Deccan Education Society's

FERGUSSON COLLEGE (AUTONOMOUS), PUNE-4

Department Of Computer Science

A

Project Report

On

ONLINE GARAGE SYSTEM

By

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Task.1

1.1 Detailed Problem Definition

The vehicle repair system is all about reducing the time of the customer and providing quality service with planes resources including mechanics and equipments. The online garage system ensures the end user satisfaction and reports the functioning of its various aspects.

A vehicle servicing center has become a need of 21st century. As automobiles are contineously growing in numbers, the cost of repairing systems, getting them serviced on time has become essential and difficult as well. Our system is the solution for this problem. Our system gives the progress report about your vehicle so that only in one visit the customer gets his vehicle ready after being serviced. We also advise you to get the vehicle serviced after a specific period of time as per our calculations. The user has to register with us by filling a simple registration form which includes personal details as well as vehicle details.

Thus the striking benefit for the customer is their time is saved and quality service is obtained.

1.2 Presently available system for the same

The number of automobiles continue to increase creating humongous demand for its maintenance and servicing. There is hardly any system which notifies about the vehicle progress.

1.3 Need for the new system

As no such system exists, the customer has to keep visiting the garage until its serviced. Also, if in advance he knows the queue of customers above him then, he would adjust his servicing dates get it done afterwards.

1.4 Project scope

1] The proposed system saves time by avoiding repeated visits to the garage.

2] The system keeps record of the servicing and repairing of the vehicles of all customers.

3] The system is user-friendly and handy.

4] This system maintains records servicing of vehicles and suggest the next date of servicing.

Task.2

2.1 Feasibility study

2.1.1 Technical feasibility

The technical feasibility is defined as with what ease the project will be completed with what of amount of requirements and the technology is used. Since we are provided with all the technical facilities in our lab, the project is technically feasible with the following technologies :

Operating System: Cent OS

Release: 6.6(Final)

Kernel: Linux 2.6.32-504.e16.x86-64

GNOME version: 2.28.2

OS type : x86 bit

Memory: 3.7 GiB

2.1.2 Economical Feasibility

1] Economical Feasibility is defined as at what expense the project has been completed.

2] The technology is used, the equipments required and all other factors which have required expenditure is Economical Feasibility.

3] In our case we have used simple tools like PHP, PostgreSQL , CSS, HTML, javascript. Thus our system is cost efficient.

4] The desktops ,laptops or mobiles having appropriate OS is the only need Since most of our facilities are provided in the lab itself therefore the project is absolutely feasible economically. It's requirement is just a online system (either computer or mobile) . Anyone from anywhere having a PC(personal computer) or mobile can use it. This makes it more economically feasible.

Now since it just requires a system with internet connection, its investment is much lesser, basically because of which it is more economically feasible.

In future if the owner requires to modify the system it is possible to modify the system with minimal cost which enhances the economical feasibility.

2.1.3 Operational Feasibility

As our system provides various functionalities it is crucial to measure the feasibility of each function so that integrating all of them will help us estimating the overall feasibility of the system.

The features are:

1] Progress Report

2] Next Date Of Servicing

3] Online Booking for getting Services is very useful and thus contributes to operational feasibility.

4] The system has very less requirements for its implementation and can be operated over wide range of area.

5] The operational feasibility makes it easier for the customers and becomes beneficial in terms of time and money.

Task.3

3.GATHERING DATA REQUIREMENTS AND FUNCTIONAL REQUIMENTS

3.1 Identify End User of The System :

An end user is the person that a software program or hardware device is design for. The term is based on the idea that the "end goal" of a software or hardware product is to be useful to the consumer. The end user can be contrasted with the developers or programmers of the product. End user are also in a separate group from the installers or administrators of the product.

To simplify the end user is the person who use the software or a hardware after it has been fully developed, marketed and installed. It is also the person who keeps calling the "IT Guy" with questions about why the product is not working correctly. Generally, the terms "user" and "end user" means the same thing.

Garage management system will manage by Garage Admin.

3.2 Input Data to The System :

Very careful attention had to be given to input design which is major part of the overall system design. In order to make the data entry as easy, logical and error free as possible, specific standard has been followed ,validation checks provided in the system prevented the user in entering incorrect, erroneous data. This made sure that only valid data had been available for data processing. If valid data was entered, then meaningful errors massages had been prompted to enter correct data. The interactive screen format facilitate the entry of valid data.

The number clear of input design are,

1.Owner gives his name for the login.

2.Customer gives his name.

3. Customer gives his mobile number.

4. Customer gives his vehicle details such as Plateno of the vehicle and the Company of the vehicle.

3.3 Output information from the system:

Output, as you probably know, generally refers to the results and information that are generated by the system. For many end users, output is the main reason for developing the system and the basis of which they will evaluate the usefulness of the information system data through work stations but they will use the output from the system.

When designing output the output, system analysts must accomplish the following,

1. System register details of customer.

2. System will allocate customer id .

3. System will show all details of customer if we search customer id.

3.4 - Functional Requirements of the System:

The system must provide following functionalities:

1. Status of the progress bar for vehicle being serviced.

2. Status of bill

3. Servicing details.

4. keeping the records of the payments.

Task.4

4.1 Database Table Designing

RELATIONSHIP TABLE:

Table 1	Relationship	Table 2
Customer	1-M	Vehicle
Customer	1-M	Servicing
Owner	1-M	Customer
Vehicle	1-M	Servicing
Customer	1-M	Receipt
Vehicle	1-M	Receipt
Owner	1-M	Receipt
Owner	1-M	Servicing

TABLE 1: OWNER-DETAILS

Field name	Field type	Description
owner_name	Varchar(10)	**(Primary key)** Owner's name
owner_password	Varchar (20)	Password
owner_login	Varchar(20)	admin email-id

TABLE 2: CUSTOMER-DETAILS

Field name	**Field type**	**Description**
Cust_mobno	Varchar(10)	(**Primary key**) Customer mobile no.
Cust_password	Varchar(20)	Customer Password
Cust_name	Char	Customer name
Status	Integer(1)	Status of the progress bar for vehicle being serviced.
Bill_Status	Integer(1)	Status of bill
Cust_login	Varchar(20)	Email Id of user
Bike	Varchar(10)	Bike Model
Owner_name	Varchar(10)	**(Foreign key)** Owner Name

TABLE 3: VEHICLE-DETAILS

Plate_no.	Varchar(10)	(**Primary key**) Vehicle plate number
Company	Varchar(10)	Company of the vehicle
Owner_name	Varchar(10)	(**Foreign key**) Owner name
Cust_mobno	Varchar(10)	(**Foreign key**) Customer mobile no.

TABLE 4: SERVICING

Field name	Field type	Description
Serv_parts	Varchar(100)	Parts serviced
Kms	Integer	Kms covered by vehicle
DateOfServicing	Date	Date of servicing
Next_serv	Integer	Next Date Of servicing
Plate_no	Varchar(10)	(**Foreign key**) Vehicle plate number
Cust_mobno	Varchar(10)	(**Foreign key**) Customer mobile no.
Owner_name	Varchar(10)	(**Foreign key**) Owner name

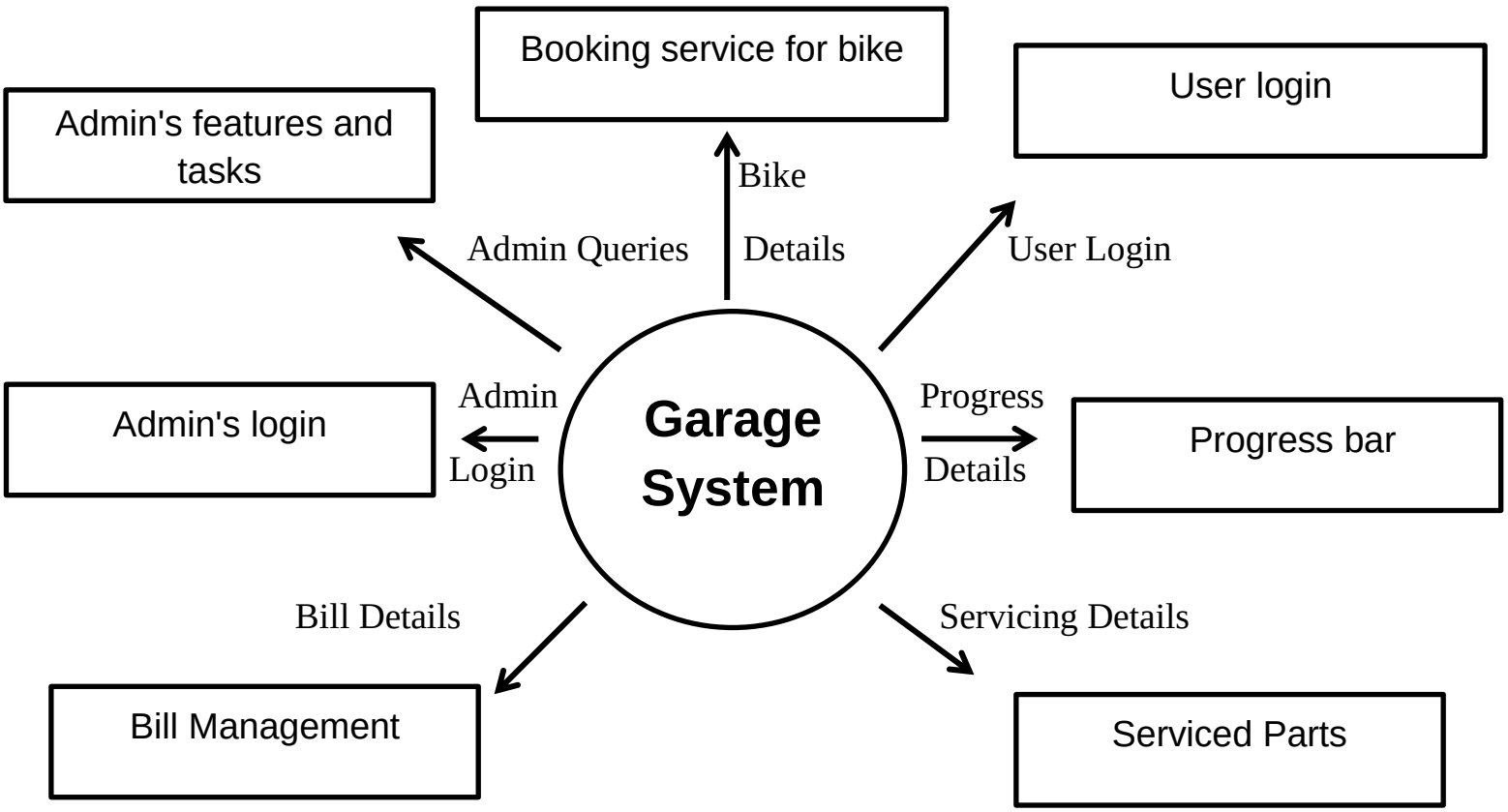
TABLE 5: RECEIPT

Field name	Field type	Description
Receipt_no	Integer	**(Primary key)** Receipt number
Total_bill	Integer	Total Bill
Plate_no	Varchar(10)	(**Foreign key**) Vehicle plate number
Cust_mobno	Varchar(10)	(**Foreign key**) Customer mobile no.
Owner_name	Varchar(10)	(**Foreign key**) Owner name

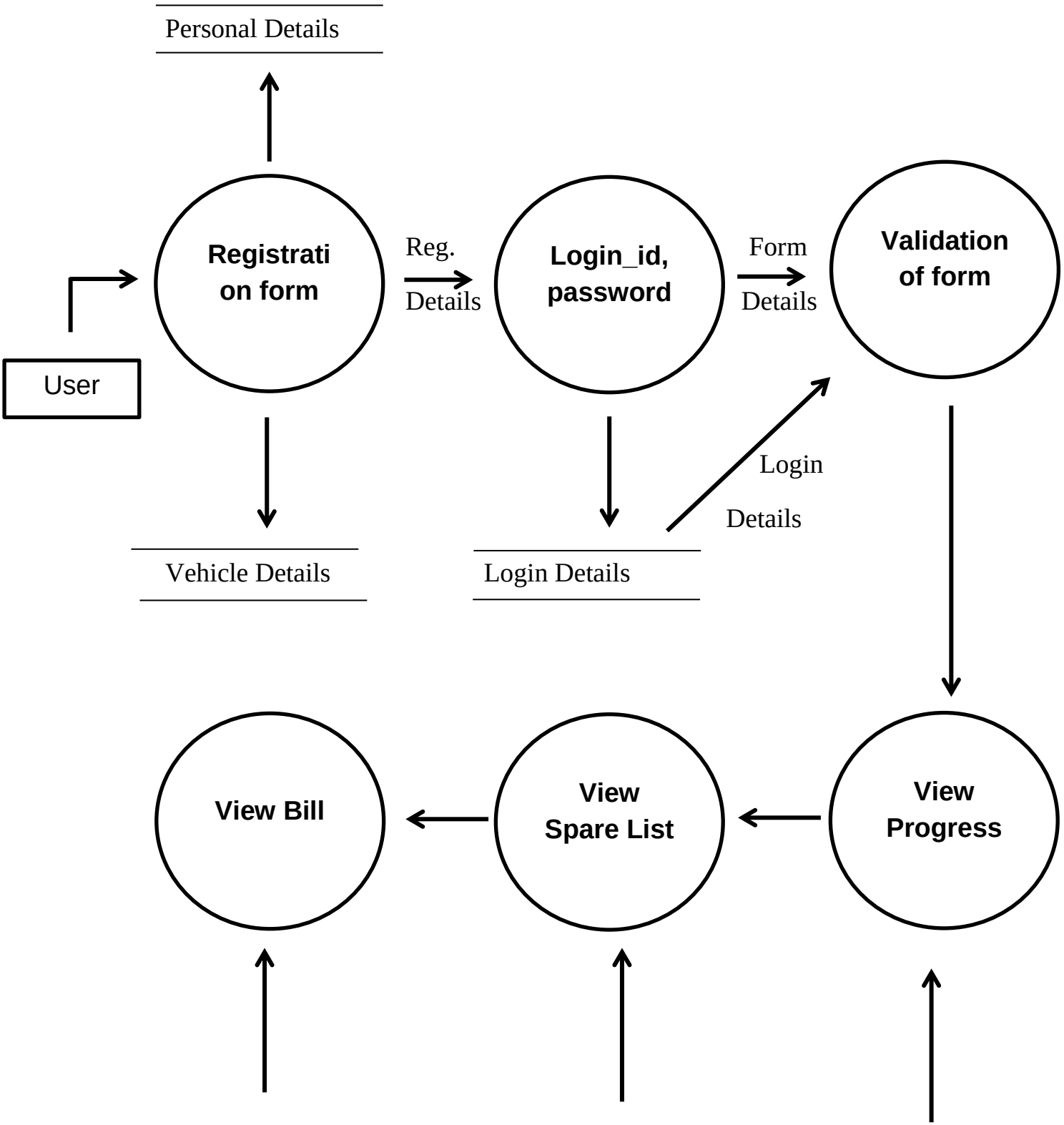
Task.5

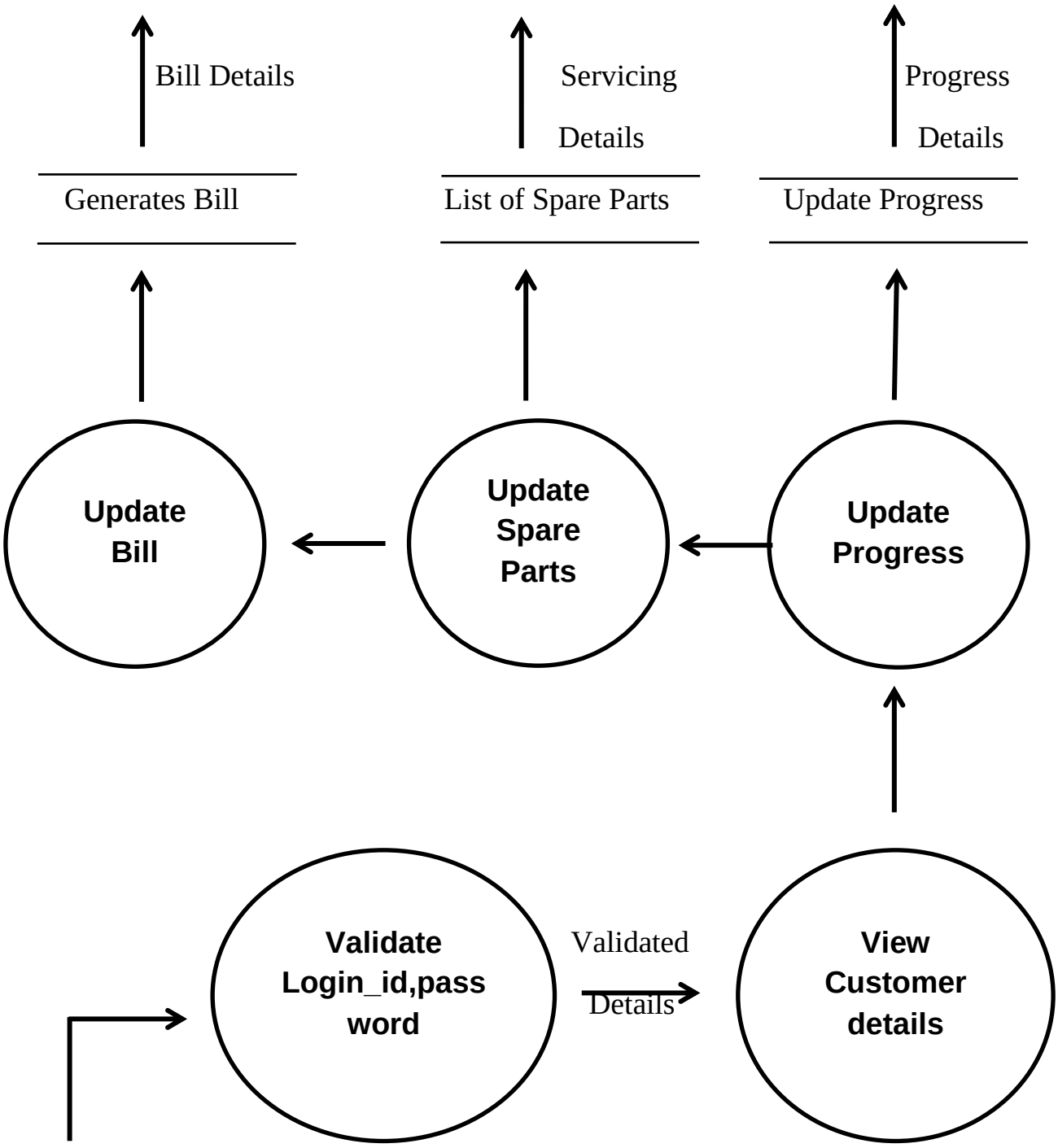
5. Data Flow Diagram

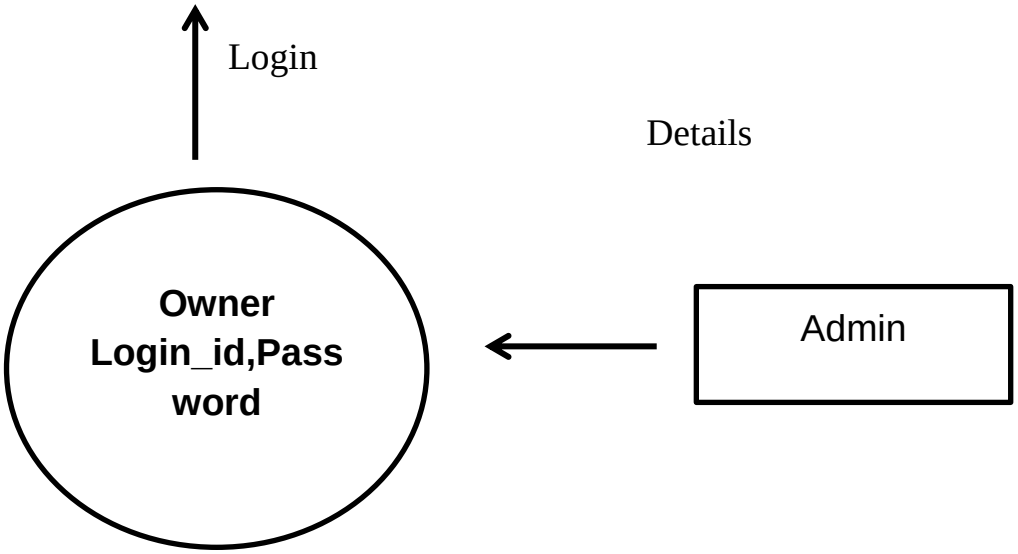
5.1. Context level DFD



5.2. First level DFD

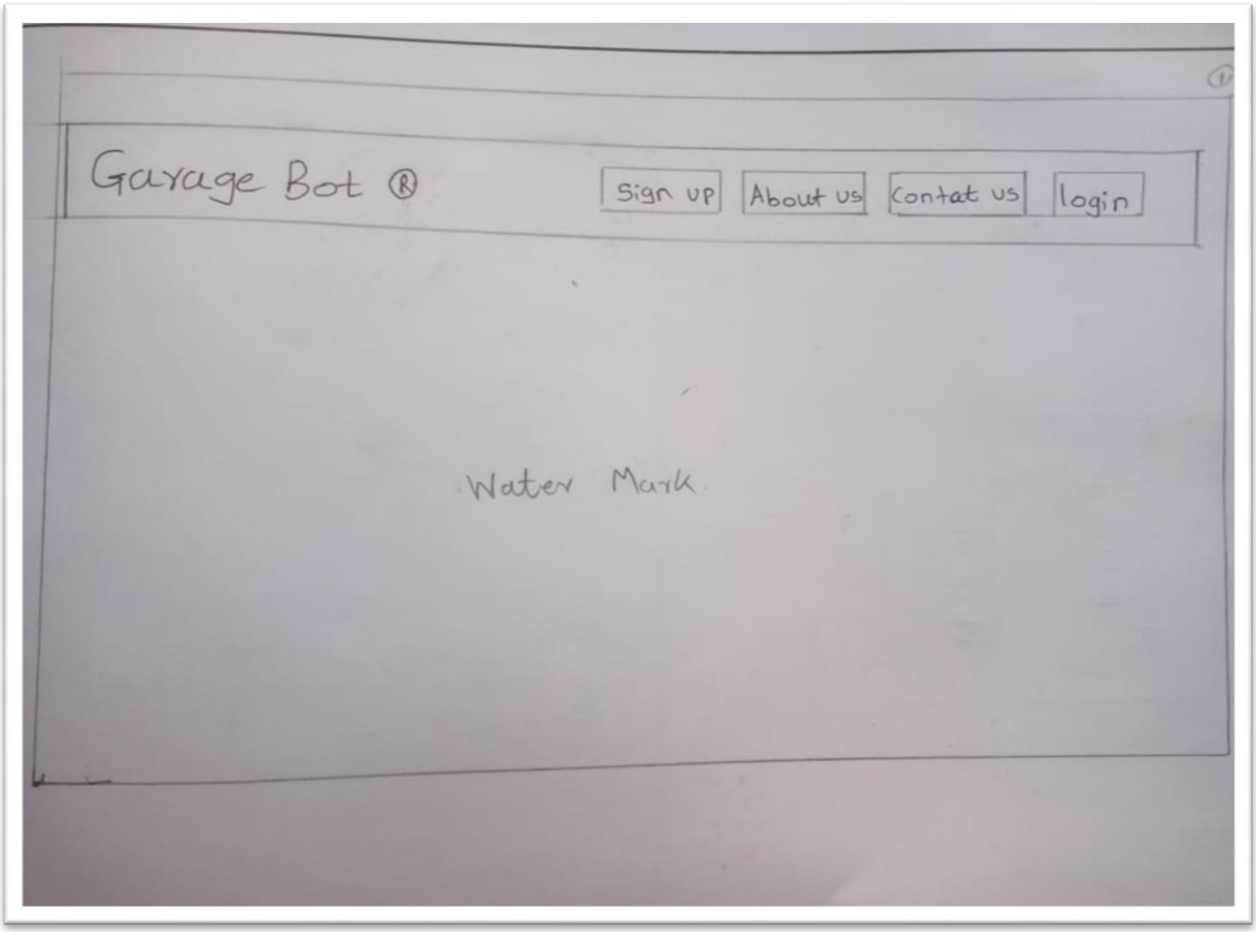


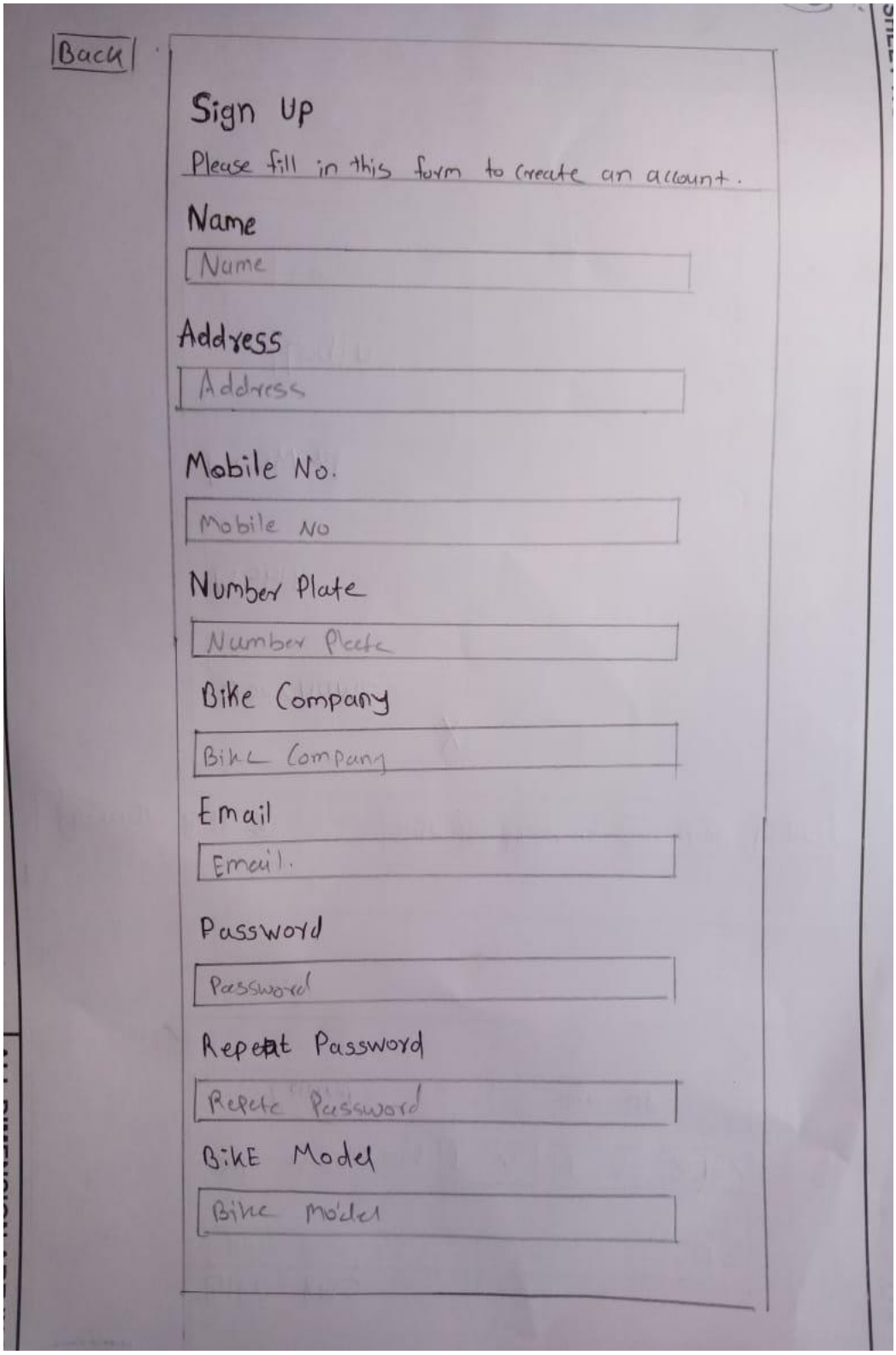

Bill Details
Servicing Details
Progress Details
Generates Bill
List of Spare Parts
Update Progress
Update Bill
Update Spare Parts
Update Progress
Validate Login_id,password
Validated Details
View Customer details

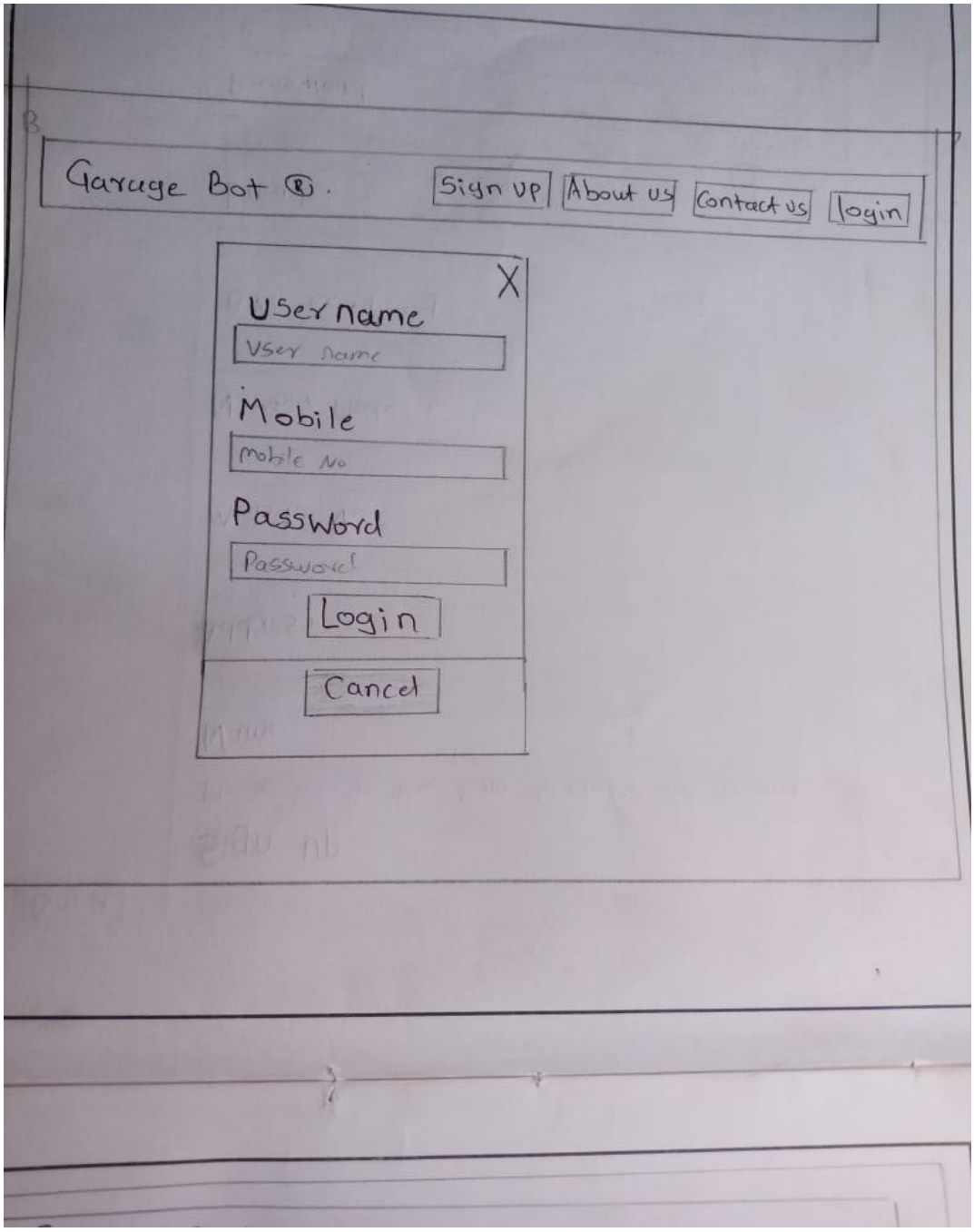

Login
Details
Owner
Login_id,Pass
word
Admin

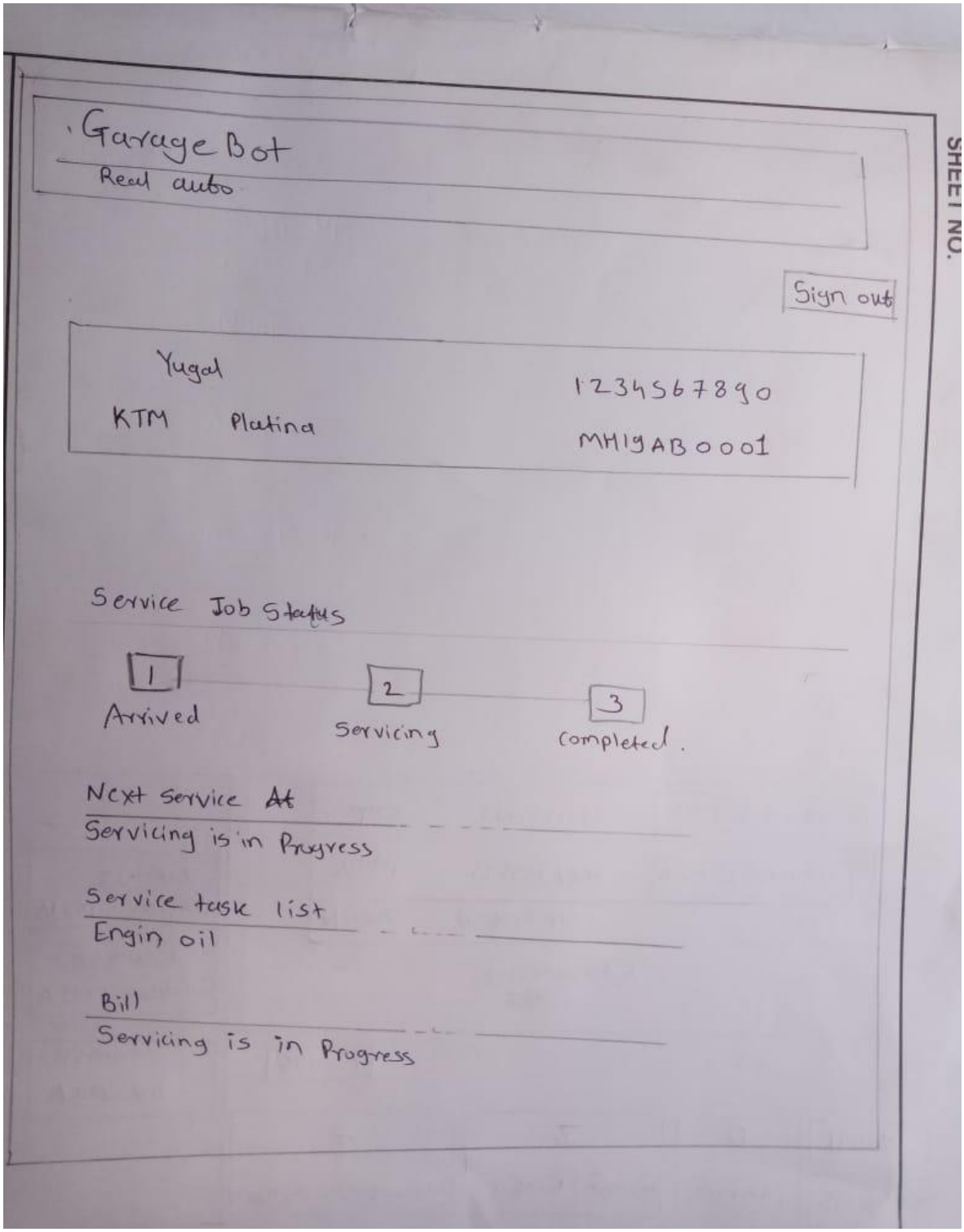
Task 6

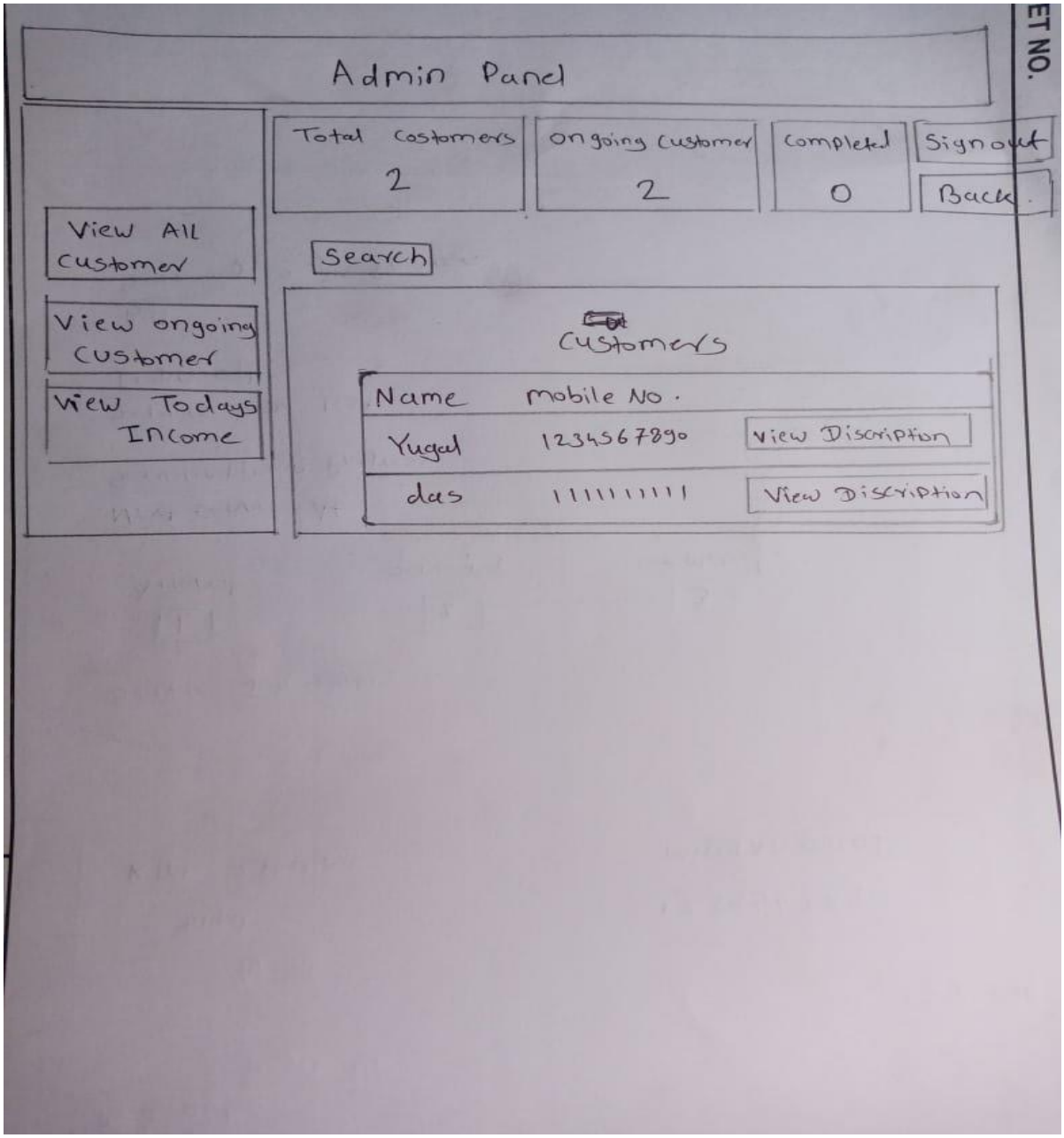
Input output screens

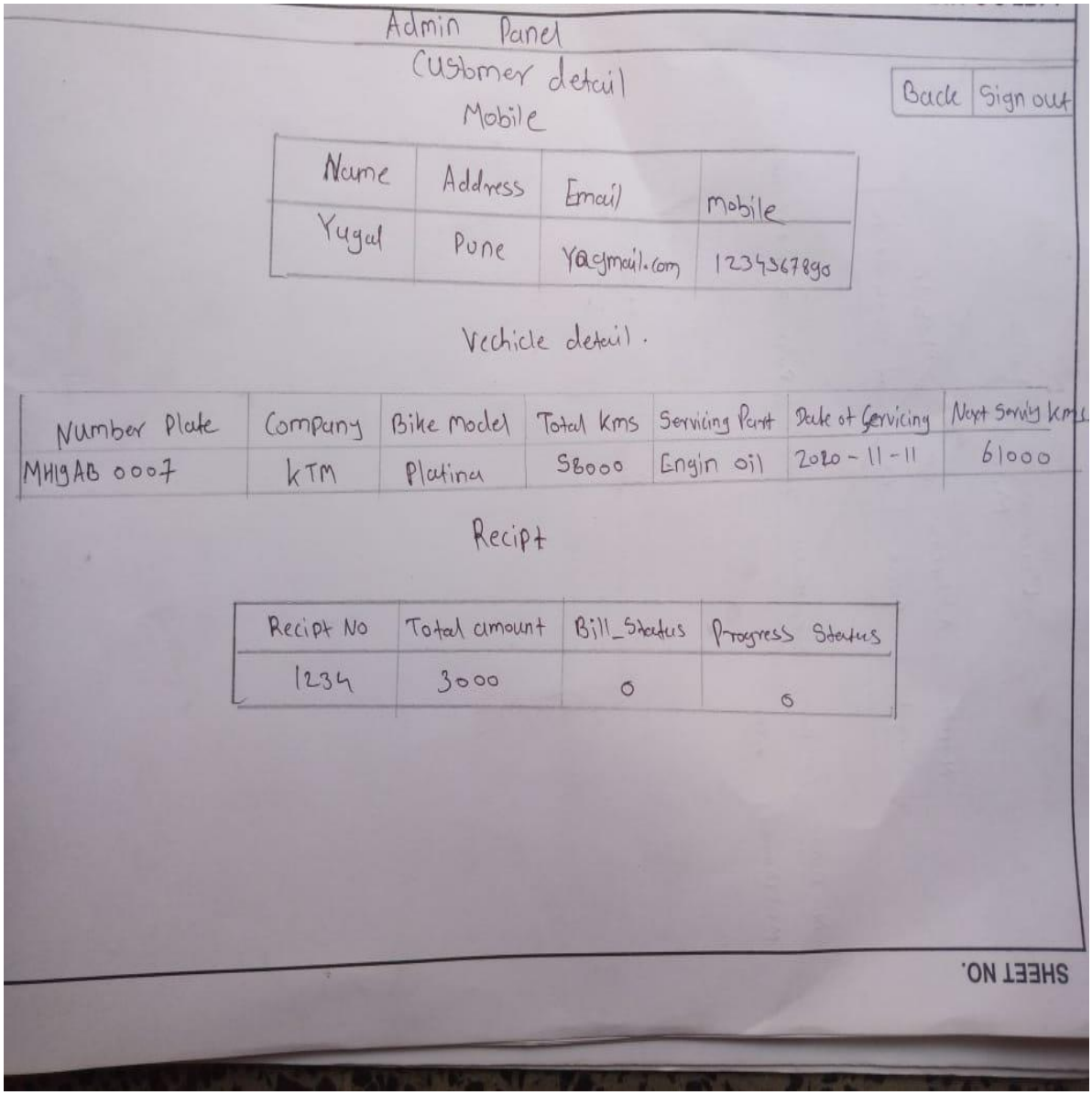


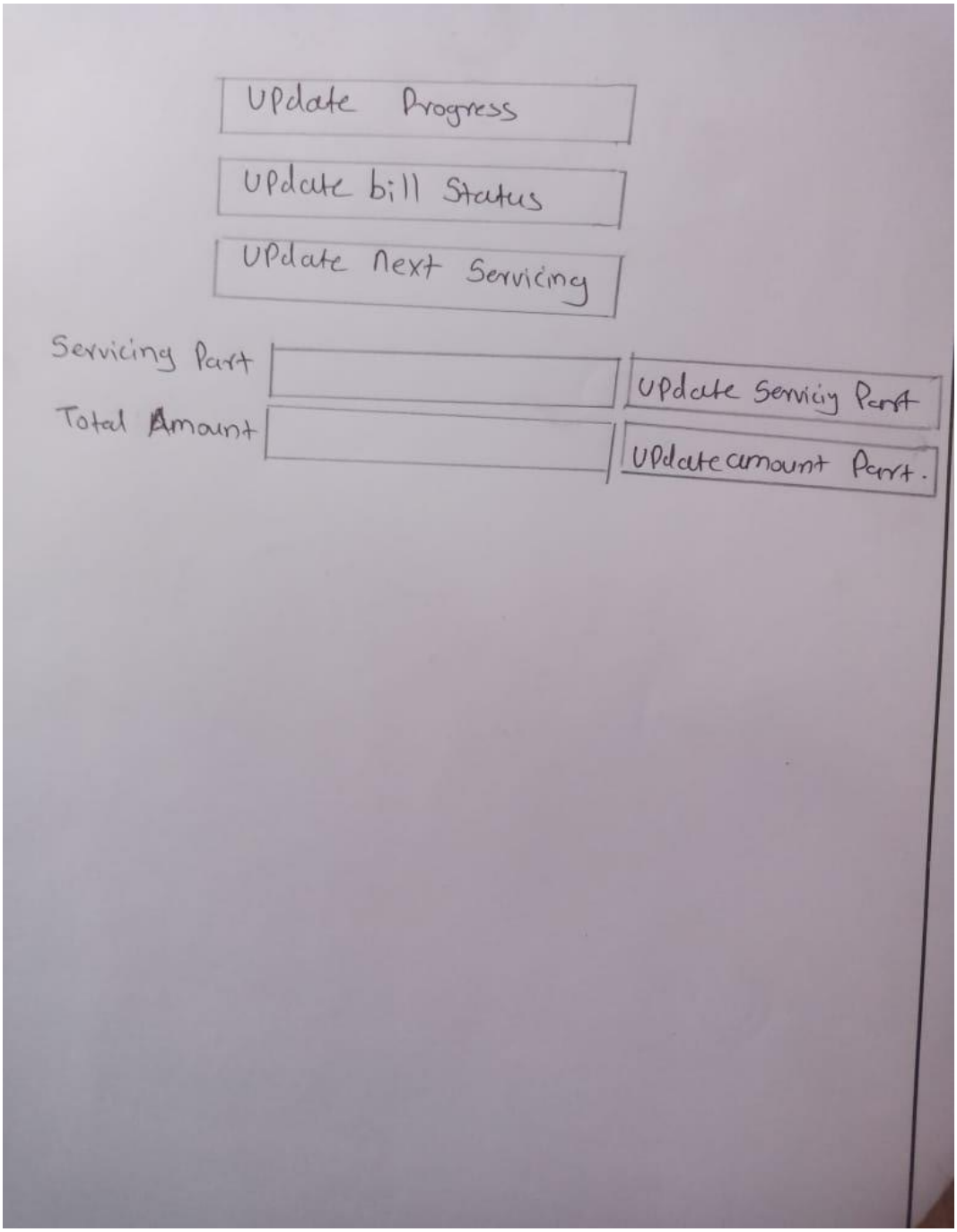

Back
Sign Up
Please fill in this form to create an account.
Name
Name
Address
Address
Mobile No.
Mobile No
Number Plate
Number Plate
Bike Company
Bike Company
Email
Email.
Password
Password
Repeat Password
Repeat Password
BiKE Model
Bike Model

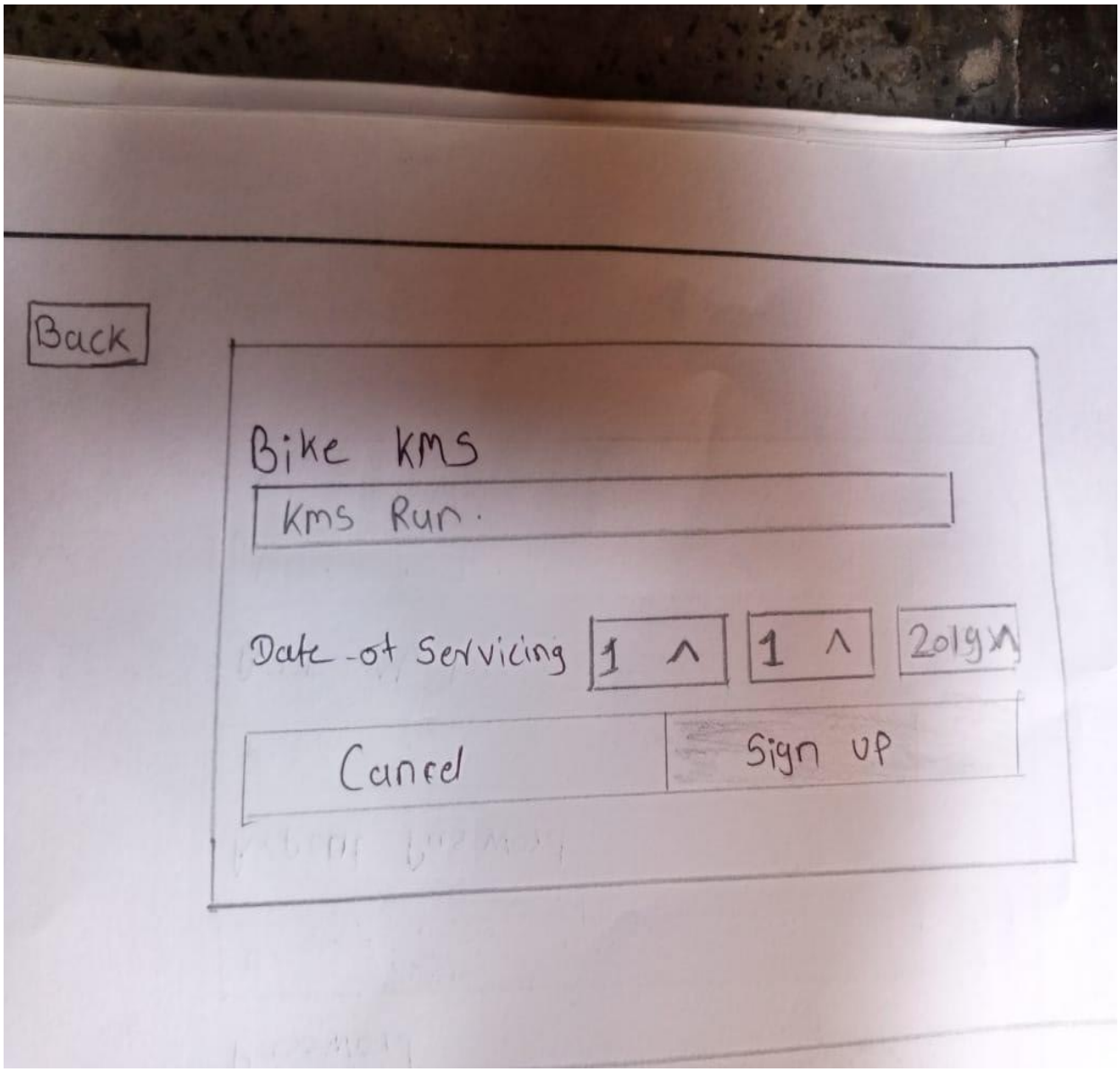

Garage Bot
Sign UP
About us
Contact us
login
X
User name
User Name
Mobile
Mobile No
PassWord
Password
Login
Cancel

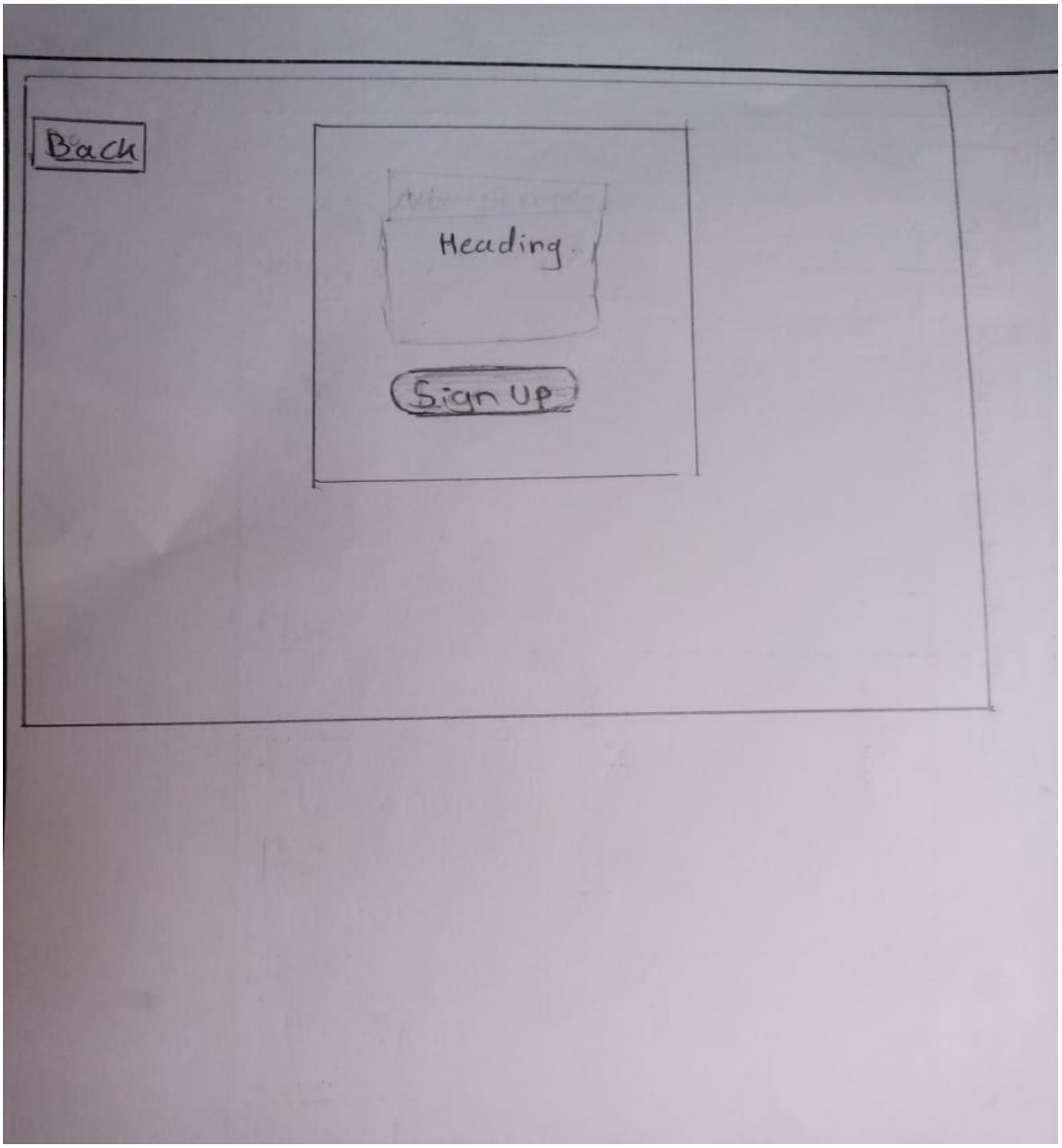

Garage Bot
Real auto
SHEET NO.
Sign out
Yugal
1234567890
KTM
Platina
MH19AB0001
Service Job Status
1
Arrived
2
Servicing
3
completed.
Next service At
Servicing is in Progress
Service task list
Engin oil
Bill
Servicing is in Progress


Admin Panel
Total Customers
2
Ongoing Customer
2
Completed
0
Sign out
Back
View All Customer
View ongoing Customer
View Todays Income
Search
Customers
Name
mobile No.
Yugal
1234567890
View Discription
das
1111111111
View Discription


Admin Panel
Customer detail
Mobile
Back
Sign out
Name
Address
Email
mobile
Yugal
Pune
Yag@gmail.com
1234567890
Vechicle detail.
Number Plate
Company
Bike model
Total kms
Servicing Part
Date of Servicing
Next Servig kms
MH19AB 0007
KTM
Platina
58000
Engin oil
2020-11-11
61000
Recipt
Recipt No
Total amount
Bill_Status
Progress Status
1234
3000
0
0
SHEET NO.


Update Progress
Update bill Status
Update next Servicing
Servicing Part
Update Servicing Part
Total Amount
Update amount Part.


Back
Bike KMS
Kms Run.
Date of Servicing
1
1
2019
Cancel
Sign up


Back
Heading
Sign Up

Task .7

TESTING

7.1 Test case and Test result

Test case name	Test Done	Output of the test
i)Verify customer(login_id, password)	The login and password cannot be null.The password must have minimum 8 characters. The login(email_id) is checked for various constraints.(i.e. for @, . ,etc.)	If login and password matches the customer logs into his account.
ii)Registration	Most of the fields are compulsory.Name is validated for alphabets. Email is validated for correct syntax. Mobile number is validated for 10 digits.	Customer Registration is successful and now he can log into his account.
iii)Verify Owner (Login_id,Password)	The login and password cannot be null.The password must have	If login is successful the control transfers to

	minimum 8 characters. The login(email_id) is checked for various constraints.(i.e. for @, . ,etc.)	the admin panel.
iv)Owner (Status)	Owner can update status till step 3 at max.	If status is correct, the status in progress bar is updated successfuly.
v)Owner (Bill Status)	The bill status is checked for 0 or 1 and for status=3 i.e. if the vehicle has completed the servicing then only bill can be generated.	The bill is successfully generated.
vi) Vehicle (Plate_no)	The vehicle plate number is checked for correct syntax.i.e.MH 12 8876.	If the syntax is correct then only the registration form is submitted.
vii)User details	Once the customer is registered using a paruicular mobile number,no other user	The details are displayed into their account.

	can use the same mobile number,same login,same password	
Vehicle details	Once a customer registers himself with a plate number,the same plate number cannot be used by any other customer.	The details are displayed into the respective accounts.

Email validations:-

We have check validity for the email-id entered. In our system the @symbol should not appear more than once. The dot(.)can appear at the most once before @ and at the most twice or at least once after @ symbol. The sub-string before @should not begin with a digit or underscore or dot or @ or any other special character

Name validations:-

Name should not start with numbers or symbols and must have alphabets only.