Project Name:

Vehicle Management System (VMS)

GROUP - 04

Our team members:

1. SHAON, INDROJIT DHE (ID: 18-38674-3)
2. Nabajit Dey (ID: 19-40618-1)
3. Pranto Saha (ID: 18-38805-3)
4. Sakib-Ul-Ahsan (ID: 20-42978-1)

PROJECT PROPOSAL PART:

1. Does the project have a clear target market or audience?

=> Yes, our project have a clear target market and audience also. We will add some new features in our software. Our unique features are Emergency customer support in the road, being able to buy every vehicle equipment and etc. Other companies do not have these features. But with these we will target the market. Also, we will target audience. We will give them standard equipment and emergency call support. Also by using our features, they will save their valuable time.

For emergency support, first they will call us. Then we will send our service on the spot. We will provide 24 hours service.

Moreover, the scope of work of garage owners will increase through our software. The software will be easily accessible. The peoples from the age of 20 to 65 years old will use the application. By using this application, both customers and garage mechanics can save their necessary time.

2. Does the team demonstrate a thorough understanding of the need, problem or opportunity, including evidence of research into the need, problem or opportunity?

=> Yes, Our team demonstrate a thorough understanding of the need, problem or opportunity, including evidence of research into the need, problem or opportunity.

We will always give priority to the needs of the customer. We will give maximum solution to their problems. Our team will always research new features. Then we will add new successful features. If we have a problem, we will try to solve it quickly.

3. Define the project's purpose and basic functionality easily in an understandable way?

=> Our main purpose is to provide maximum benefits to the customer through online support.

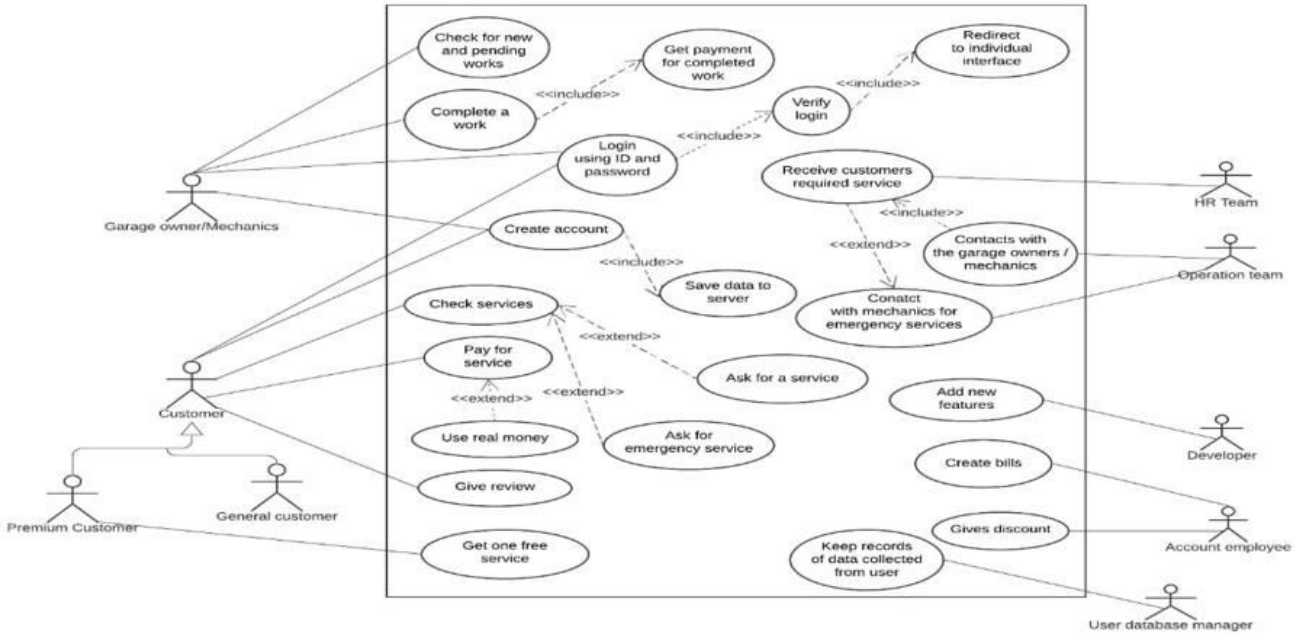
We provides 360-degree vehicle solutions & on-demand emergency repair services. In our app, there will be a login page. Customers and garage owners will create their accounts here. Each account will be an individual account, and the account database for the customers, garage owners and admin panel will be different. Everyone can use every required feature for them.

The website of the company will connect the software. After a successful login, a customer can choose any options, like - Home & On-road Emergency repair Support, Vehicle Health Consultancy, Vehicle Parts e-commerce platform and they can check the nearest garage from their location.

On the other hand, the garage owner or manager who will use the app to communicate with the customers can quickly locate where the customer is.

Whether the customer will come to the garage or they need to send a mechanic if it is an on-road emergency repair. Mobile data or wi-fi will be needed to use the application. The software will connect the company's chat bot so that anyone can check their car or bike problems using the bot. In addition to these, there are several other benefits.

USE CASE DIAGRAM:



1. **Use Case:** Working and payment process

2. **Author:** Group-4

3. **Date:** 01 October, 2021

4. <u>Purpose</u>: To provide customer service, emergency service and clear discussion about payment process.

5. <u>Overview:</u> "Vehicle Management System (VMS)" is an online platform that provides 360-degree vehicle solutions & on-demand emergency repair services. With the motto of being the roadside best friends, they want to create the biggest innovative revolution in the automobile industry within five years. They want to build an application for their customers and garage owners to manage everything efficiently. In their app, there will be a login page. If the customer or garage owner already have an account they can sign in;

Otherwise, they have to create an account.

Each account will be an individual account, and the account database for the customers, garage owners and admin panel will be different. With a single application, everyone can use every required feature for them. The website of the company will connect the software.

After a successful login, a customer can choose any options, like - Home & On-road Emergency repair Support, Vehicle Health Consultancy, Vehicle Parts e-commerce platform and they can check the nearest garage from their location.

On the other hand, the garage owner or manager who will use the app to communicate with the customers can quickly locate where the customer is. Whether the customer will come to the garage or they need to send a mechanic if it is an on-road

emergency repair or else what should a garage manager or owner know.

Admins of that company can also log in and check everything about the app. The company will update the software after some specific time for next five years depending on the customer feedback and upcoming new services. Mobile data or wi-fi will be needed to use the application. There will be some options for payment. The customers can use e-banking system for payment, or they can choose cash. They can buy automobile-related products using the app, and they can also pay using e-banking or cash on delivery. The software will connect the company's chat bot so that anyone can check their car or bike problems using the bot. They can detect a problem by themselves.

6. <u>Actors:</u> Customer (Premium, General), Garage owners/Mechanics, HR Team, Operation Team,

Developer, Account employee, User database manager.

7. **Pre-Condition:**

- Customer and Garage owner must have an account.
- The garage owners must provide updates on his services in software.
- HR team must accept the customer request.
- The account employee has to create the bill.

8. **Post Condition:**

- After successful login, the customer needs to be given specific directions for the desired service.
- The customer will choose the payment method.
- The developer will add new features for software.

9. Typical Course of events:

Actor Actions	System Actions
1. Begins when a customer face vehicle related problem.	
2. Then customer open the app and logs in to the account.	3. The System verifies the customer ID and Password.
4. After a successful login, a customer go to service option and choose any service options.	
5. HR team receives customer's required service	6. The System sends information to the operation team
7. Operation team contacts with garage owners.	8. Also the system sends customer's required info to garage owners.
9. Then garage owners completes fixed work for customer.	10. The System sends work's info to account employee
11. Account employee creates the bill and sends it to the customer.	
12. Customer pays the bill	13. The System confirms customer's bill
14. User data management Saves all processing	

10. Alternative flow of events:

- Step 3: Customer verification failed. Display an

error message, cancel login step.

- Step 7: Garage owner refuse the service. Operation team sends message HR team and HR team inform to customer.

- Step12: Customer failed to Payment. The bill has been added to the customer's loan repayment section.

11. Exceptional flow of events:

- System failure in the process before step 3 or 6 or 8 or 10; cancel the next step

USER STORY:

USER STORY-1

***G. O. = Garage Owner**

Title: Conduct the registration for G. O.	**Priority:** High	**Estimate:** 1 Day; 1 person
As a garage owner/ mechanics **I want to** create a service provider id **So that I can** add my car services		
Acceptance criteria **Given** Name, Email, Password **When** I provide the information **Then** I can access my account		
Developer: MD AJGAR UDDIN **Platform:** Android, Windows		

USER STORY-2

Title: Conduct the registration for User	**Priority:** Medium	**Estimate:** 1 Day; 1 person
As a user **I want to** create a user id **So that I can** get services for my car		
Acceptance criteria **Given** Name, Email, Password **When** I provide the information **Then** I can allow to use any service with payment		
Developer: MD AJGAR UDDIN **Platform:** Android, Windows		

USER STORY-3

Title: Use the service interface from user id	**Priority:** Medium	**Estimate:** 5 Day; 3 person
As a user **I want to** request for a service **So that I can** repair my car and purchase new product		
Acceptance criteria **Given** service names **When** I choose a service **Then** they give me those service		
Developer: Mrs. Hafsa Afrin **Platform:** Android, Windows		

USER STORY-4

Title: Conduct the Home Page from GO id	**Priority:** High	**Estimate:** 3 Day; 2 person
As a garage owner/mechanics **I want to** check my pending work **So that I can** ensure about my work info		
Acceptance criteria **Given** account id, account password **When** I choose the option of pending work **Then** they can give me customer address & working details		
Developer: Mr Arefin Siddque **Platform:** Android, Windows		

USER STORY-5

Title: Use Payment Method	**Priority:** High	**Estimate:** 5 Day; 3 person
As a user **I want to** use online payment system **So that I can** pay for my service		
Acceptance criteria **Given** customer's work details **When** I choose a payment option **Then** they give me a bill and I can clear my bill		
Developer: Mr Arefin Siddque **Platform:** Android, Windows		

USER STORY-6

Title: Use the review interface	**Priority:** Medium	**Estimate:** 5 Day; 3 person
As a user **I want to** say about my service **So that I can** give them a sort feedback		
Acceptance criteria **Given** message box **When** I write my message in the box **Then** they will properly know about their customer satisfaction		
Developer: Mrs. Hafsa Afrin **Platform:** Android, Windows		

USER STORY-7

Title: Conduct the Customer's Request	**Priority:** High	**Estimate:** 5 Day; 3 person
As a HR Team's member **I want to** contact with garage owners **So that I can** give the requesting service to user		
Acceptance criteria **Given** Customer's chosen data **When** I received a service message from user **Then** I will contact with nearby garage owner		
Developer: Mrs. Hafsa Afrin **Platform:** Android, Windows		

USER STORY-8

Title: Conduct the system Management	**Priority:** Medium	**Estimate:** 8 Day; 6 person
As a Developer **I want to** update my system **So that I can** add new features		
Acceptance criteria **Given** System's Data **When** I develop my site **Then** user see new services		
Developer: Mrs Kaniz Fatema Roksana **Platform:** Android, Windows		

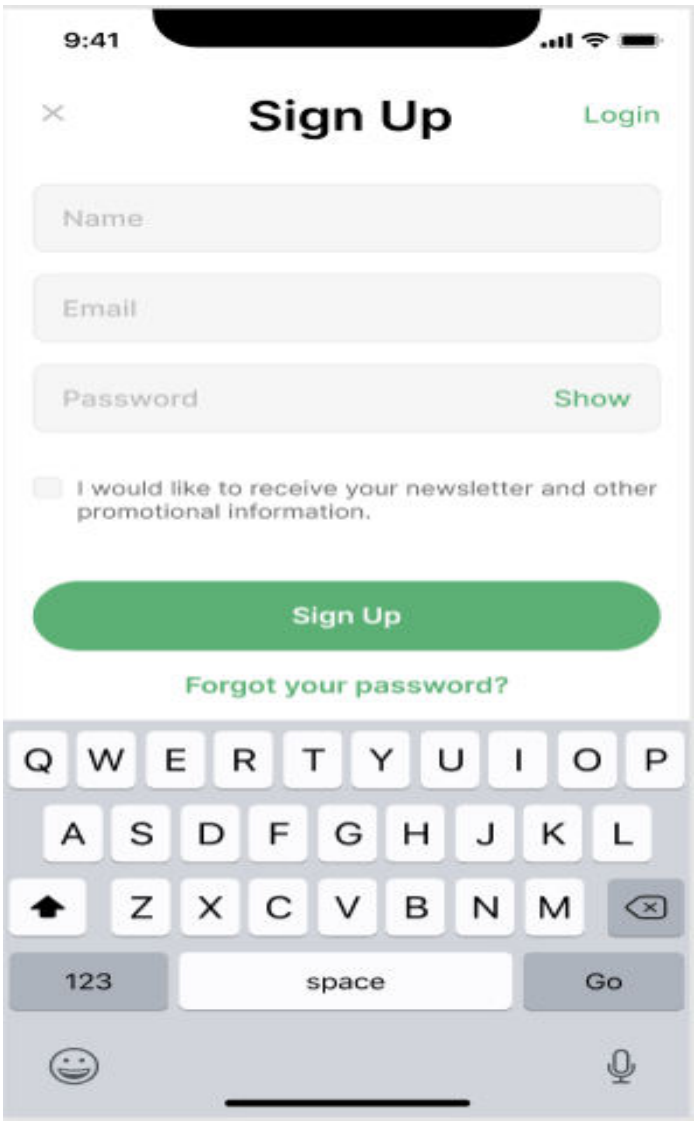
USER STORY-9

Title: Conduct the database	**Priority:** Medium	**Estimate:** 3 Day; 2 person
As a user database manager **I want to** keep user records **So that I can** collect and store user data		
Acceptance criteria **Given** database **When** I include any data in the system **Then** Database will store those data		
Developer: Mrs. Kaniz Fatema Roksana **Platform:** Android, Windows		

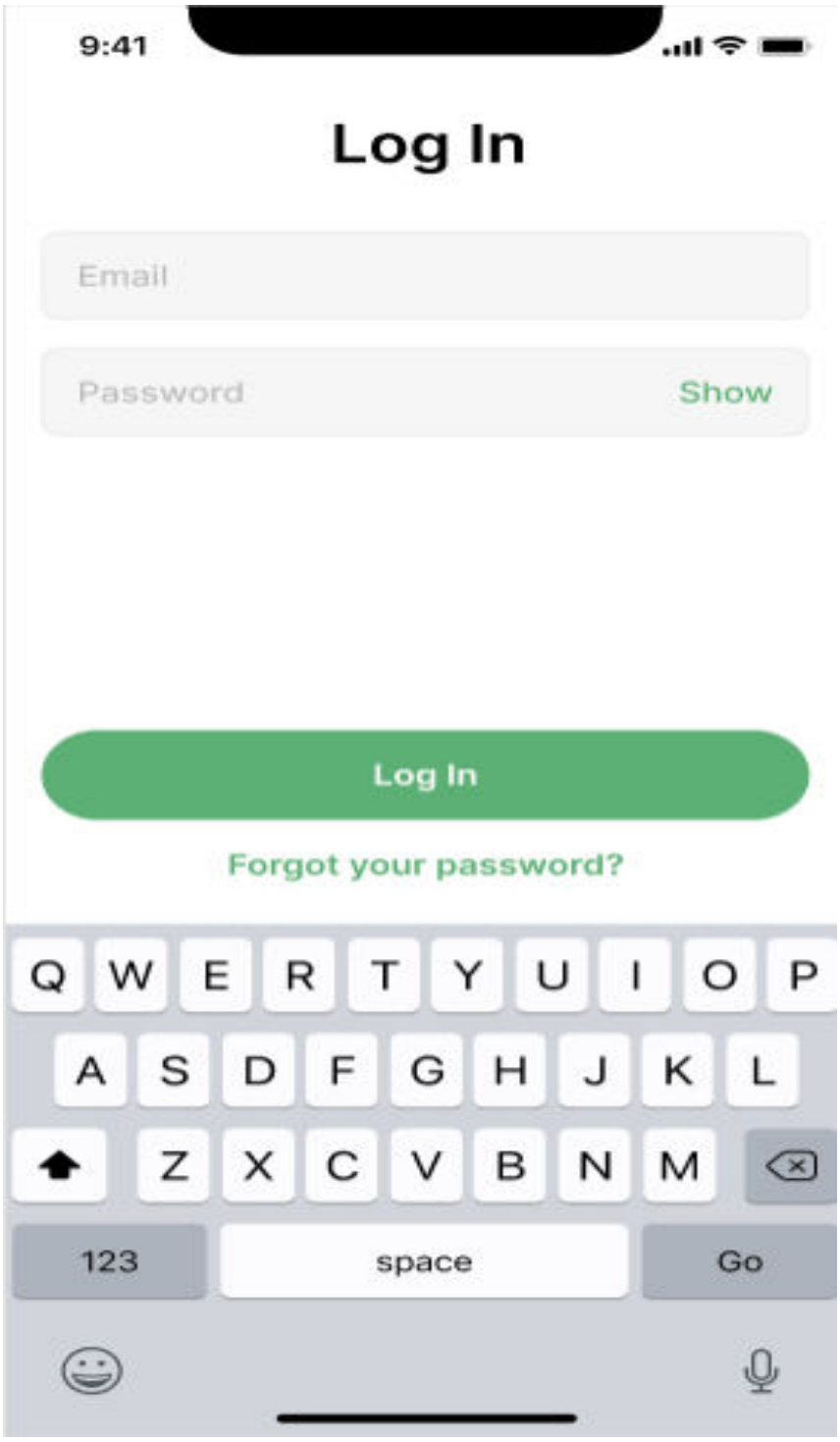
USER INTERFACE (UI):

***** Some of our Project's UI interface:**

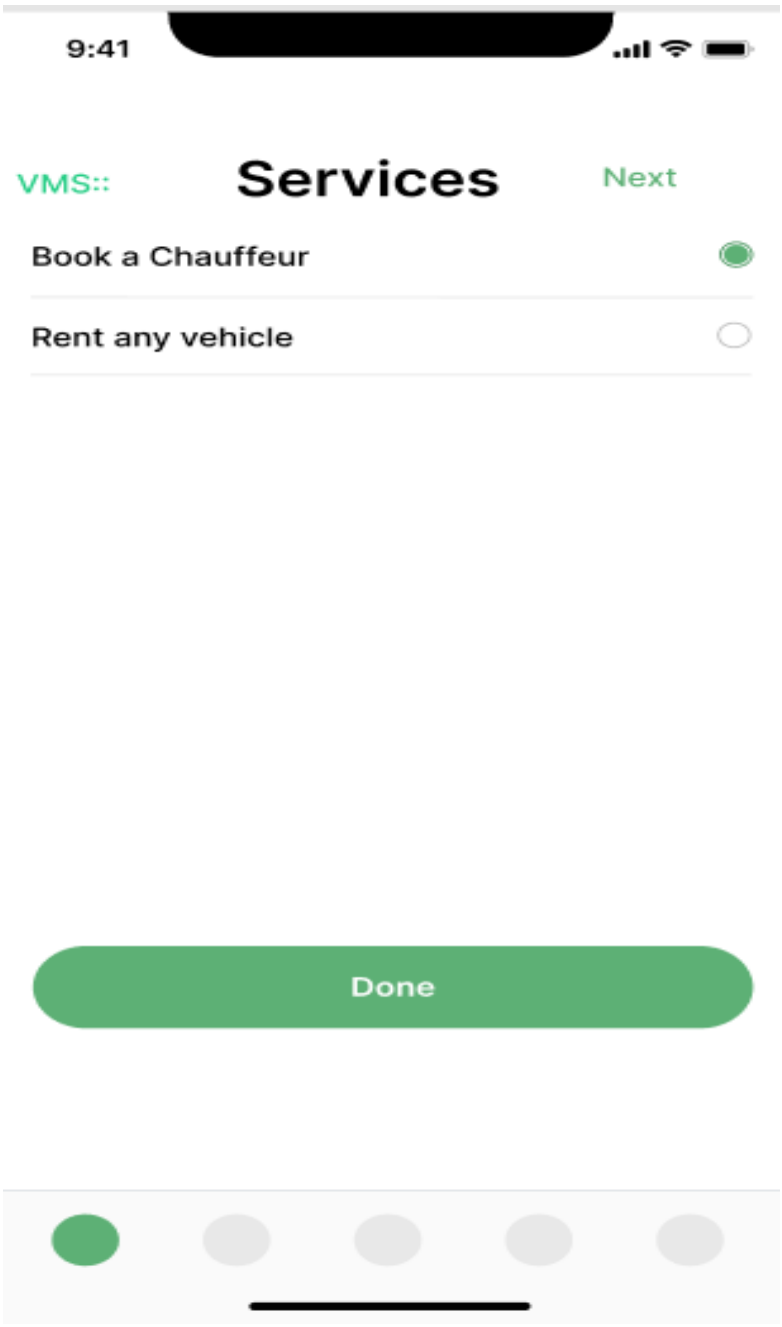
1.


9:41
Sign Up
Login
Name
Email
Password
Show
I would like to receive your newsletter and other promotional information.
Sign Up
Forgot your password?
Q W E R T Y U I O P
A S D F G H J K L
Z X C V B N M
123
space
Go

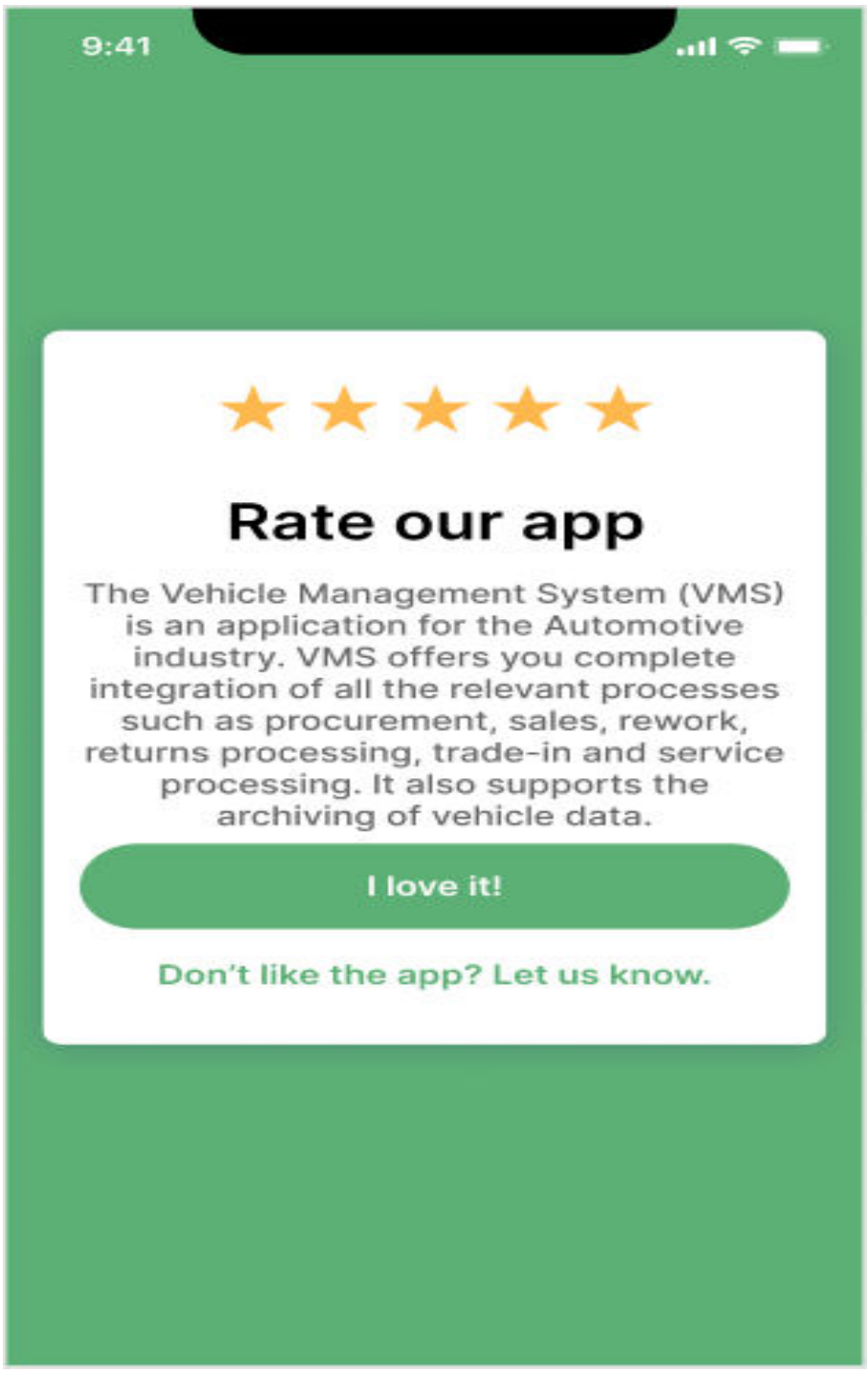
2.


9:41
Log In
Email
Password
Show
Log In
Forgot your password?
Q W E R T Y U I O P
A S D F G H J K L
Z X C V B N M
123
space
Go

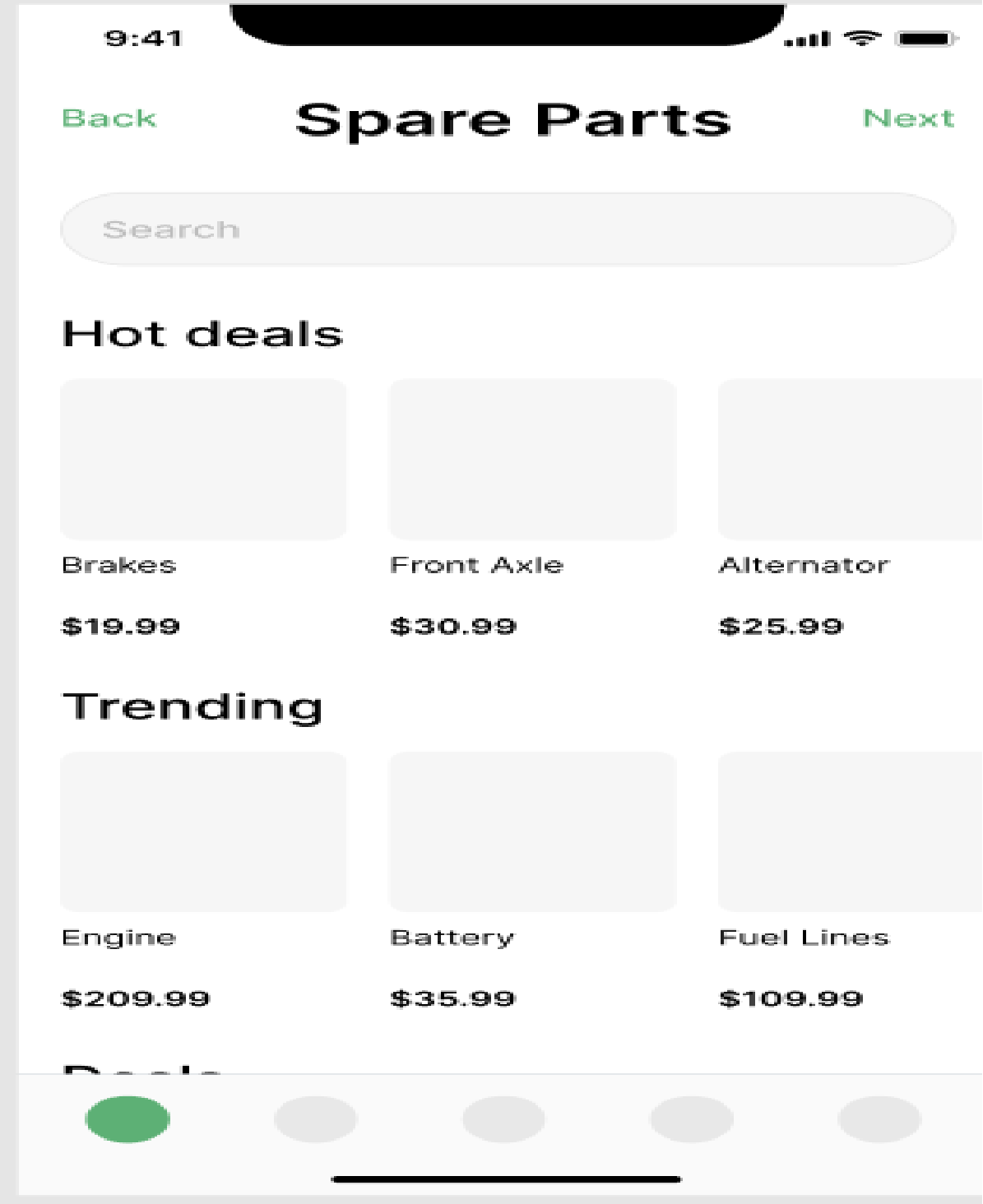
3.


9:41
VMS::
Services
Next
Book a Chauffeur
Rent any vehicle
Done

4.

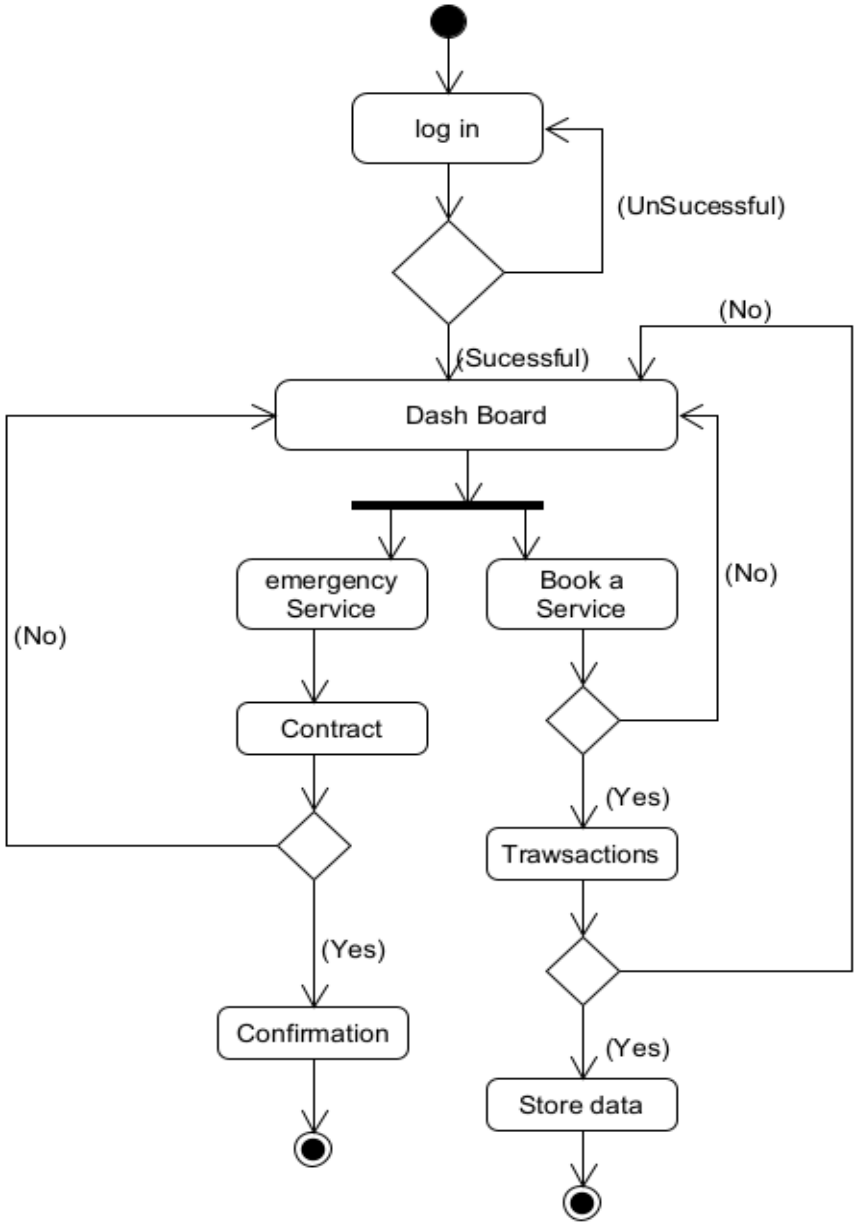

9:41
Rate our app
The Vehicle Management System (VMS) is an application for the Automotive industry. VMS offers you complete integration of all the relevant processes such as procurement, sales, rework, returns processing, trade-in and service processing. It also supports the archiving of vehicle data.
I love it!
Don't like the app? Let us know.

5.

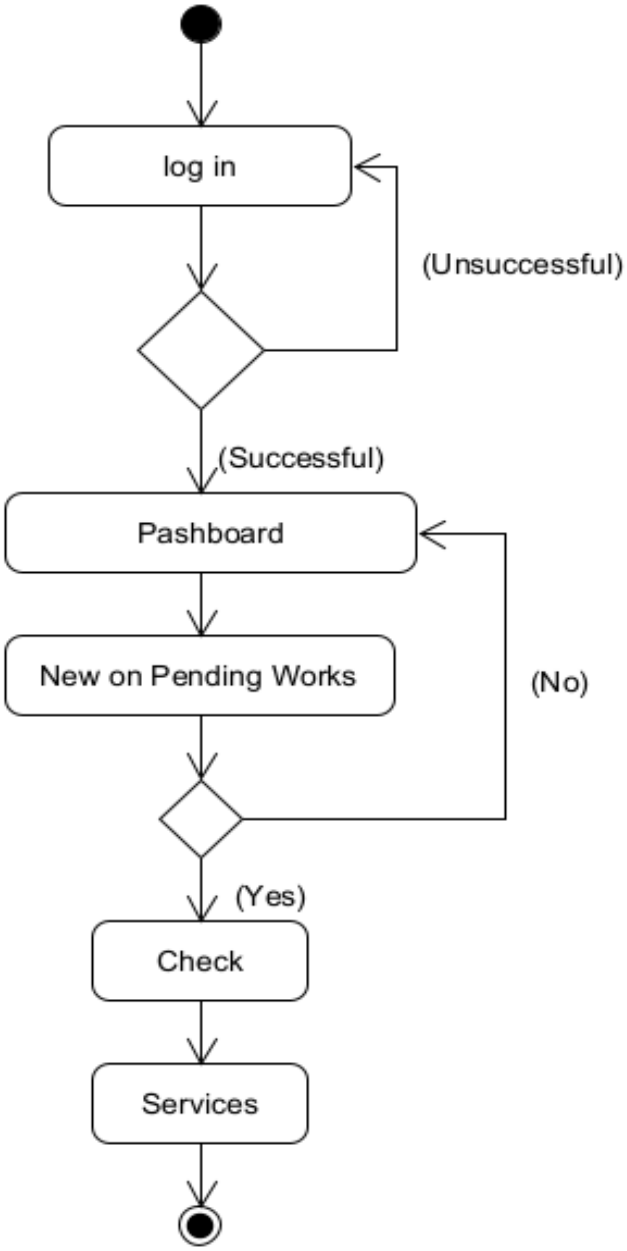


ACTIVITY DIAGRAM: (Part-By-Part)

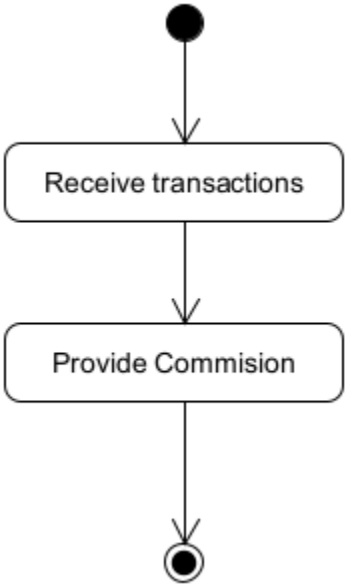
CUSTOMER


log in
(UnSucessful)
(No)
(Sucessful)
Dash Board
emergency Service
Book a Service
(No)
(No)
Contract
(Yes)
Trawsactions
(Yes)
Confirmation
(Yes)
Store data

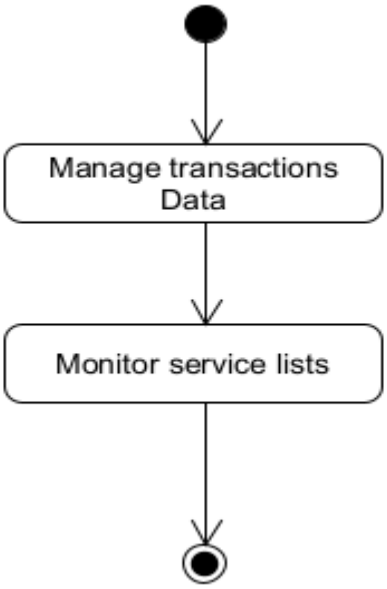
MECHANICS


log in
(Unsuccessful)
(Successful)
Pashboard
New on Pending Works
(No)
(Yes)
Check
Services

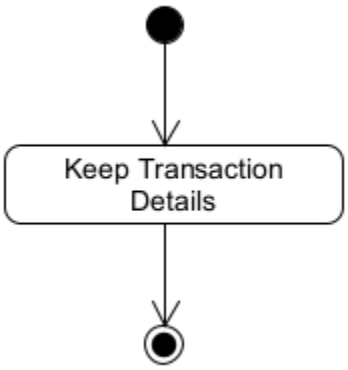
SYSTEM ADMIN



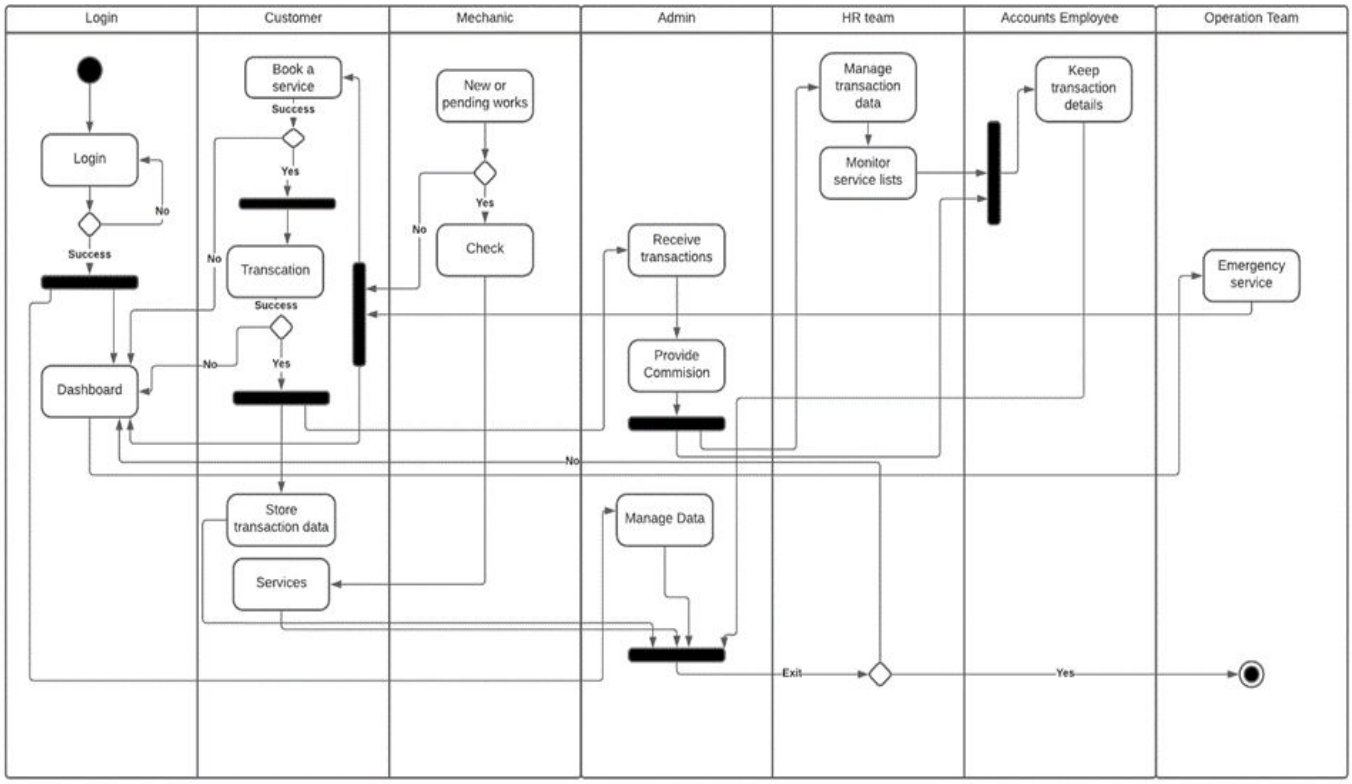
HR TEAM



ACCOUNT EMPLOYEE



Full:


Login
Customer
Mechanic
Admin
HR team
Accounts Employee
Operation Team
Login
No
Success
Dashboard
Book a service
Success
Yes
No
Transcation
Success
No
Yes
Store transaction data
Services
New or pending works
Yes
No
Check
Receive transactions
Provide Commision
Manage Data
Manage transaction data
Monitor service lists
Exit
Keep transaction details
Yes
Emergency service
No

CRC:

1.

Class: Customer	
Subclass:	
Superclass:	
Responsibilities	**Collaborators**
1. Create user account	Car Owner
2. Account Confirmation	Car Driver
3. Create user profile	
4. Check services	
5. Book a service	
6. Pay for service	
7. Give review	
8. Use emergency service	

2.

Class: Mechanics	
Subclass:	
Superclass:	
Responsibilities	**Collaborators**
1. Create garage account	Garage Owner
2. Account Confirmation	Garage Manager
3. Check new works	Garage IT Admin
4. Check pending works	
5. Complete a work	

3.

Class: Operation Team	
Subclass:	
Superclass:	
Responsibilities	**Collaborators**
1. Handle emergency service	OT Manager
2. Assign tasks to the mechanics	OT Officer

4.

Class: HR Team	
Subclass:	
Superclass:	
Responsibilities	**Collaborators**
1. Send data to Operation Team	HR Manager
2. Monitor booked services	HR Officers

5.

Class: Account Employee	
Subclass:	
Superclass:	
Responsibilities	**Collaborators**
1. Create customer bills	Account Manager
2. Ask for payment	Account Senior Officer
3. Gives discount	

6.

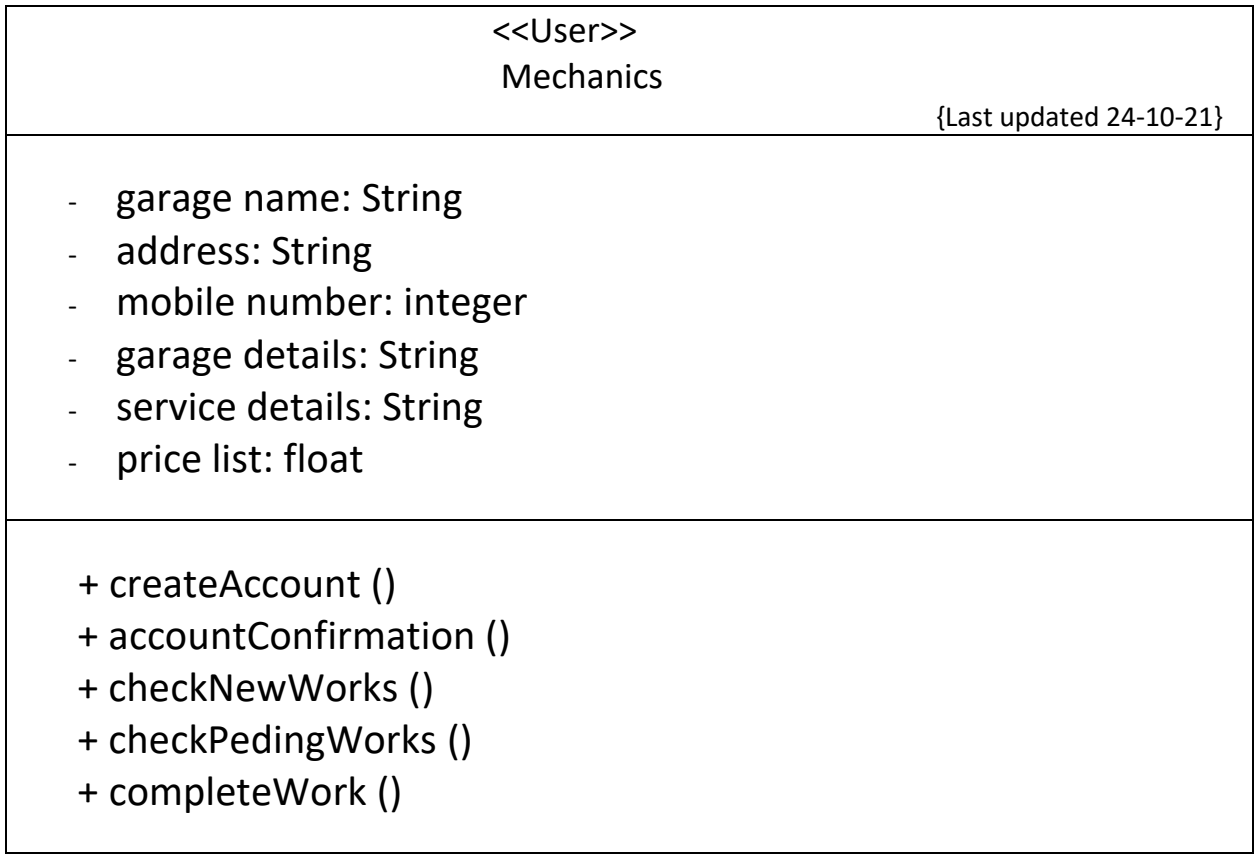
Class: Developer	
Subclass:	
Superclass:	
Responsibilities	**Collaborators**
1. Add new features	Senior Developer
2. Monitor our system	Junior Developer

CLASS COMPARTMENTS:

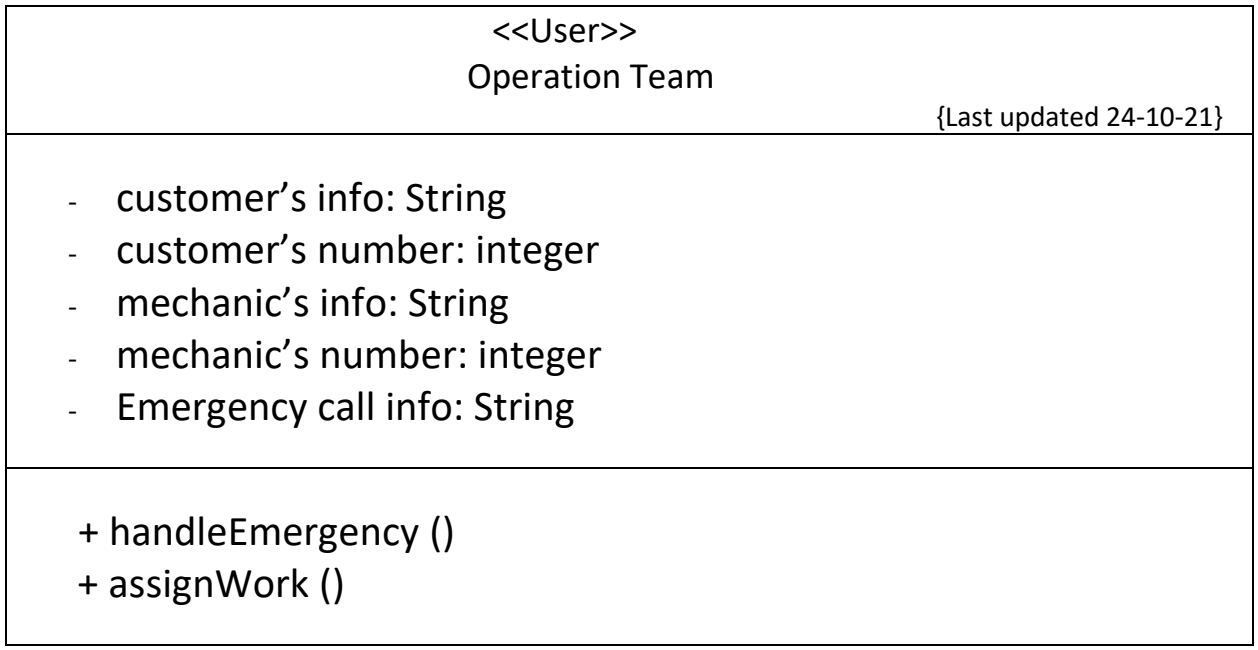
1.

<<User>> Customer {Last updated 24-10-21}
- customer name: String - address: String - mobile number: integer - car number: integer - car details: String - balance: float
+ createAccount () + accountConfirmation () + createProfile () + checkServices () + bookServices () + payForSevices () + giveReview () + useEmergency ()

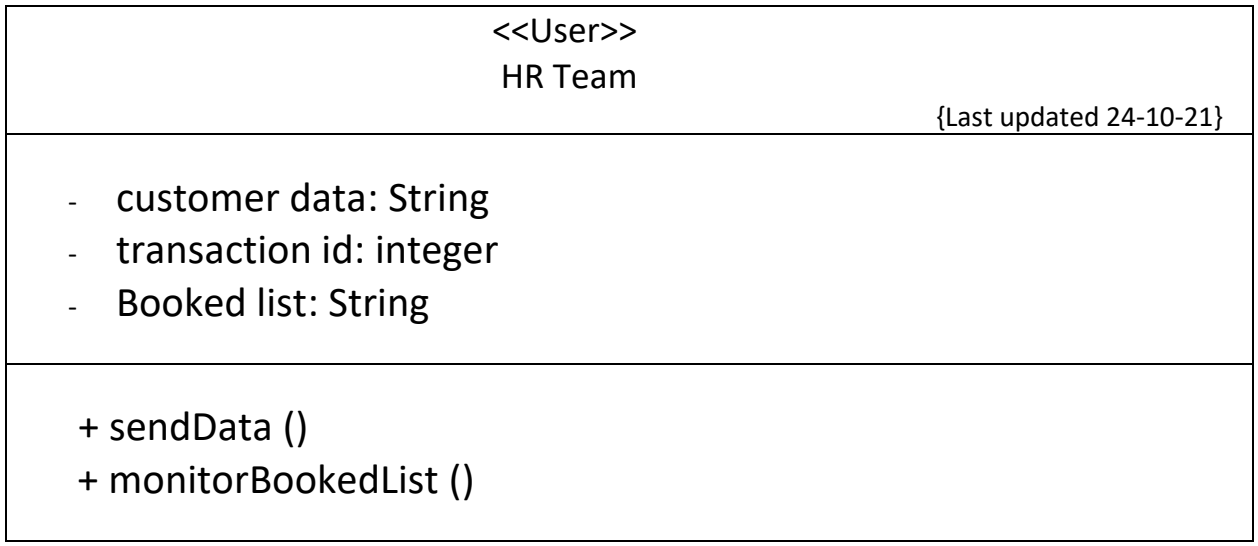
2.


<<User>>
Mechanics
{Last updated 24-10-21}
- garage name: String
- address: String
- mobile number: integer
- garage details: String
- service details: String
- price list: float
+ createAccount ()
+ accountConfirmation ()
+ checkNewWorks ()
+ checkPedingWorks ()
+ completeWork ()

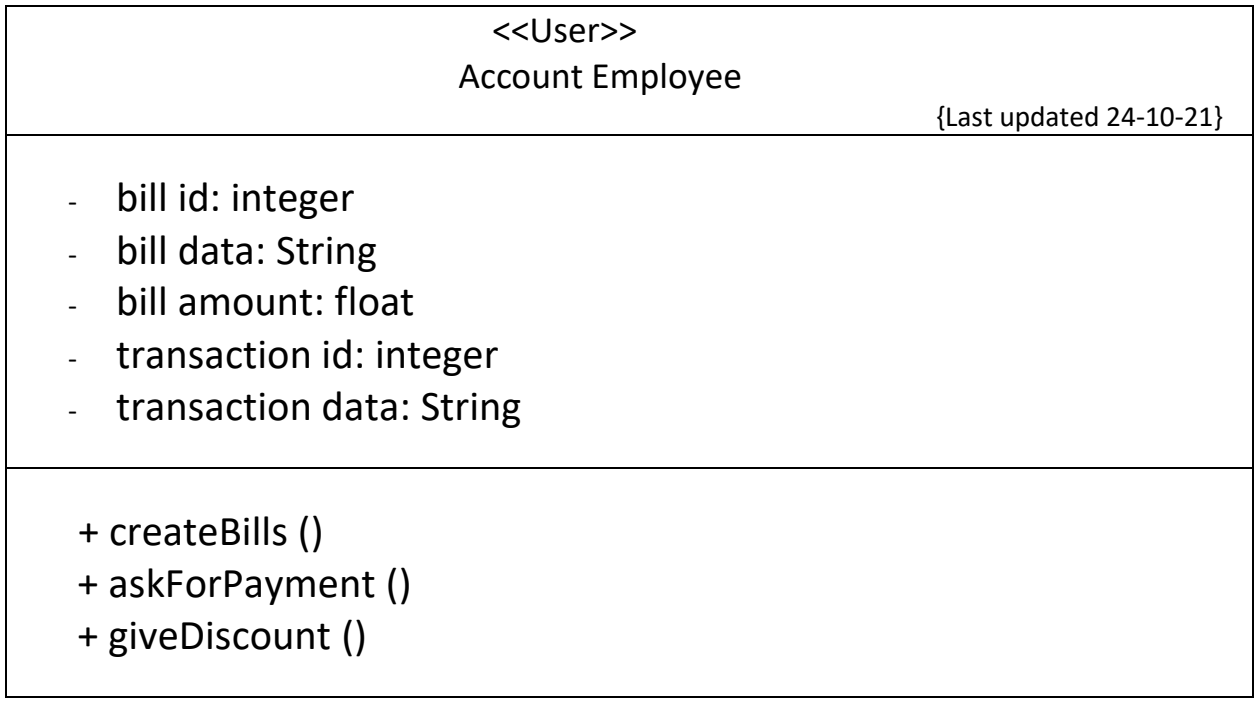
3.


<<User>>
Operation Team
{Last updated 24-10-21}
- customer's info: String
- customer's number: integer
- mechanic's info: String
- mechanic's number: integer
- Emergency call info: String
+ handleEmergency ()
+ assignWork ()

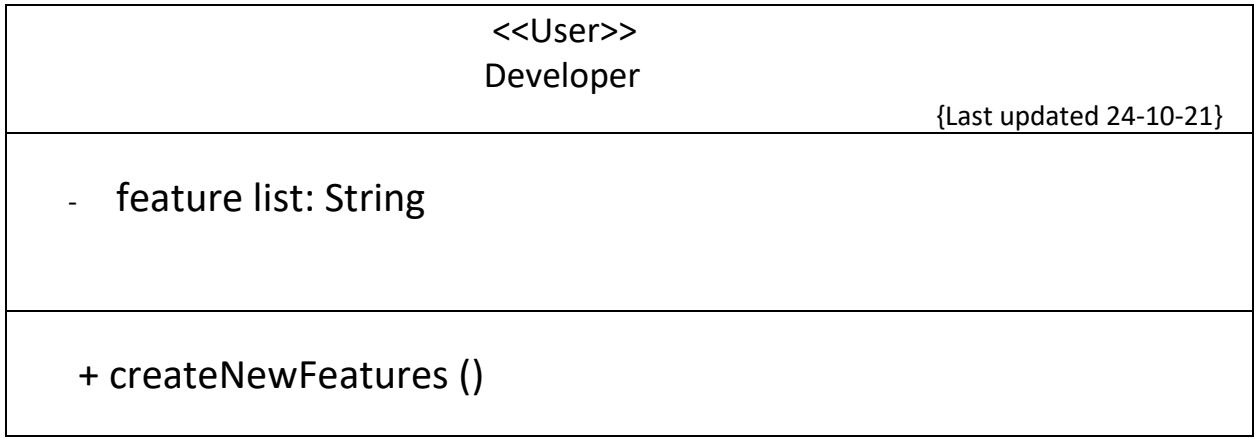
4.


<<User>>
HR Team
{Last updated 24-10-21}
- customer data: String
- transaction id: integer
- Booked list: String
+ sendData ()
+ monitorBookedList ()

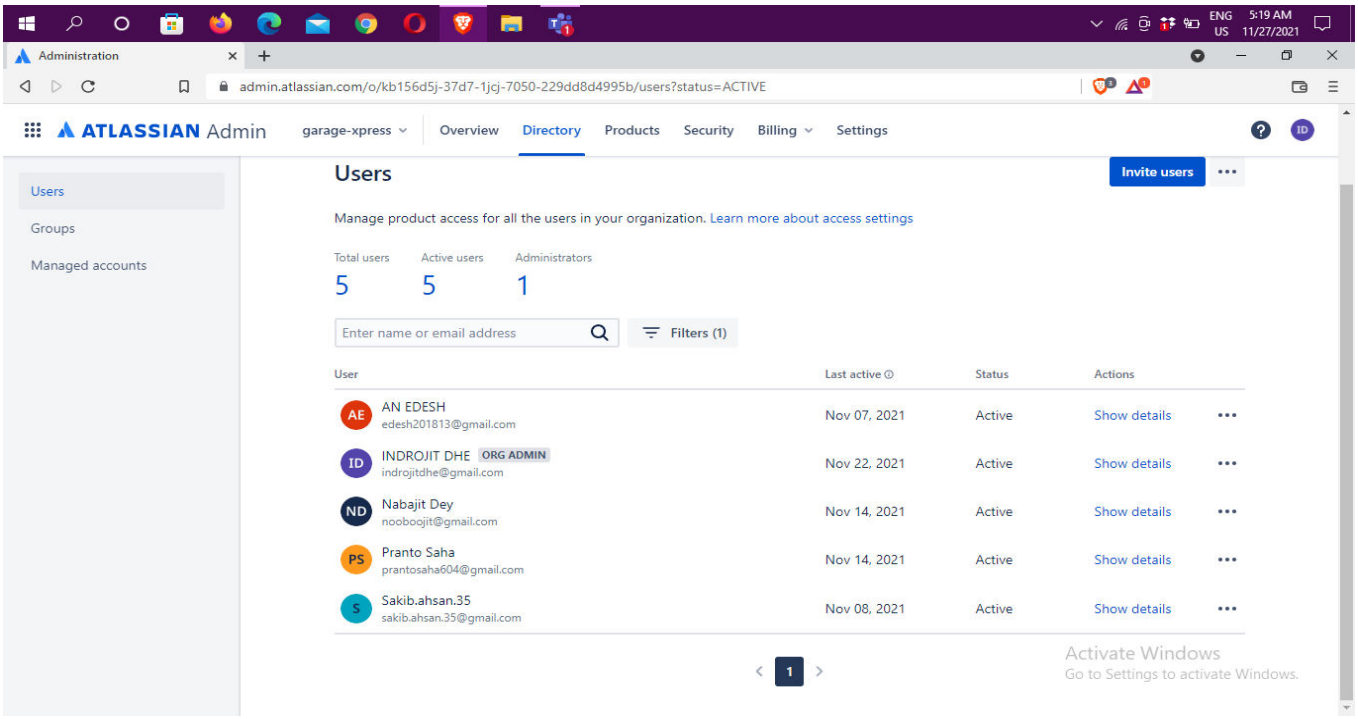
5.

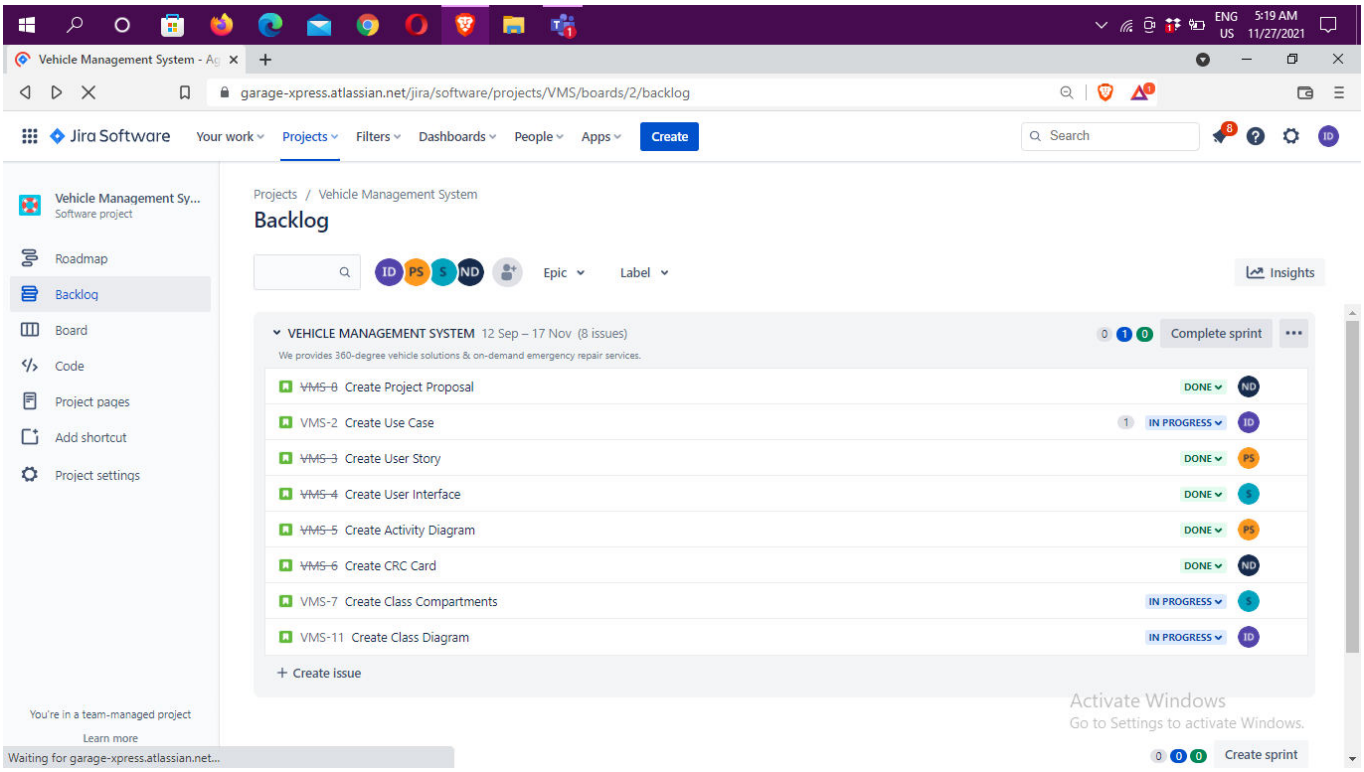

<<User>>
Account Employee
{Last updated 24-10-21}
- bill id: integer
- bill data: String
- bill amount: float
- transaction id: integer
- transaction data: String
+ createBills ()
+ askForPayment ()
+ giveDiscount ()

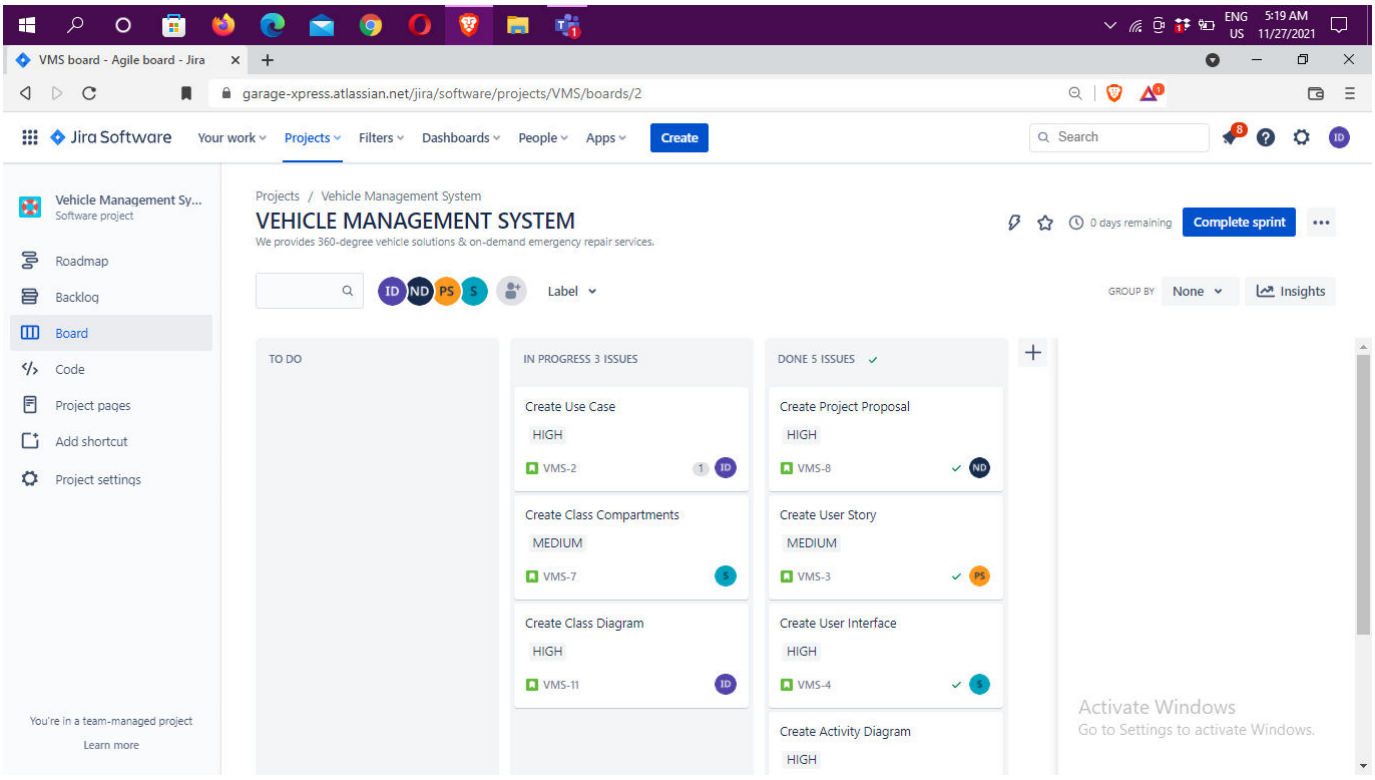
6.

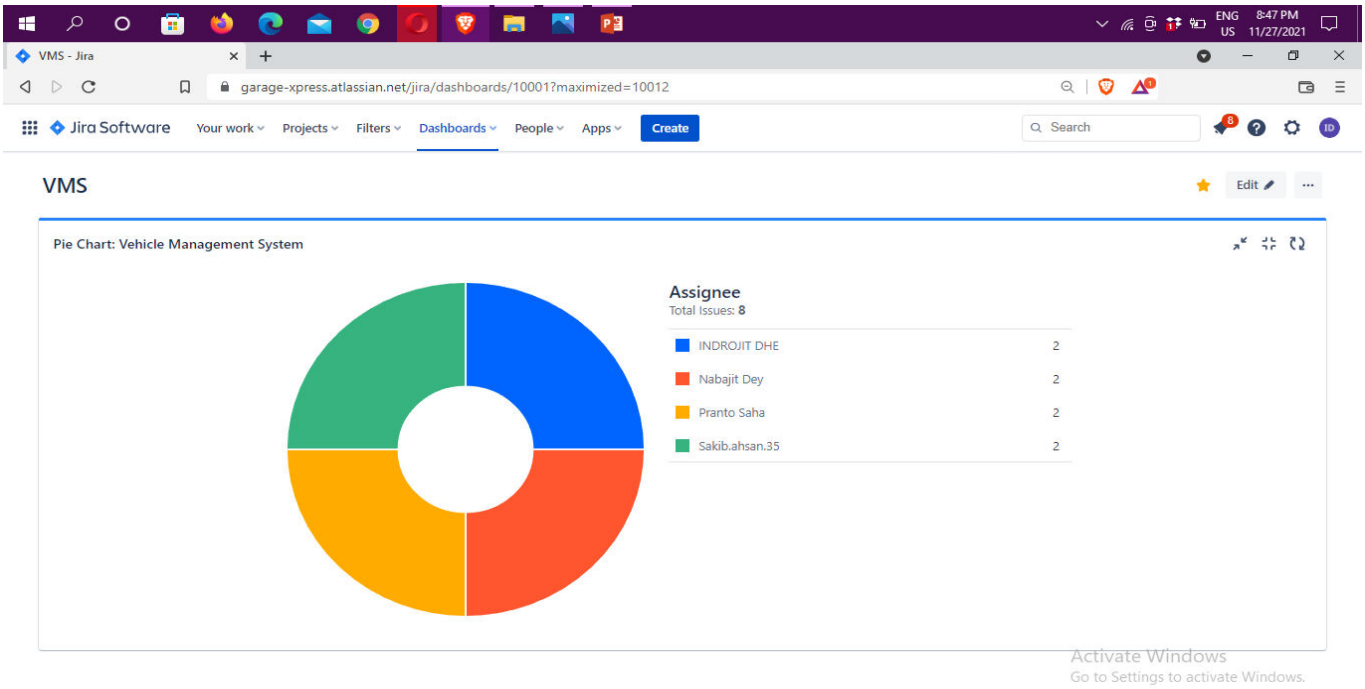

<<User>>
Developer
{Last updated 24-10-21}
- feature list: String
+ createNewFeatures ()

JIRA:


Administration
admin.atlassian.com/o/kb156d5j-37d7-1jcj-7050-229dd8d4995b/users?status=ACTIVE
ATLASSIAN Admin
garage-xpress
Overview
Directory
Products
Security
Billing
Settings
Users
Groups
Managed accounts
Users
Invite users
Manage product access for all the users in your organization. Learn more about access settings
Total users 5
Active users 5
Administrators 1
Enter name or email address
Filters (1)
User
Last active
Status
Actions
AE AN EDESH edesh201813@gmail.com Nov 07, 2021 Active Show details
ID INDROJIT DHE ORG ADMIN indrojitdhe@gmail.com Nov 22, 2021 Active Show details
ND Nabajit Dey noobojit@gmail.com Nov 14, 2021 Active Show details
PS Pranto Saha prantosaha604@gmail.com Nov 14, 2021 Active Show details
S Sakib.ahsan.35 sakib.ahsan.35@gmail.com Nov 08, 2021 Active Show details
1
Activate Windows
Go to Settings to activate Windows.


Vehicle Management System - Ag
garage-xpress.atlassian.net/jira/software/projects/VMS/boards/2/backlog
Jira Software
Your work
Projects
Filters
Dashboards
People
Apps
Create
Search
Vehicle Management Sy...
Software project
Roadmap
Backlog
Board
Code
Project pages
Add shortcut
Project settings
You're in a team-managed project
Learn more
Projects / Vehicle Management System
Backlog
Epic
Label
Insights
VEHICLE MANAGEMENT SYSTEM 12 Sep – 17 Nov (8 issues)
We provides 360-degree vehicle solutions & on-demand emergency repair services.
Complete sprint
VMS-8 Create Project Proposal DONE
VMS-2 Create Use Case IN PROGRESS
VMS-3 Create User Story DONE
VMS-4 Create User Interface DONE
VMS-5 Create Activity Diagram DONE
VMS-6 Create CRC Card DONE
VMS-7 Create Class Compartments IN PROGRESS
VMS-11 Create Class Diagram IN PROGRESS
+ Create issue
Create sprint
Activate Windows
Go to Settings to activate Windows.
Waiting for garage-xpress.atlassian.net...


VMS board - Agile board - Jira
garage-xpress.atlassian.net/jira/software/projects/VMS/boards/2
Jira Software
Your work
Projects
Filters
Dashboards
People
Apps
Create
Search
Vehicle Management Sy...
Software project
Roadmap
Backlog
Board
Code
Project pages
Add shortcut
Project settings
You're in a team-managed project
Learn more
Projects / Vehicle Management System
VEHICLE MANAGEMENT SYSTEM
We provides 360-degree vehicle solutions & on-demand emergency repair services.
0 days remaining
Complete sprint
Label
GROUP BY
None
Insights
TO DO
IN PROGRESS 3 ISSUES
DONE 5 ISSUES
Create Use Case
HIGH
VMS-2
Create Class Compartments
MEDIUM
VMS-7
Create Class Diagram
HIGH
VMS-11
Create Project Proposal
HIGH
VMS-8
Create User Story
MEDIUM
VMS-3
Create User Interface
HIGH
VMS-4
Create Activity Diagram
HIGH
Activate Windows
Go to Settings to activate Windows.



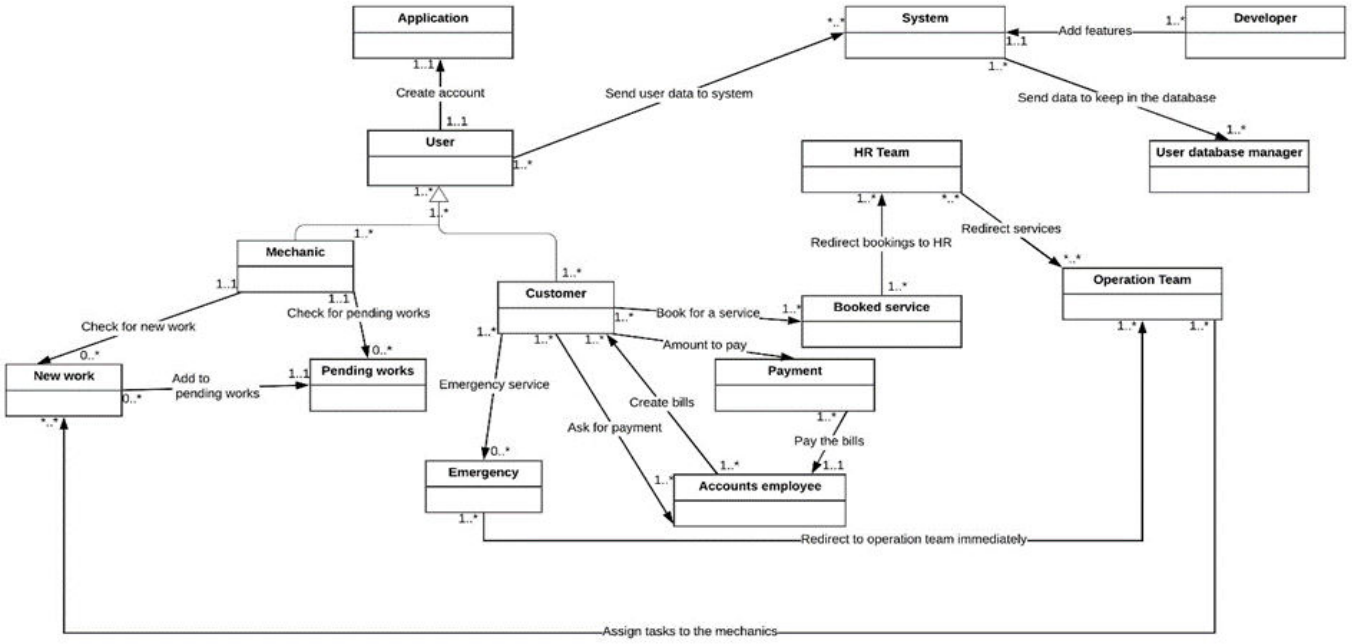
Project Statement:

- Our company is maintaining many mechanics with garages by online. They provide vehicle service, emergency road service, purchase vehicle service, car wash service to customers. The customer must book in advance to get any services without emergency. Then the garage authorities have to confirm it.

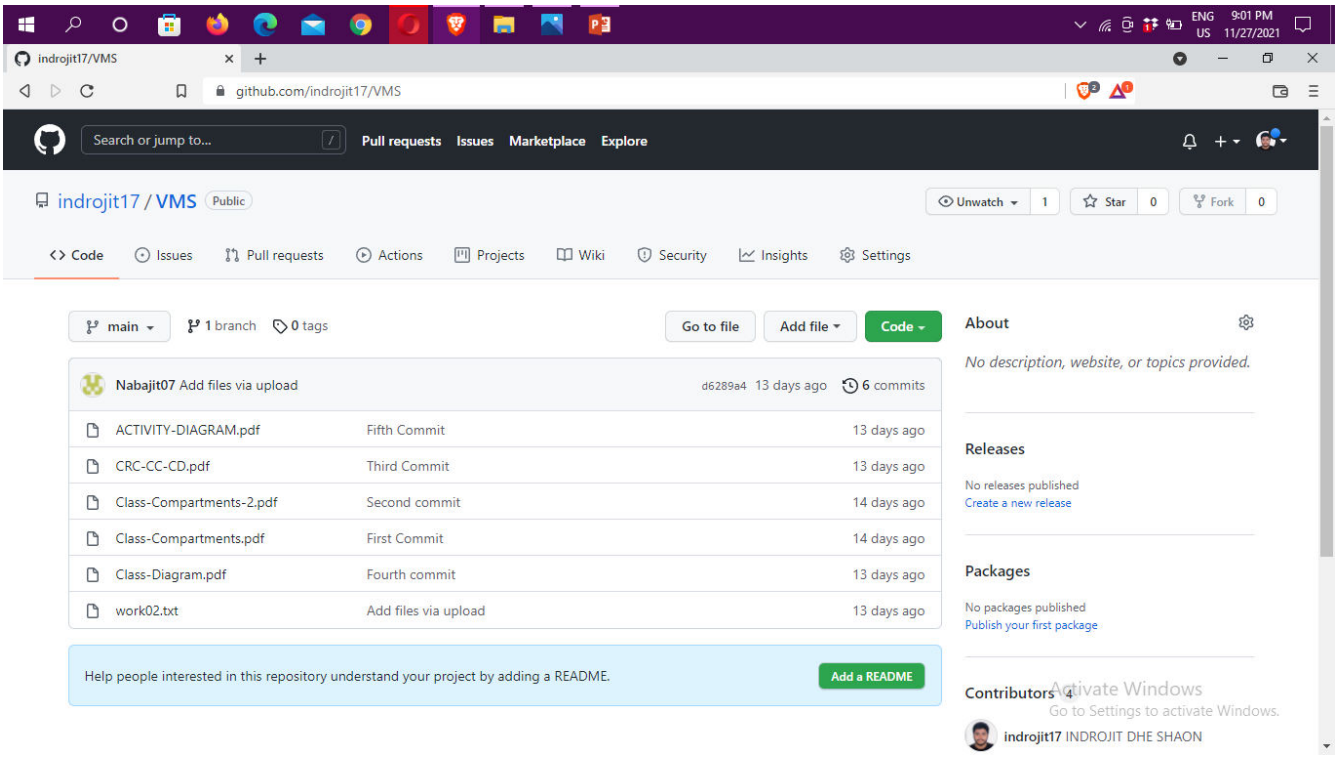
Actually, after a successful login, a customer can choose any options, like - Home & On-road Emergency repair Support, Vehicle Health Consultancy, Vehicle Parts e-commerce platform and they can check the nearest garage from their location. On the other hand, the garage owner or manager who will use the app to communicate with the customers can quickly locate where the customer is. Our software will connect the company's chat bot so that anyone can check their car or bike problems using the bot. In addition to these, there are several other benefits.

- Our HR Team check booked lists and send to Operation Team. Operation Team assign wok to mechanics and handle emergency services. Our developer add new features. Our account employee create bills and gives discount. Also ask for payment. We need a system for communicate and control our employee and garage mechanics.

Class Diagram:



GITHUB:


indrojit17/VMS
github.com/indrojit17/VMS
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Pull requests
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Nabajit07 Add files via upload
d6289a4 13 days ago
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ACTIVITY-DIAGRAM.pdf Fifth Commit 13 days ago
CRC-CC-CD.pdf Third Commit 13 days ago
Class-Compartments-2.pdf Second commit 14 days ago
Class-Compartments.pdf First Commit 14 days ago
Class-Diagram.pdf Fourth commit 13 days ago
work02.txt Add files via upload 13 days ago
Help people interested in this repository understand your project by adding a README.
Add a README
About
No description, website, or topics provided.
Releases
No releases published
Create a new release
Packages
No packages published
Publish your first package
Contributors 4
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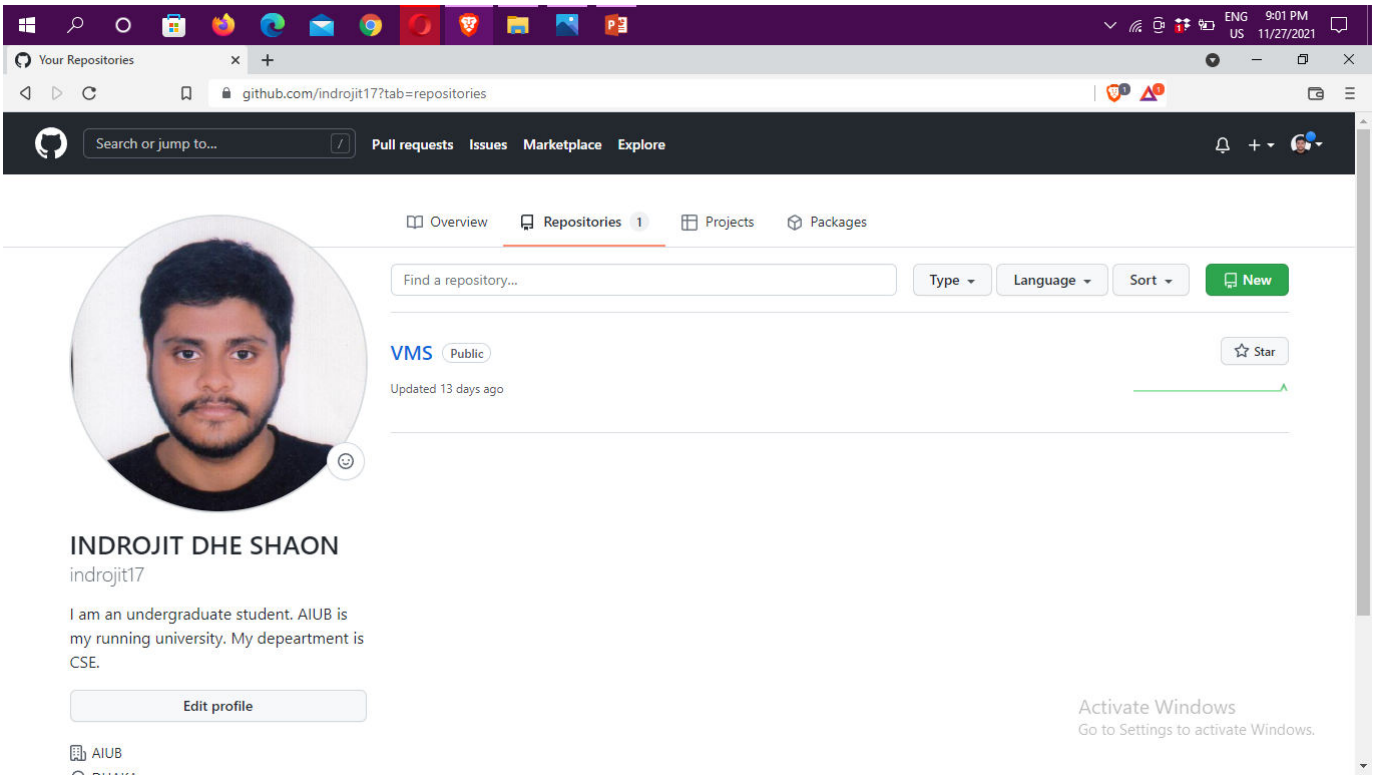
Activate Windows
Go to Settings to activate Windows.


Your Repositories
github.com/indrojit17?tab=repositories
Search or jump to...
Pull requests
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indrojit17
I am an undergraduate student. AIUB is my running university. My depeartment is CSE.
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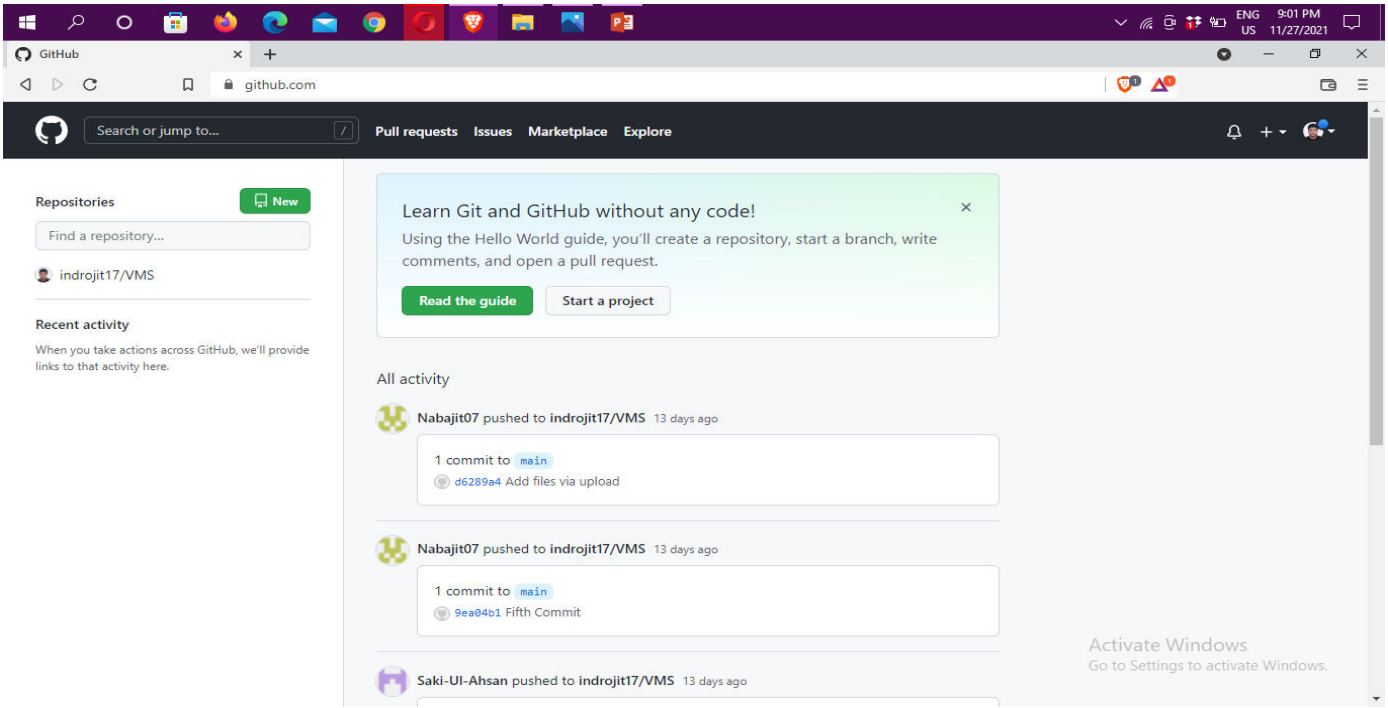
GitHub
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Pull requests
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Explore
Repositories
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Find a repository...
indrojit17/VMS
Recent activity
When you take actions across GitHub, we'll provide links to that activity here.
Learn Git and GitHub without any code!
Using the Hello World guide, you'll create a repository, start a branch, write comments, and open a pull request.
Read the guide
Start a project
All activity
Nabajit07 pushed to indrojit17/VMS 13 days ago
1 commit to main
d6289a4 Add files via upload
Nabajit07 pushed to indrojit17/VMS 13 days ago
1 commit to main
9ea04b1 Fifth Commit
Saki-Ul-Ahsan pushed to indrojit17/VMS 13 days ago
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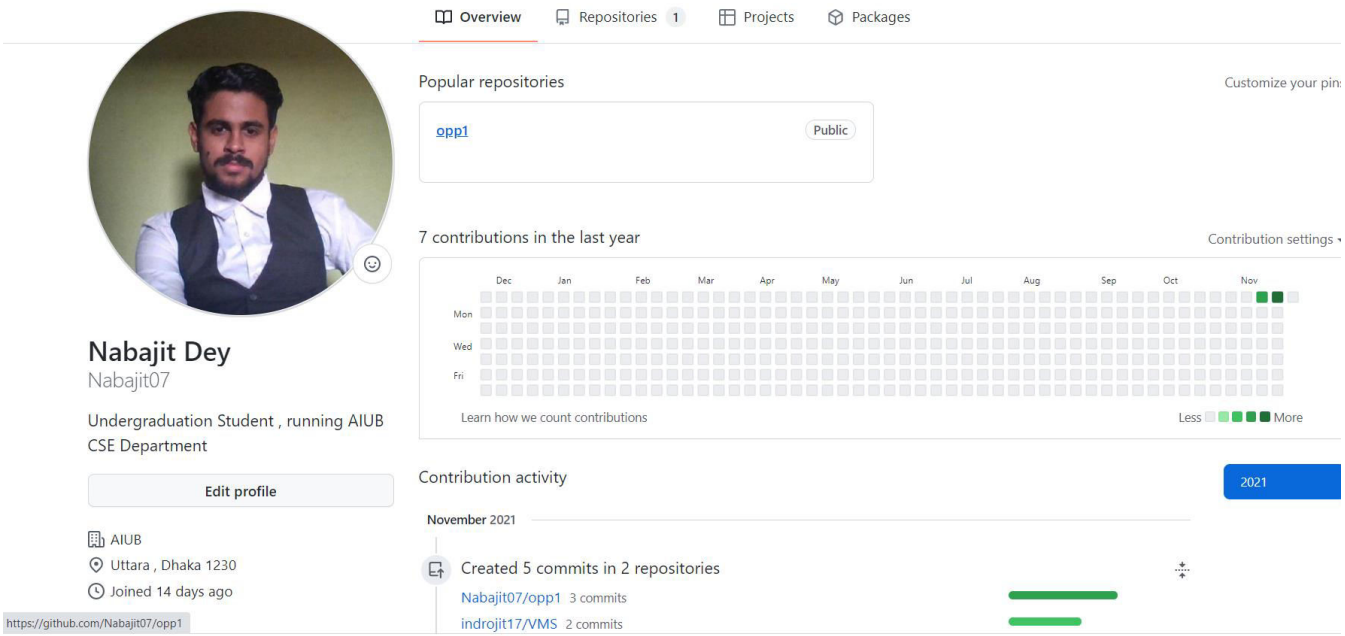
Overview
Repositories 1
Projects
Packages
Popular repositories
Customize your pin
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AIUB
Uttara , Dhaka 1230
Joined 14 days ago
Contribution activity
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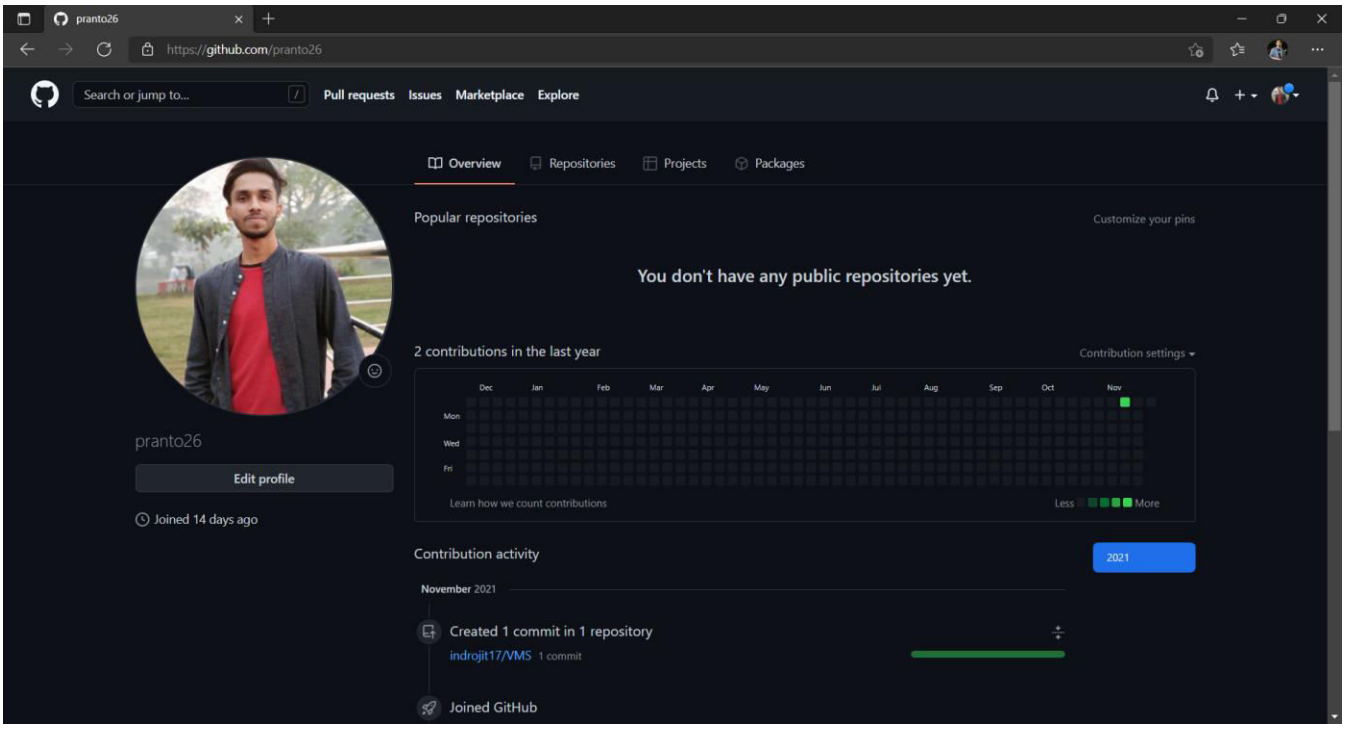
Nabajit07/opp1 3 commits
indrojit17/VMS 2 commits
https://github.com/Nabajit07/opp1


pranto26
https://github.com/pranto26
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2 contributions in the last year
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Contribution activity
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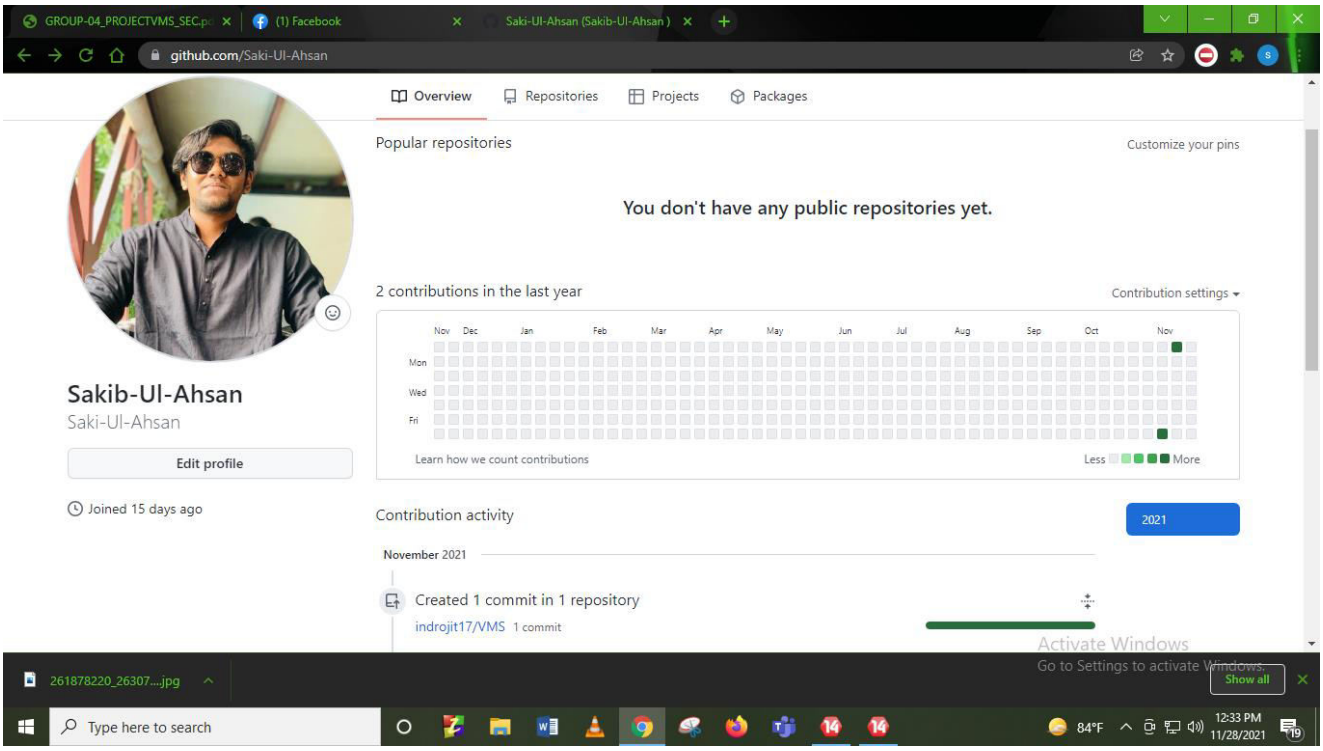
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Saki-Ul-Ahsan (Sakib-Ul-Ahsan)
github.com/Saki-Ul-Ahsan
Overview
Repositories
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You don't have any public repositories yet.
2 contributions in the last year
Contribution settings
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Learn how we count contributions
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TABLE-LINE CHARTS:

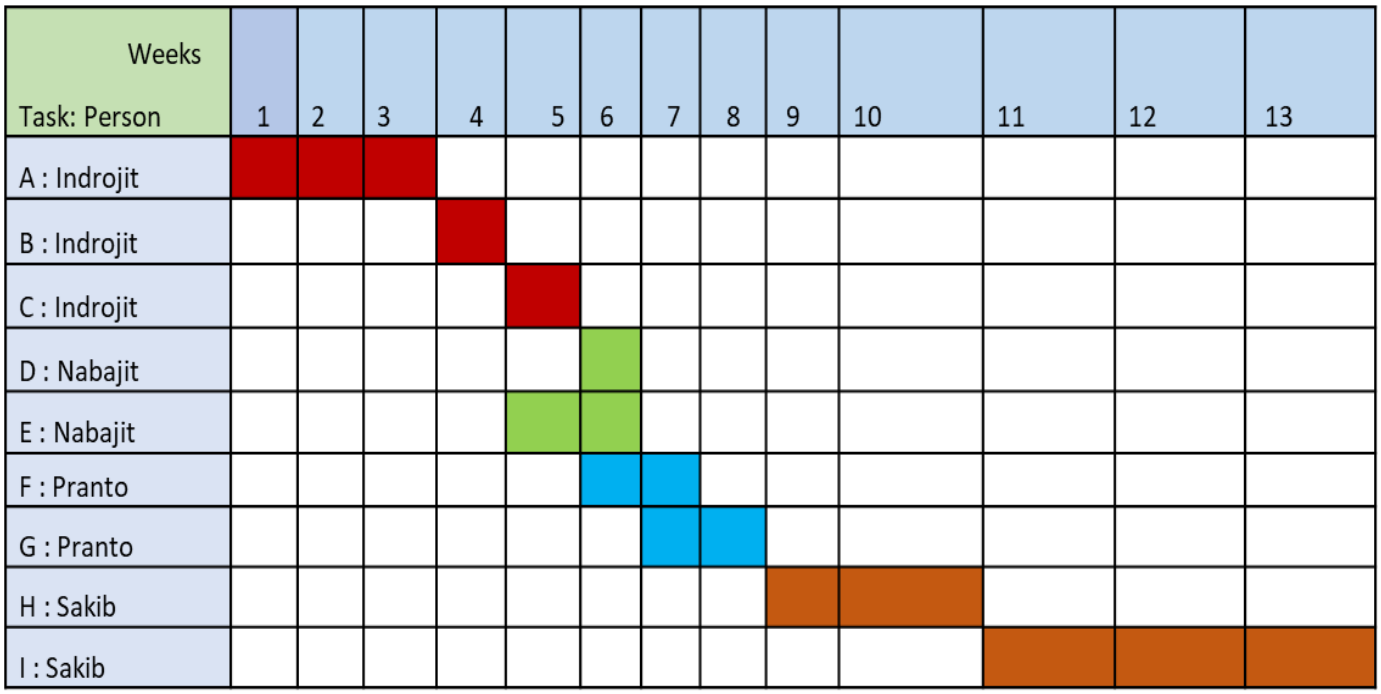


Figure: Our project plan as a bar chart

Activity key:

A: Overall design

B: Specify module 1

C: Specify module 2

D: Specify module 3

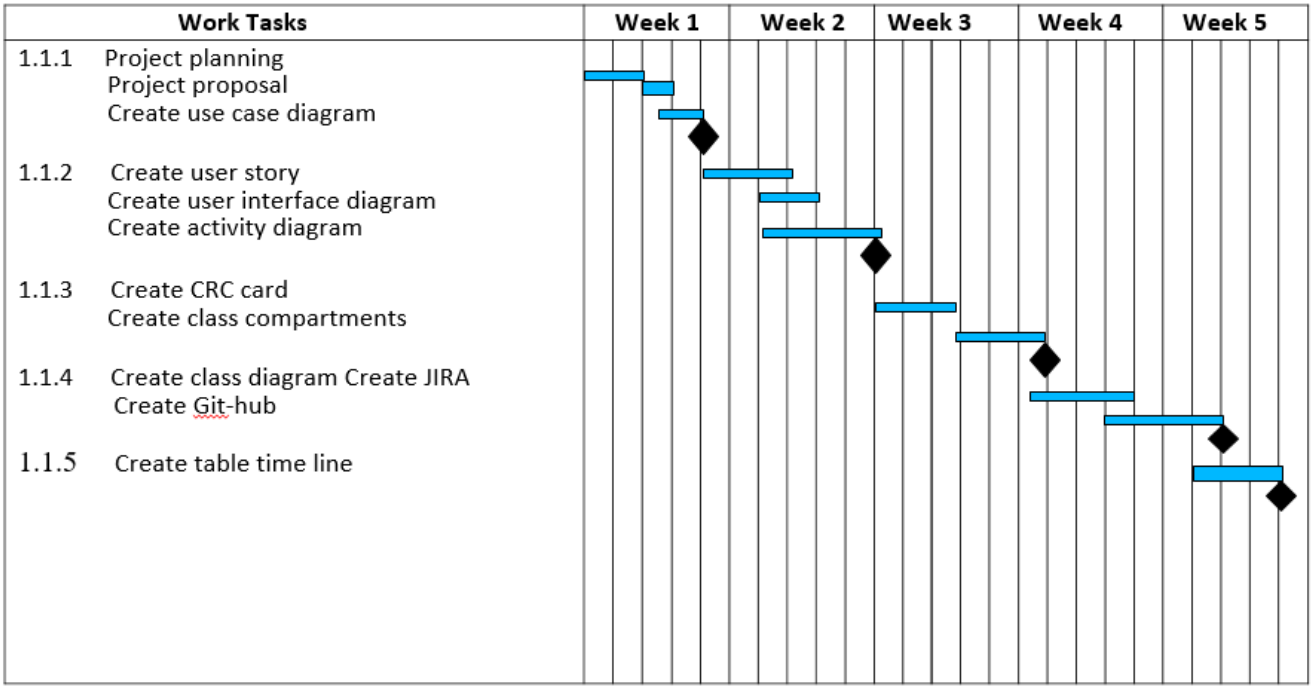
E: Code module 1

F: Code module 2

G: Code module 3

H: Integration testing

I: System testing



COCOMO & BUDGET:

Constructive Cost Model:

Project Type : Organic

Coefficient <Effort Factor> : 2.4 [P=1.05: T=0.38]

SLOC = 10,000 Lines

Person Months, PM = $(2.4*10^{1.05}) = 26.93$

Dev. Time, DM = $(2.5*26.93^{0.38}) = 8.7 = 9$ Months = 1584 Working Hours

Required people, ST = PM/DM = 3.09 = 4 People

Budgeting:

Developer Salary in 9 Months:

Per Developer salary Per working Hour = 500 Tk

Total Developer Salary = 500* 1584 = 792, 000 Taka

Requirement Analysis:

Time Needed: 1 month (22Working Days = 176 Working Hour)

Req. Analysis Person's Hourly Wage = 400 Taka

Total Req. Analysis Expense = 400* 176 = 70, 400 Taka

Transport Cost Estimation: 20,000 Taka

Training and Hardware Expenses Estimation: 100, 000 Taka

Rent Expenses:

Room Per Month = 8,000 Taka

Total in 9 Months = 72,000 Taka

Total Utilites in 9 Months: 30,000 Taka

Maintenance (Till 9 Months after Delivery):

Expense Per Hour = 1500 Taka

Total Estimated Time Needed for Maintenance = 100 Hours

Total Estimated Maintenance Expense = 100*1500 = 150,000 Taka

Total Estimated Expense: 792,000 + 70,400 + 20,000 + 100,000 + 72,000 + 30,000 + 150,000 = 1,234,400 Taka

Profit:

20% of Total Estimated Expense = 1,234,400*20% = 246, 880 Taka

Project Budget: 1,234,400 + 246, 880 = 1,481,280 Taka

THANK YOU