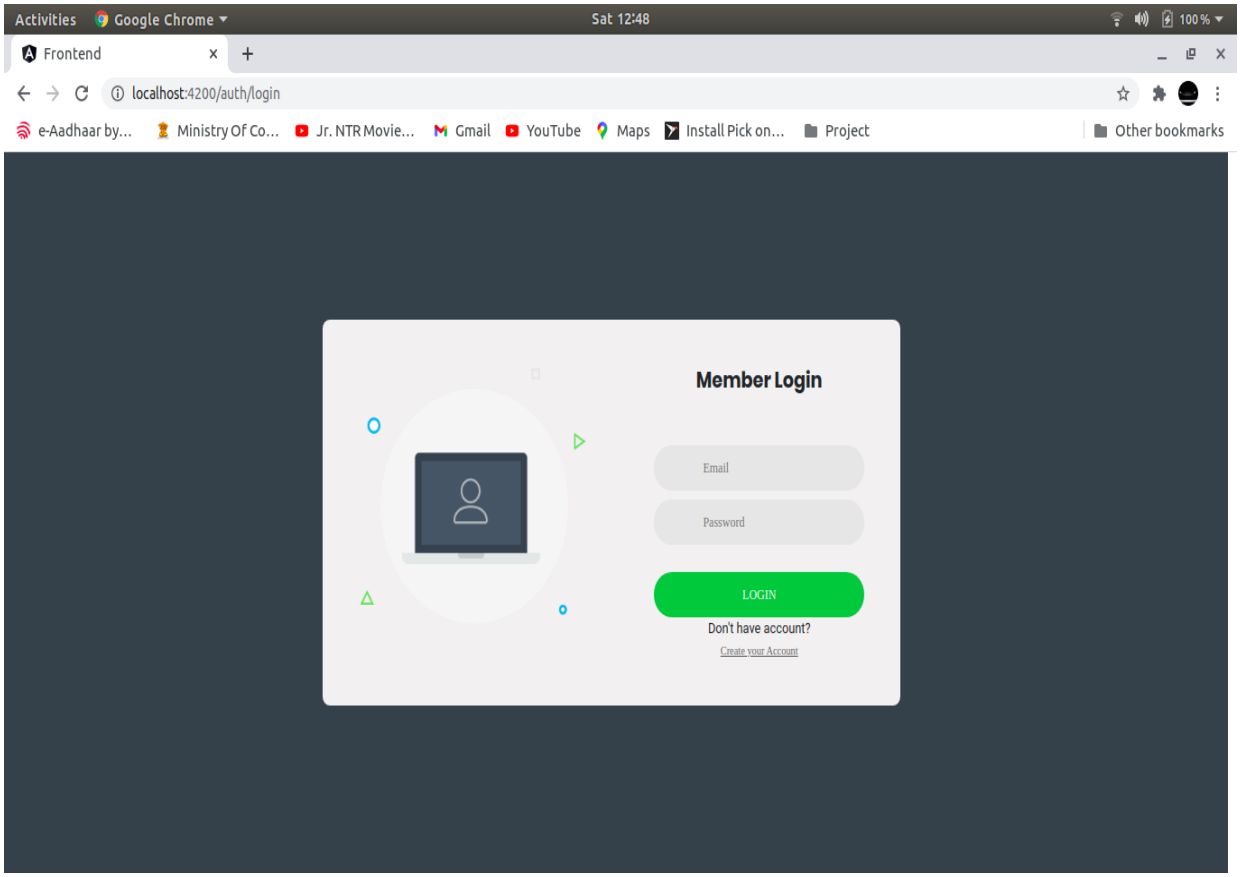
About-us



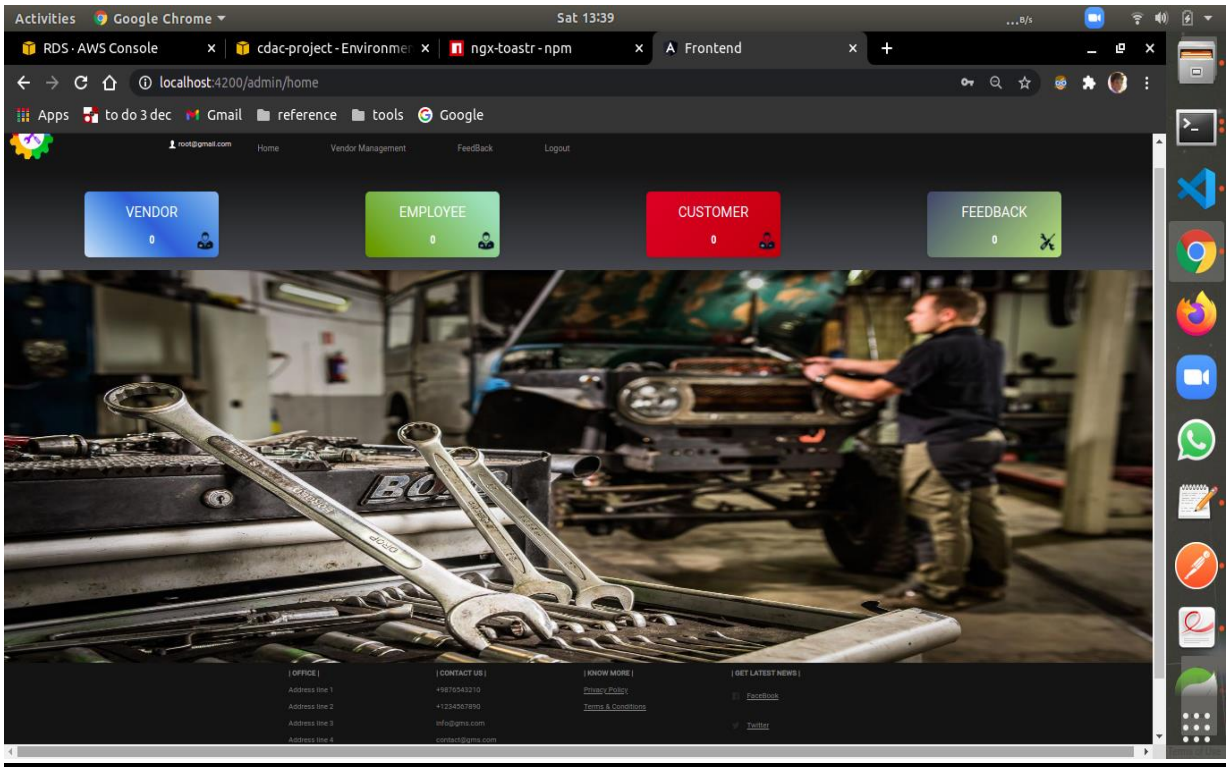
Frequently Asked Questions



Login


Activities
Google Chrome
Sat 12:48
100 %
Frontend
localhost:4200/auth/login
e-Aadhaar by...
Ministry Of Co...
Jr. NTR Movie...
Gmail
YouTube
Maps
Install Pick on...
Project
Other bookmarks
Member Login
Email
Password
LOGIN
Don't have account?
Create your Account

Admin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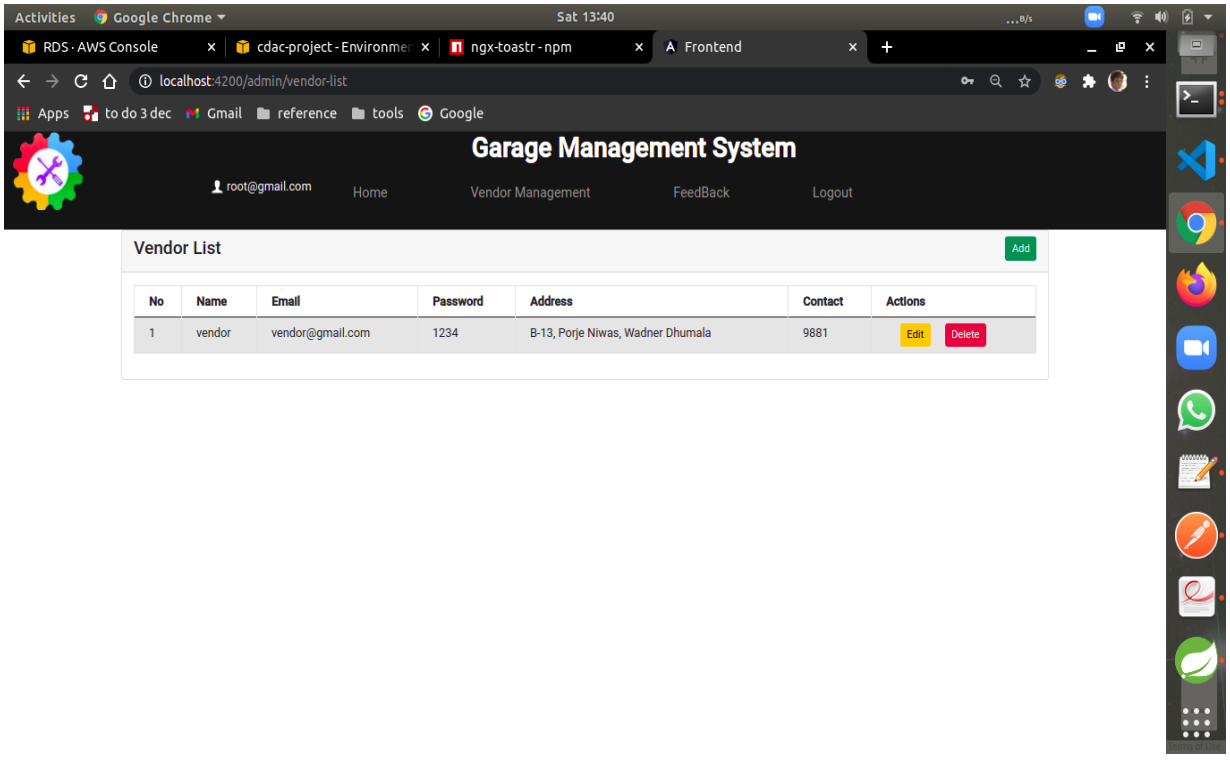
RDS - AWS Console
cdac-project - Environmen
ngx-toastr - npm
Frontend
localhost:4200/admin/home
Apps
to do 3 dec
Gmail
reference
tools
Google
root@gmail.com
Home
Vendor Management
FeedBack
Logout
VENDOR
0
EMPLOYEE
0
CUSTOMER
0
FEEDBACK
0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cdac-project - Environmen
ngx-toastr - npm
Frontend
localhost:4200/admin/vendor-list
Apps
to do 3 dec
Gmail
reference
tools
Google
Garage Management System
root@gmail.com
Home
Vendor Management
FeedBack
Logout
Vendor List
Add
No
Name
Email
Password
Address
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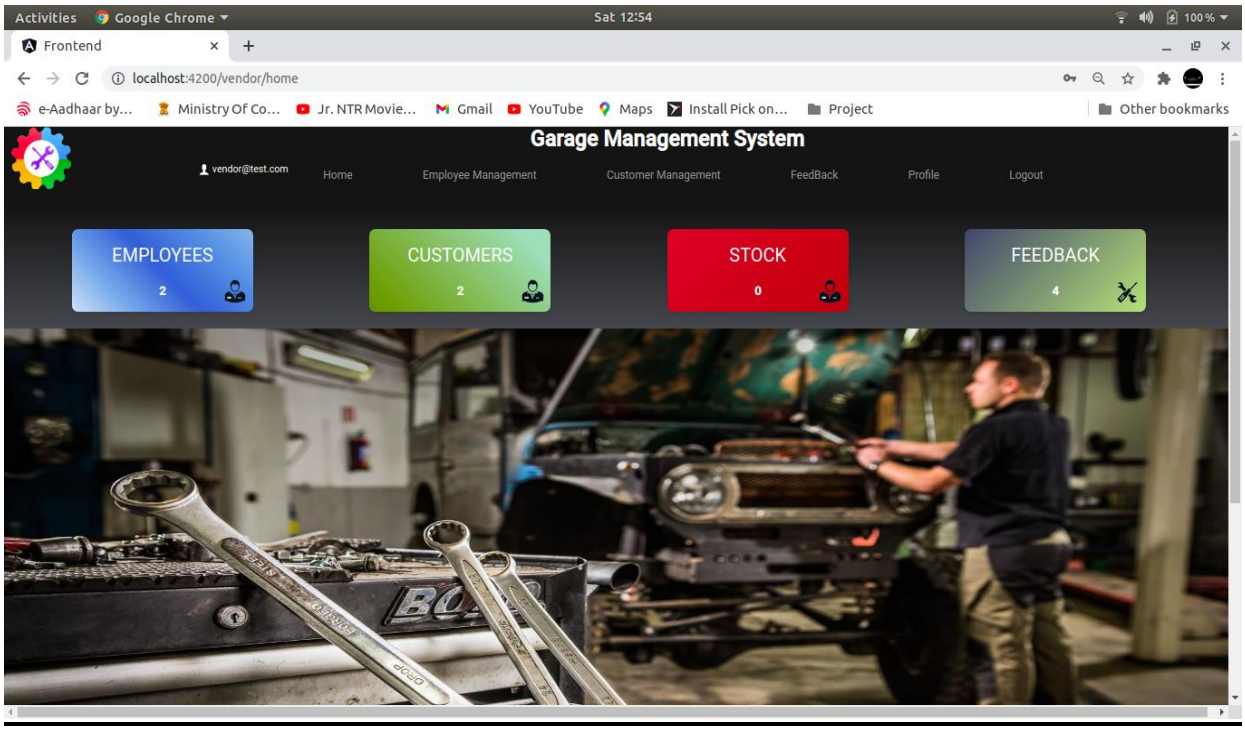
Actions
1
vendor
vendor@gmail.com
1234
B-13, Porje Niwas, Wadner Dhumala
9881
Edit
Delete

Vendor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Google Chrome
Sat 12:54
Frontend
localhost:4200/vendor/home
e-Aadhaar by...
Ministry Of Co...
Jr. NTR Movie...
Gmail
YouTube
Maps
Install Pick on...
Project
Other bookmarks
Garage Management System
vendor@test.com
Home
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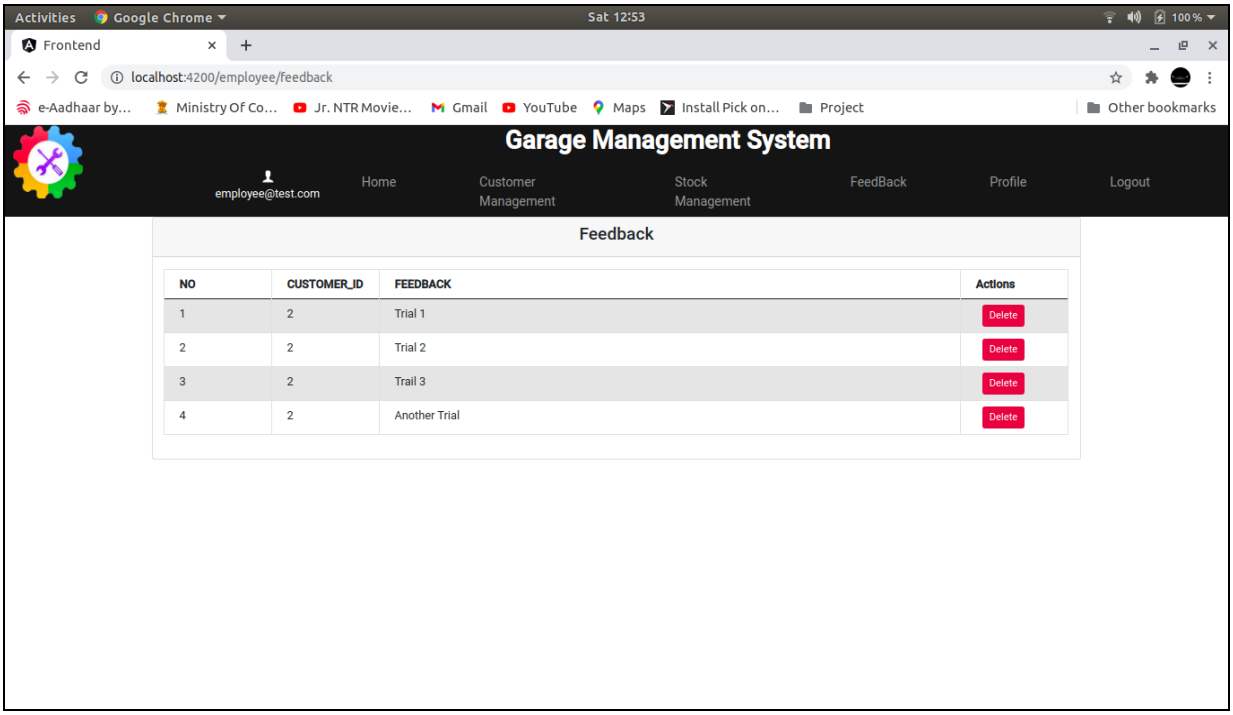
Customer Management
FeedBack
Profile
Logout
EMPLOYEES
2
CUSTOMERS
2
STOCK
0
FEEDBACK
4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Google Chrome
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Frontend
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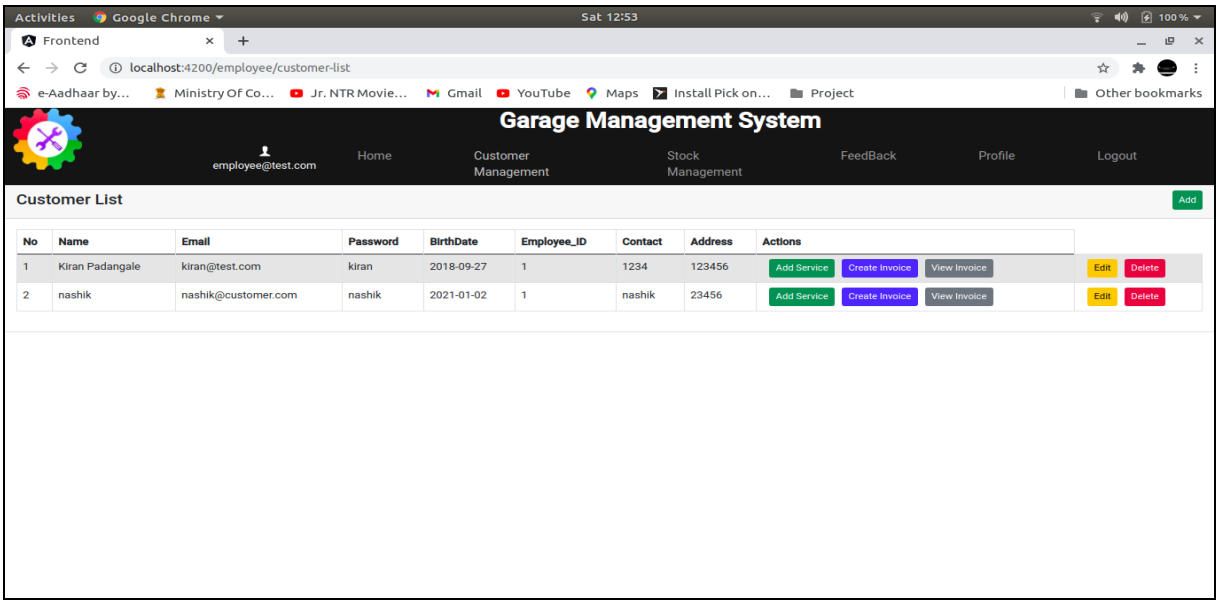
Ministry Of Co...
Jr. NTR Movie...
Gmail
YouTube
Maps
Install Pick on...
Project
Other bookmarks
Garage Management System
employee@test.com
Home
Customer Management
Stock Management
FeedBack
Profile
Logout
Feedback
NO
CUSTOMER_ID
FEEDBACK
Actions
1
2
Trial 1
Delete
2
2
Trial 2
Delete
3
2
Trail 3
Delete
4
2
Another Trial
Delete

Employee


Activities
Google Chrome
Sat 12:53
Frontend
localhost:4200/employee/customer-list
e-Aadhaar by...
Ministry Of Co...
Jr. NTR Movie...
Gmail
YouTube
Maps
Install Pick on...
Project
Other bookmarks
Garage Management System
employee@test.com
Home
Customer Management
Stock Management
FeedBack
Profile
Logout
Customer List
Add
No
Name
Email
Password
BirthDate
Employee_ID
Contact
Address
Actions
1
Kiran Padangale
kiran@test.com
kiran
2018-09-27
1
1234
123456
Add Service
Create Invoice
View Invoice
Edit
Delete
2
nashik
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1
nashik
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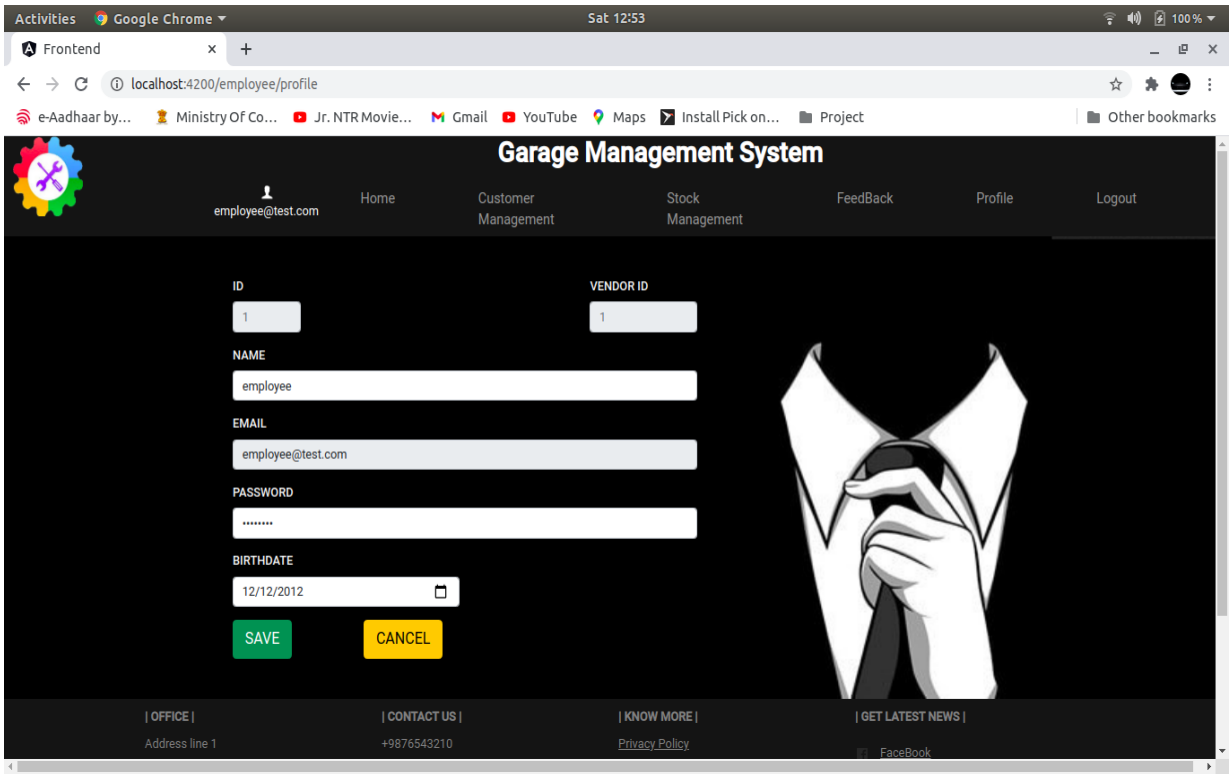
Add Service
Create Invoice
View Invoice
Edit
Delete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Frontend
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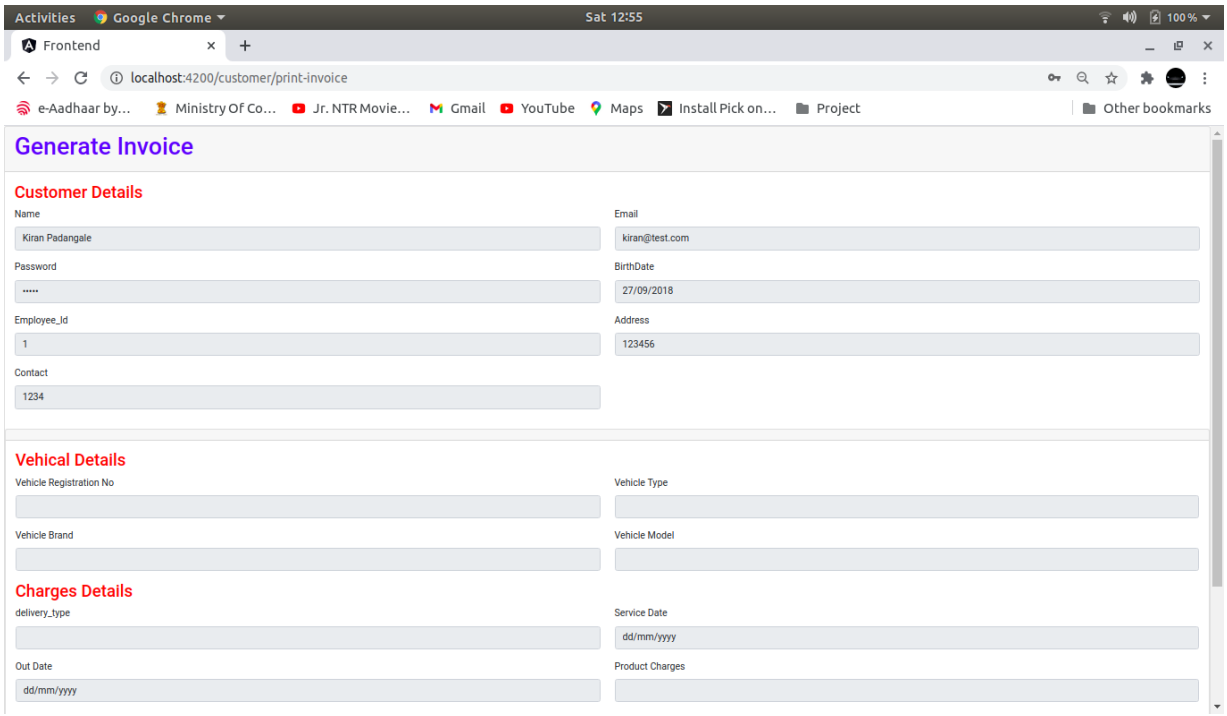
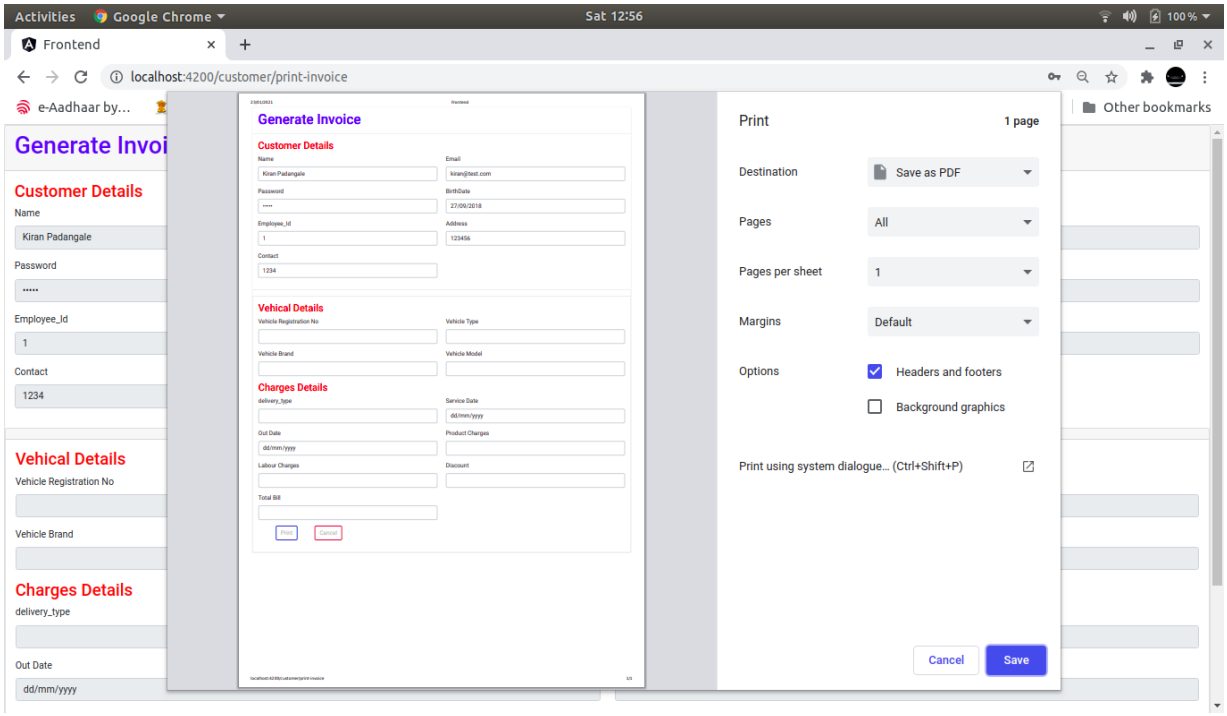
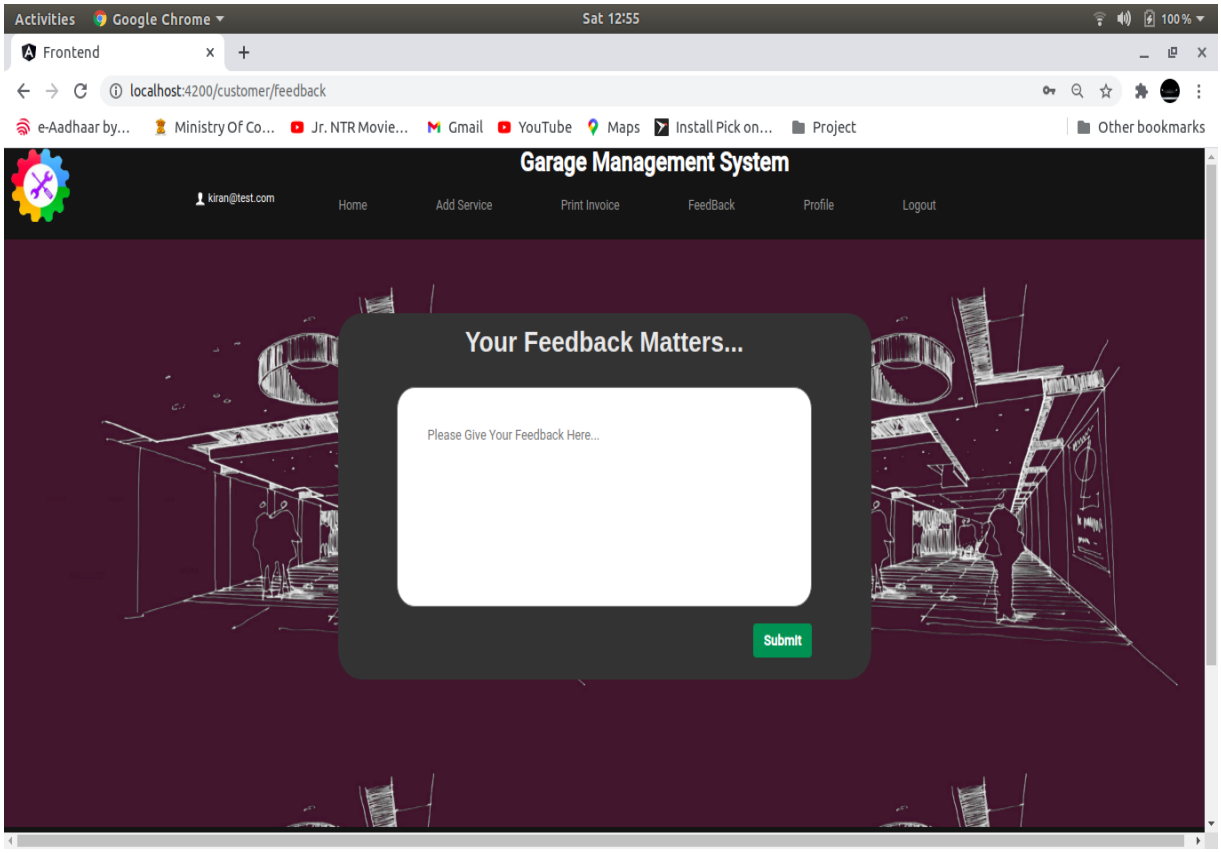
Ministry Of Co...
Jr. NTR Movie...
Gmail
YouTube
Maps
Install Pick on...
Project
Other bookmarks
Garage Management System
employee@test.com
Home
Customer Management
Stock Management
FeedBack
Profile
Logout
ID
1
VENDOR ID
1
NAME
employee
EMAIL
employee@test.com
PASSWORD
BIRTHDATE
12/12/2012
SAVE
CANCEL
| OFFICE |
Address line 1
| CONTACT US |
+9876543210
| KNOW MORE |
Privacy Policy
| GET LATEST NEWS |
FaceBook

Customer


Activities
Google Chrome
Sat 12:55
100 %
Frontend
localhost:4200/customer/print-invoice
e-Aadhaar by...
Ministry Of Co...
Jr. NTR Movie...
Gmail
YouTube
Maps
Install Pick on...
Project
Other bookmarks
Generate Invoice
Customer Details
Name
Kiran Padangale
Email
kiran@test.com
Password
BirthDate
27/09/2018
Employee_Id
1
Address
123456
Contact
1234
Vehical Details
Vehicle Registration No
Vehicle Type
Vehicle Brand
Vehicle Model
Charges Details
delivery_type
Service Date
dd/mm/yyyy
Out Date
dd/mm/yyyy
Product Charges


Activities
Google Chrome
Sat 12:56
100 %
Frontend
localhost:4200/customer/print-invoice
e-Aadhaar by...
Other bookmarks
Generate Invoi
Customer Details
Name
Kiran Padangale
Password
Employee_Id
1
Contact
1234
Vehical Details
Vehicle Registration No
Vehicle Brand
Charges Details
delivery_type
Out Date
dd/mm/yyyy
Generate Invoice
Customer Details
Vehical Details
Charges Details
Print
1 page
Destination
Save as PDF
Pages
All
Pages per sheet
1
Margins
Default
Options
Headers and footers
Background graphics
Print using system dialogue... (Ctrl+Shift+P)
Cancel
Save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Ministry Of Co...
Jr. NTR Movie...
Gmail
YouTube
Maps
Install Pick on...
Project
Other bookmarks
Garage Management System
kiran@test.com
Home
Add Service
Print Invoice
FeedBack
Profile
Logout
Your Feedback Matters...
Please Give Your Feedback Here...
Submit

TESTING

To build up our project we used software testing process for executing a program with the intent of finding error that is uncovering errors in a program makes it a feasible task and also typing to find the errors (whose presence is assumed) in a program. As it is a destructive process.
Types of testing we use in our project

Here we just mentioned that how the testing is related to this software and in which way we have test the software? In our project we have used five types of testing this are listed below –

UNIT TESTING –
Unit testing where individual program units or object class are tested here by using this testing we have focus on testing functionality of the methods.

MODULE TESTING–
Where this is the combination of unit program is called module. Here we tested unit program is where the module program have dependency.

SUB SYSTEM TESTING –
Then we combined some module for the preliminary system testing in out project.

SYSTEM TESTING –
Where it is combination of two or more sub system and then it is tested here we tested the entire system a per requirement.

ACEEPTANCE TESTING –
Normally this type of testing is done to verify if system meets the customer specified requirements. After submitting this project to the user then they tested and to determine whether to accept the application. It is the system of testing performed by the customer to determine where they should accept the delivery of system.

CONCLUSION

Currently small and medium scale service center don’t have synchronization between their task and customer.

By making online vehicle management system we have solved the problem from vendor and customer end and more convenience is added to the existing system.

In future scope this system will be available with large scale database and can accommodate many customers and vendors.

To find the location of new customer for that particular city we can add Google API to find nearest service center.

This system can also be developed on mobile application so that it can be access remotely.