

Scrapnet:Scrapping of cars

PROJECT REPORT

Submitted by

SCISSNA TK

KMC21MCA-2022

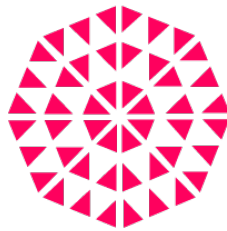
to

the APJ Abdul Kalam Technological University in partial fulfillment of the requirements

for the award of the Degree

of

Master of Computer Applications



Department Of Management Studies & Computer Applications

KMCT College of Engineering

Kallanthode, NITC P.O, Kozhikode-673601

NOVEMBER 2022

DECLARATION

I undersigned hereby declare that the project report “**Scrapnet:scrapping of cars**”, submitted for partial fulfillment of the requirements for the award of degree of Master of Computer Applications of the APJ Abdul Kalam Technological University, Kerala is a bonafide work done by me under supervision of **Mrs. Sharafunisa** . This submission represents my ideas in my own words and where ideas or words of others have been included, I have adequately and accurately cited and referenced the original sources. I also declare that I have adhered to ethics of academic honesty and integrity and have not misrepresented or fabricated any data or idea or fact or source in my submission. I understand that any violation of the above will be a cause for disciplinary action by the institute and/or the University and can also evoke penal action from the sources which have thus not been properly cited or from whom proper permission has not been obtained. This report has not been previously formed the basis for the award of any degree.

Place: Kallanthode

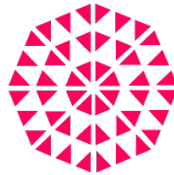
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Date: 23-11-2022

DEPARTMENT OF MANAGEMENT STUDIES & COMPUTER APPLICATIONS

KMCT COLLEGE OF ENGINEERING

Kallanthode, NITC P.O, Kozhikode-673601



CERTIFICATE

This is to certify that the report entitled "**Scrapnet:scrapping of cars**" submitted by **SCISSNA TK (KMC21MCA-2022)** to the APJ Abdul Kalam Technological University in partial fulfillment of the requirements for the award of the Degree of Master of Computer Applications is a bonafide record of the project work carried out by her under our guidance and supervision. This report in any form has not been submitted to any other University or Institute for any purpose.

Internal Supervisor

Project Coordinator

Head Of The Department

ACKNOWLEDGEMENT

I would like to take this opportunity to extend my sincere thanks to people who helped me to make this project possible. This project will be incomplete without mentioning all the people who helped me to make it real.

First and foremost I thank **Dr. Sabiq P V (Principal of KMCT College of Engineering)** who gave me all support to this project. I also thank **Mr. Ajayakumar K K (Head of the Department, MCA)** for providing all the facilities and resources for my project. I would also like to express my gratitude towards **Mrs. REMMYA CB (Assistant Professor, MCA)** and **Mrs. ANJUSHA K (Assistant Professor, MCA)**, Project Coordinator and Project Guide for their continuous support, guidance and supervision without which the project wouldn't have been a reality. I would also take this opportunity to thank all my friends who took time out of their busy schedule to encourage, support and motivate me which has been the key reason for the successful completion of this project.

Above all I thank God, the almighty for his grace without which it would not have been possible to complete this work on time.

Chapter 1

SYSTEM ANALYSIS

1.1 Existing system

There are some protocols associated with car scrapping. According to the norms, the car owner should approach the authorized Regional Transport Officer (RTO) and submit a letter expressing the intent to scrap the car. Once an agreement has been reached, the scrap dealer will dismantle the car parts and segregate them into iron, plastic, rubber, etc. During the scrapping process, the chassis number of the car is cut out before the scrap is sent for recycling. This chassis number has to be submitted to RTO as part of the deregistration process. After getting the vehicle scrapped, the car owner is supposed to submit the registration certificate along with the chassis number that is cut out of the car while scrapping. The scrapping of cars is the main topic of this essay. There are certain procedures involved in wrecking cars. In accordance with the rules, the owner of the vehicle must go to the designated Regional Transport Officer (RTO) and submit a letter stating their desire to scrap the vehicle. After a deal is made, the scrap dealer will remove the car parts and sort them into categories such as iron, plastic, rubber, etc. Before the scrap is shipped for recycling during the scrapping process, the vehicle's chassis number is removed.

The car owner will also have to submit an affidavit mentioning that the car is not under any loans, insurance claims or pending court cases. It should also mention that the car is not involved in any kind of criminal activity such as robbery. Once the documents are verified by the RTO, the car will be deregistered. Even though such rules exist, many people are

unaware of these legal procedures to be followed for getting their vehicles scrapped. This traditional method is complex and centralized. It requires a huge amount of time and manual work which is one of the biggest drawbacks in today's world of digital technologies. Therefore, in this paper, we develop a secure and automated system framework to implement scrapping of cars to reduce human interaction. To the best of our knowledge, there is no previous work using blockchain and machine learning technologies for this application.

1.2 Proposed System

The proposed system "Scrapnet: Scrapping of Cars" is the application to build for "Best Scrap", West Fort, Thrissur. Scrapnet is a system that educates people about the importance of scrapping and promotes a simple scrapping experience. As the record is updated automatically and accessible by all network members, it facilitates quicker and more transparent settlements. Three parties are included into the system: the scrap merchant, the car owner, and the RTO. A proof-of-work agreement technique is used to facilitate communication between the scrap dealer, car owner, and RTO. Firstly, the scrap dealer registers with his details and wait for approval from the RTO, who in turn authenticates the scrap dealer's details and allows the scrap dealer into the network. Secondly, the car owner has to register with his details and wait for approval by the scrap dealer as well as verification by RTO. On verifying both the scrap dealer and the car owner, RTO will approve the scrapping request. The next step is detecting damage of the car and predicting the price conforming to the damage detected and other features of the car. After scrapping the car, the scrap dealer has to put forward all information about the scrapped car to the RTO. The RTO will verify the details and issue a certificate to the car owner stating that the vehicle is deregistered. The certificate is generated using blockchain, each certificate has a unique hash value, based on which the authenticity of transactions can be monitored. The system revolves around four smart contracts for car owner registration, scrap dealer registration, RTO verification and certificate generation. The smart contracts are deployed in a local environment.

Main activities of System are:**Registration:**

Admin needs to enter the id and password they were provided to access the website. Users and scrap dealers needs to register into the system .This can be done by entering basic information like name, phone number, email address etc. After successful registration User and scrap dealer can login to their account.

Manage RTO's:

The admin will create user names and passwords for the RTOs as well as add the RTOs to the website.

Manage Scrap dealers:

Admin can see the scrap dealer and provide their approval. The list of accepted and rejected scrap dealers is available to admin.The application allows the RTO to view the registered scrap dealers.

Manage vehicles:

Pictures of the user's own vehicle can be added and viewed. The photos of the vehicle are visible to the admin.

Manage Request :

The requests from the user may be viewed by the scrap dealer and sent to the RTO. RTO has access to user requests and can check them. Once verified, the scrap dealer can access RTO to view the verification status.

Complaint and Reply:

User and scrap dealer have sent and received responses. Admin and RTO have viewed and responded to the complaints.

1.3 Module Description

2.3.1 Admin

Admin needs to log in to the website using a username and password. The admin will control the RTOs and the scrap dealers. Admin can approve or reject the scrap dealers. The admin has access to the registered user's . The admin can view the vehicle images uploaded by the user and also view the stolen vehicles.

2.3.2 User

The system enables users to sign up for an account using personal information. Vehicle information and photographs can be added by the user. The user may see the request's status and make a request to the scrap dealer for the vehicle to be scrapped. The user can then get a certificate from the RTO following the procedure.

2.3.2 Scrap dealer

The system enables scrap dealer to sign up for an account using personal information. The profiles of scrap dealers can be updated. The request from the user is visible to the scrap dealer. After then, the RTO will receive the information. The status of the RTO's verification is known to the scrap dealer. The scrapper is then free to carry out the scrapping operations. Following that, the scrap dealer updated the RTO with the scrapped information.

2.3.2 RTO's

RTOs need to login in to the application using the admin's already-given username and password. RTOs have profile management options. The RTO has access to the approved scrap dealers' information. RTO evaluates requests it gets from scrap traders. The RTO can then see the scrap dealers' confirmation of the scrapping. The vehicle will be scrapped by the scrap dealer so the RTO may deregister it. RTO is capable of reviewing the complaints and respond as well.

1.4 Feasibility study

A feasibility study is an assessment of the practicality of a proposed plan or project. A feasibility study analyzes the viability of a project to determine whether the project or venture is likely to succeed. The study is also designed to identify potential issues and problems that could arise while pursuing the project. A feasibility analysis evaluates the project's potential for success; therefore, perceived objectivity is an essential factor in the credibility of the study for potential investors and lending institutions.

1.4.1 Operational feasibility

This assessment involves undertaking a study to analyze and determine whether and how well the organization's needs can be met by completing the project. Operational feasibility studies also examine how a project plan satisfies the requirements identified in the requirements analysis phase of system development. The new system or project can be used in day-to-day life which becomes more user-friendly for the customer. This system is operationally feasible as it is very easy to operate. It helps the Owner to manage the operations. Also, the customers can easily view and order the products.

1.4.2 Technical feasibility

Technical feasibility involves the evaluation of the hardware, software, and other technical requirements of the proposed system. The structure of the system will consist of a back end and a front end. The back end will be implemented using MYSQL. The front end should be completed using PYTHON, HTML, and CSS. The proposed system is supported by the existing computer system for the admin side and customers can access the system via a mobile device or computer system.

1.4.3 Economical feasibility

This assessment typically involves a cost/ benefits analysis of the project, helping organizations determine the viability, cost, and benefits associated with a project before financial resources are allocated. Customers can use any laptop or smartphone to order the products

and use the services. Thus, this system is economically feasible. There is no extra cost only need good internet access.

1.5 System Environment

Developer Requirement

Hardware Requirement

- Processor: Intel Core i3
- RAM: 4 GB
- Storage: 500GB Hard disk

Software Requirement

- Operating system: Windows 10 or above
- Front end: HTML, CSS,flutter,python
- Back end: MySQL
- Languages: Python
- IDE: Android studio, Pycharm community
- Web browser: Internet Explorer/Google chrome/Firefox

User requirement

- Any Smartphone/Computer/ Laptop
- Stable Internet Access

1.6 Actors and Their Roles

Admin

The Admin is responsible for the overall management of this system.

- Login
- View and Manage scrap dealers
- View users
- View vehicles/scrapped vehicles
- Manage RTO's
- View/send reply to complaints

RTO's

RTO's can access services on the application.

- Login
- View/Update Profile
- View scrap dealers
- Manage vehicles
- view request from scrap dealers
- view confirmation of scrapping from scrap dealers
- Deregister vehicles
- view/send complaints
- Logout

scrap dealer

Scrap dealer can access services on the application.

- Login
- View/Update Profile
- view request from users
- forward request from user to RTO
- View confirmation status from RTO
- update scrapping details to RTO
- send complaints and view reply
- Logout

User

User can access services on the application.

- Login
- View/Update Profile
- view own vehicles
- send scrapping request
- View status of request
- obtain certificate from RTO
- send complaints and view reply
- Logout

Chapter 2

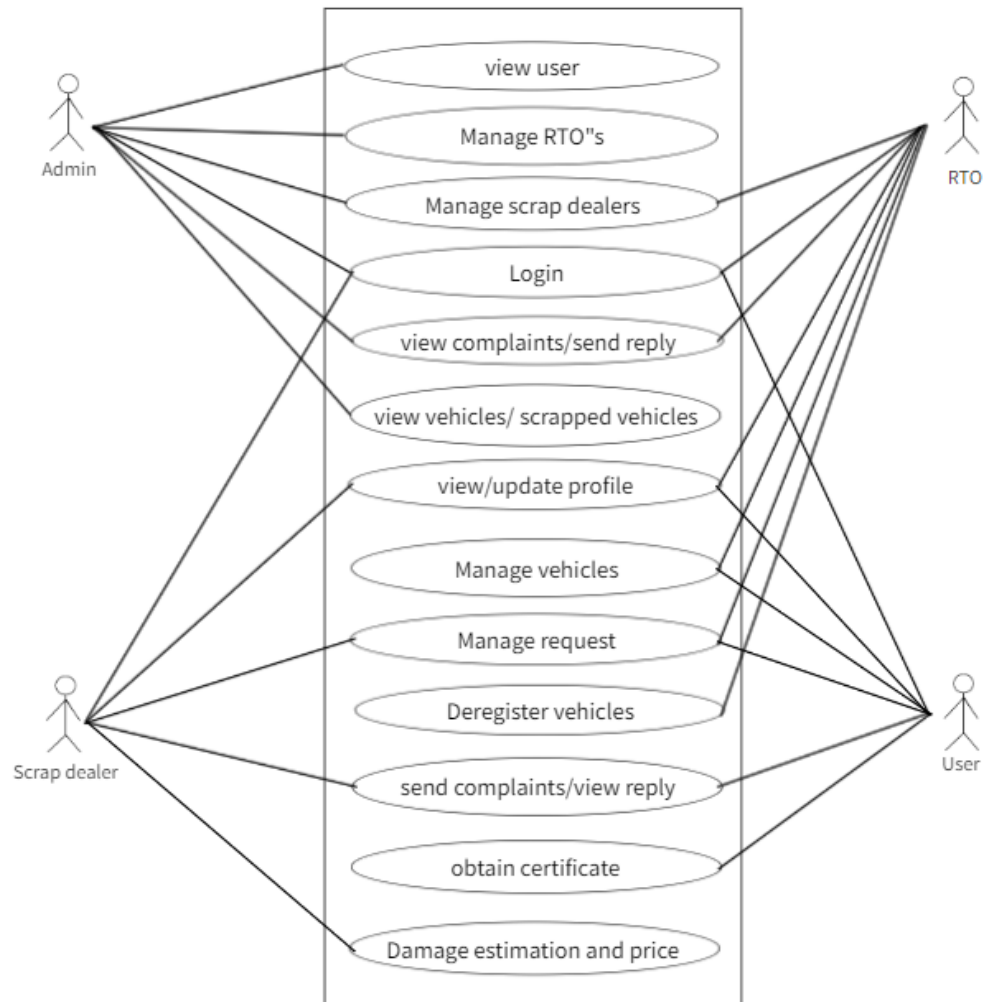
METHODOLOGY

2.1 Introduction

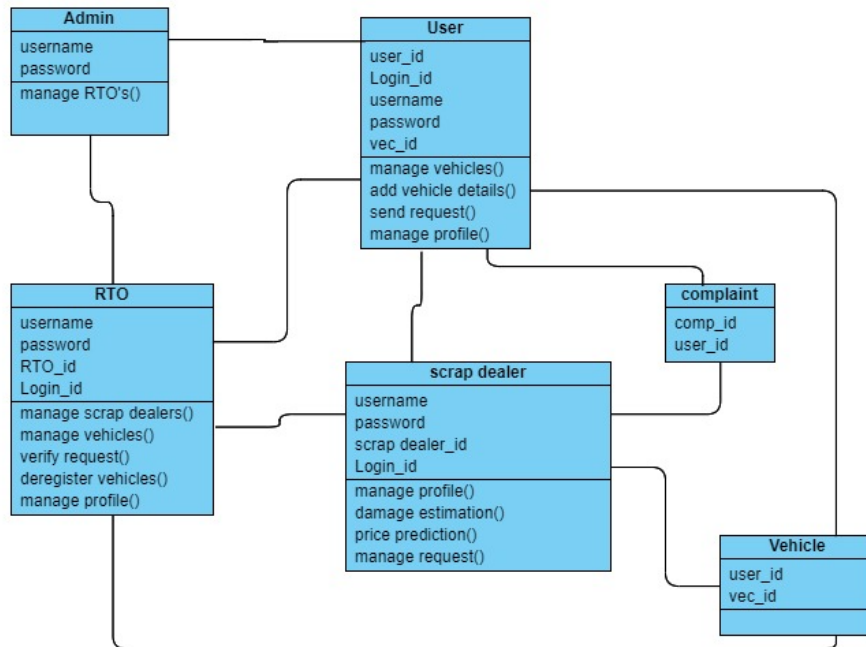
This project follows Agile methodology. Agile software development comprises various approaches to software development under which requirements and solutions evolve through the collaborative effort of self organizing and cross-functional teams and their customers/end users. It advocates adaptive planning, evolutionary development, early delivery and continuous improvement and it encourage rapid and flexible response to change. It's a process for managing a project that involves constant collaboration and working in iterations. Today, the word Agile can refer to these values and the frameworks for implementing them, including Scrum, Kanban, Extreme Programming (XP), and Adaptive Project Framework (APF). One thing that separates Agile from other approaches to software development is the focus on the people doing the work and how they work together. Solutions evolve through collaboration between self-organizing cross-functional teams utilizing the appropriate practices for their context.

2.2 UML Diagram

2.2.1 Use case Diagram



2.2.2 Class Diagram



2.3 User Story

User story ID	As a <Type of Users >	I want to <Perform some task >	So that I can <Achieve some goal >
1	Admin	Home page	can view the system's entire page.
2	Admin,user,scrap dealer,RTO	Login	Access the system.
3	User,scrap dealer	Register	User can register into the system and create their profile.
4	User	Manage profile	user can view profile,update profile and also change password.
5	Admin	View Users	Admin can view Users.
6	Scrap dealer	Manage profile	Scrap dealer can view profile,update profile and change password.
7	Admin	Manage scrap dealers	Admin can view Scrap dealer and approve it.Admin can view approved scrap dealers.Admin can view rejected Scrap dealers.

User story ID	As a <Type of Users >	I want to <Perform some task >	So that I can <Achieve some goal >
8	User	View own vehicles.	User can view and add own vehicles details
9	Admin	View vehicles.	admin can view vehicles
10	User	Send request to the scrap dealer	user can send scrapping request to the scrap dealer.
11	Scrap dealer	View requests	Scrap dealer can view the requests from users
12	Scrap dealer	forward requests	Scrap dealer can forward the requests from users to RTO
13	RTO	Manage profile	can view profile.
14	Admin	Manage RTO	Admin can manage RTO's.
15	RTO	View Scrap dealers	RTO can view scrap dealers.
16	RTO	View requests	RTO can view requests from Scrap dealers.
17	RTO	Manage vehicles	RTO can manage vehicles.

User story ID	As a <Type of Users >	I want to <Perform some task >	So that I can <Achieve some goal >
18	RTO	verify requests	RTO can verify the requests from Scrap dealers.
19	Scrap dealer	view verification status	Scrap dealer can view verification status from RTO.
20	User	view status of request	user can view status of request.
21	Scrap dealer	update scraping details	Scrap dealer can update scraping details.
22	RTO	view confirmation details	RTO can view confirmation of scrapping from scrap dealers.
23	RTO	De-register the vehicles	RTO can De-register the vehicles and also provide certificate.
24	User	obtain certificate	user can obtain certificate.
25	Admin	View scraped vehicles.	admin can view scraped vehicles
26	User ,scrap dealer	Add complaints	user can add the complaints and view replay .
27	Admin,RTO	Respond to complaints	Admin can view the complaints send replay.

2.4 Database design

2.4.1 Login

The Login table contains the login id and password, and an already registered user can log in to the account.

Name	Type	Constraint	Description
Login_id	Int	Primary key	Login id for user.
Username	varchar(20)	notnull	username for user.
Password	varchar(20)	notnull	User account Password
Type	Varchar(20)	notnull	Type of user.

Table 2.1: Login table

2.4.2 User Table

The table explain the user details of user id,username,place etc...

Name	Type	Constraint	Description
user_id	Int	Primary key	Id of user
login_id	Int	foreign key	user login id
Name	Varchar(50)	Notnull	name
House_name	Varchar(50)	Notnull	house name
place	varchar(50)	Notnull	place
pin	int	Notnull	pin
phone_num	int	Notnull	phone nuber
Image	varchar(50)	Notnull	Image of the person
Aadhar_num	int	Notnull	Aadhar number of the user
Father's Name	varchar(50)	Notnull	Father's name
Email_id	varchar(50)	Notnull	user name
password	int	Notnull	password

2.4.3 Scrap dealer

The table contains all details about the Scrap dealer such as scrap dealer_i, *name etc...*

Name	Type	Constraint	Description
scrapdealer_id	Int	Primary key	Id of product category
login_id	Int	foreign key	scrapdealer login id
Name	Varchar(50)	Notnull	name
Organization_name	varchar(50)	Notnull	organization name
Organization_place	varchar(50)	Notnull	organization place
Organization_post	varchar(50)	Notnull	post of the organization
Organization_pin	int	Notnull	pin number of the organization
Org_District	Varchar(250)	Not null	district
Licence_num	int	Notnull	Licence number of the organization
status	varchar(50)	Notnull	status
Email_id	varchar(50)	Notnull	user name
photo	varchar(50)	Notnull	photo of the scrap dealer

Table 2.2: scrap dealer details

2.4.4 RTO

The table contains details of RTO's such as RTO id,name,reg num etc...

Name	Type	Constraint	Description
RTO_id	Int	Primary key	Id of the order
login_id	Int	foreign key	RTO login id
Name	Varchar(50)	Notnull	name
Reg_num	Int	not null	RTO registration number
RTO address	Varchar(250)	Not null	Address of the RTO
Place	Varchar(250)	Not null	place
Post	Varchar(250)	Not null	post
Pin	int	Not null	pin
District	Varchar(250)	Not null	district
Email	Varchar(250)	Not null	email address
phone	int	Not null	phone number

Table 2.3: RTO Details

2.4.5 Vehicle

The table contains vehicle details such as vehicle id,Engine num etc.

Name	Type	Constraint	Description
user_id	Int	Primary key	Id of the order details
vehicle_id	Int	not null	Id of the vehicle
Registration_num	Int	not null	registration number of the vehicle
Engine_num	Int	not null	engine number of the vehicle.
chassis_num	Int	not null	chassis number of the vehicle.
fuel_type	varchar(20)	not null	fuel type of the vehicle.
date_of_reg	date	not null	date of registration
owner's_name	varchar(20)	not null	name of the owner.
Aadharnumber	Int	not null	aadhar number of the user.
fitness_details	varchar(20)	not null	name of the owner.
Image	varchar(50)	Notnull	Image of the car

Table 2.4: vehicle details

2.4.6 complaint

The table contains complaint details such as comp id,complaint,date etc...

Name	Type	Constraint	Description
comp_id	Int	Primary key	Id of complaint
complaint	varchar(20)	not null	complaints
User_id	Int	foreign key	Id of the user
Date	date	Not null	date of complaint.
Reply	varchar(20)	Not null	reply
status	varchar(20)	Not null	status

Table 2.5: Complaints

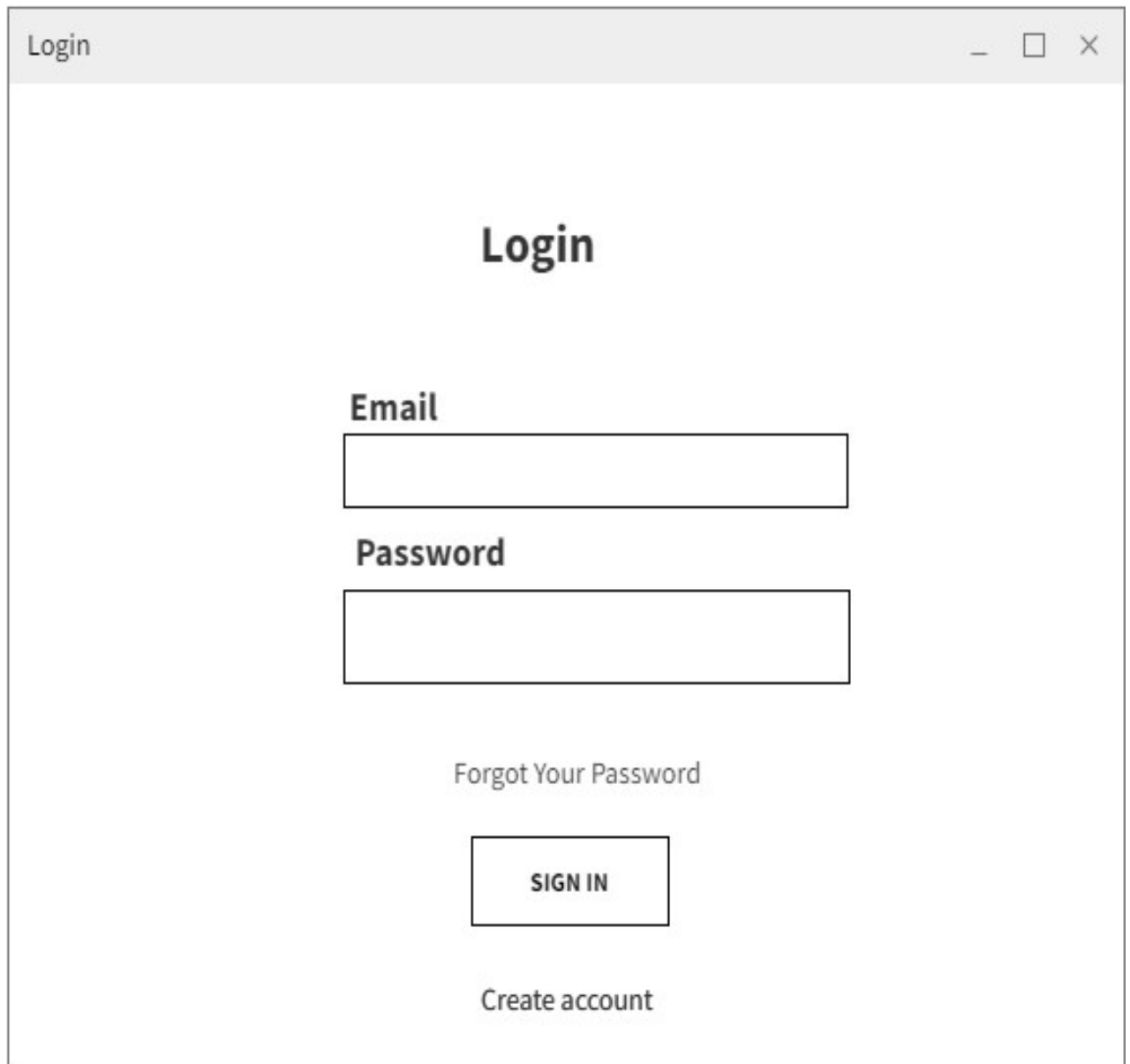
2.4.7 price

The table contains price details such as price id,price,ownername etc...

Name	Type	Constraint	Description
price_id	Int	Primary key	Id of price
price	int	not null	price
User_id	Int	foreign key	Id of the user
Date	date	Not null	date of price.
vehicle_id	int	foreign key	id of the vehicle
ownername	varchar(20)	foreign key	username

Table 2.6: price details

This is the login page for Admin of this system.



The image shows a login page design within a window titled "Login". The window has a light gray header bar with the title "Login" on the left and standard window controls (minimize, maximize, close) on the right. The main content area is white. In the center, the word "Login" is displayed in a large, bold, black font. Below it, the label "Email" is followed by a rectangular input field. Underneath the email field, the label "Password" is followed by another rectangular input field. Below the password field, the text "Forgot Your Password" is centered. Further down, a rectangular button with the text "SIGN IN" in bold is centered. At the bottom, the text "Create account" is centered.

Figure 2.1: Login page

2.5.2 Admin

dashboard

This is a home page or dashboard of admin. By clicking login, first enters to this page.

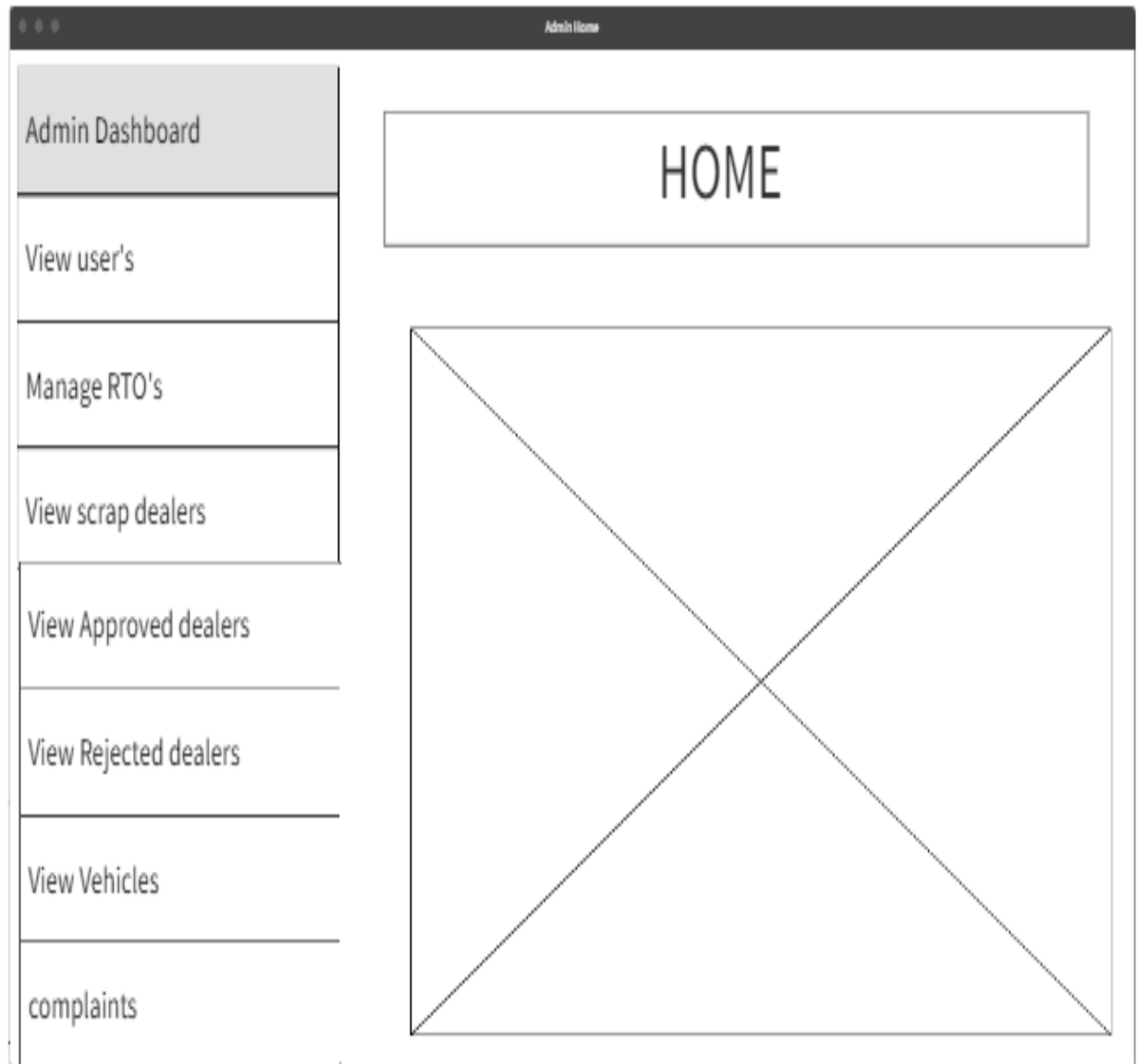


Figure 2.2: Admin dashboard

2.5.3 View

User's

This is user view page.

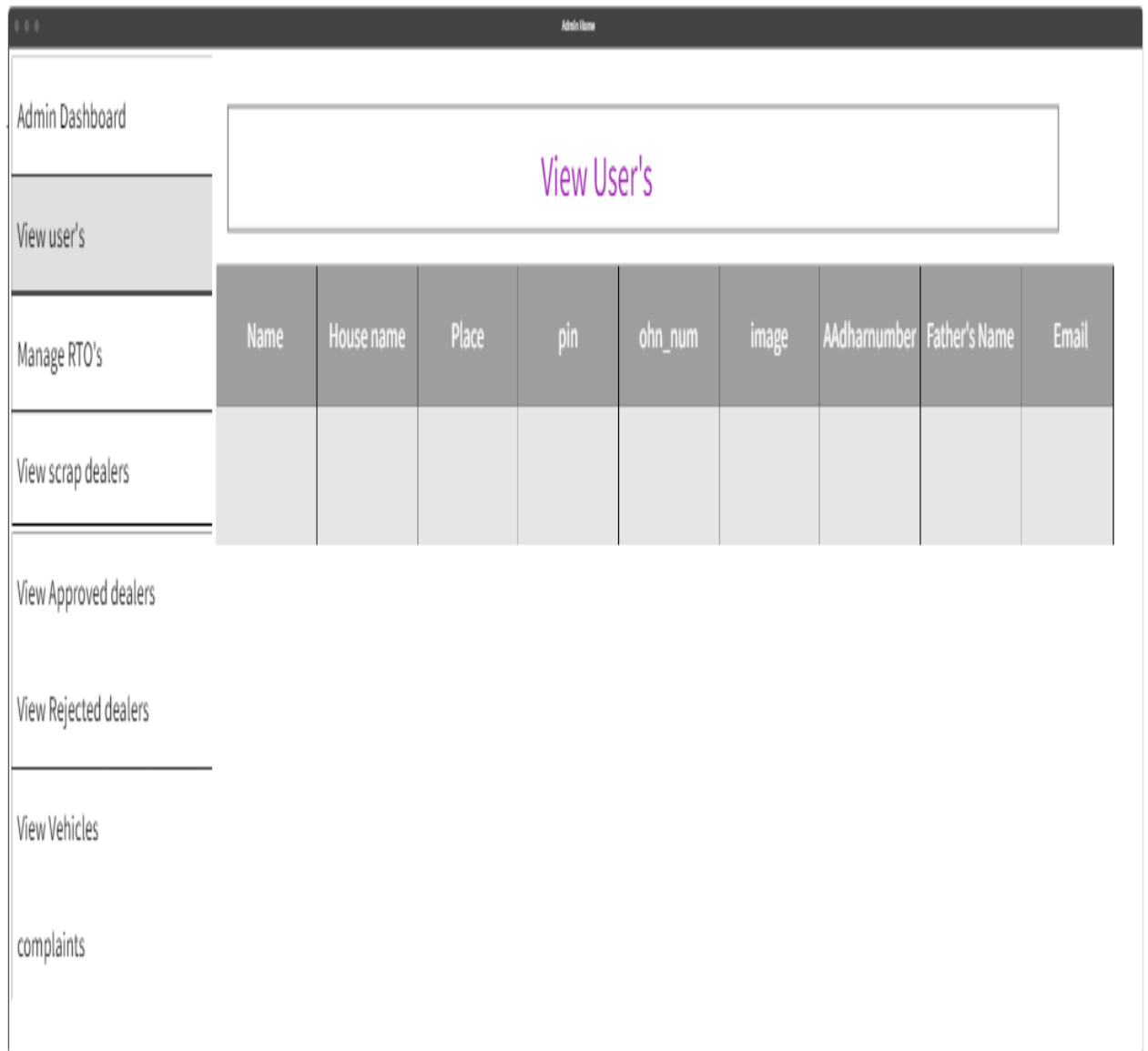


Figure 2.3: products

This page for Manage RTO.

Admin home

Admin Dashboard

View user's

Manage RTO's

scrap dealers

Approved scrap dealers

Rejected scrap dealers

Vehicles

Complaints

Logout

Manage RTO

search

Name	Reg_num	Address	Place	Post	Pin	District	Phn_num	Email	
									ADD
									ADD
									ADD

Figure 2.4: Manage RTO

Admin home

Admin Dashboard

View user's

Manage RTO's

scrap dealers

Approved scrap dealer

Rejected scrap dealers

Vehicles

Complaints

Logout

Scrap Dealers

search




Name	org_name	org_place	Post	Pin	District	Licence_num	Phin_num	Email_id	Status	Photo
										
										
										

Figure 2.5: Scrap dealers

dealers

Figure 2.6: Approved scrap dealers

Admin home										
Admin Dashboard	Rejected Scrap Dealers									<input type="text"/> search
View user's	Name	org_name	org_place	Post	Pin	District	Licence_num	Phn_num	Email_id	Status
Manage RTO's										
scrap dealers										
Approved scrap dealer										
Rejected scrap dealers										
Vehicles										
Complaints										
Logout										

Figure 2.7: Rejected Scrap dealer

2.5.8 Vehicle

Details

Admin home

Admin Dashboard

View user's

Manage RTO's

scrap dealers

Approved scrap dealers

Rejected scrap dealers

Vehicles

Complaints

Logout

Vehicles

Search





Vec_Name	org_name	org_place	Post	Pin	District	Licence_num	Phin_num	Email_id	Status	Photo
										
										
										

Figure 2.8: Vechicle Details

2.5.9 Login



The image shows a login page for an application titled "Scrapnet: Scrapping of Cars". The page is displayed on a tablet-like interface with a dark grey border and rounded corners. At the top, the title "Scrapnet: Scrapping of Cars" is written in a bold, purple, italicized font. Below the title, there are two input fields: one for "username" and one for "Password". Both fields have a light grey border and a small shadow. Below the password field, there is a rounded rectangular button with a grey gradient and the word "Login" in purple. At the bottom, the text "Sign Up" is displayed in a bold, purple font.

Scrapnet: Scrapping of Cars

username

Password

Login

Sign Up

Figure 2.9: Login page

This page for Sign Up.

Scrapnet:Scrapping of Cars

Sign Up

Name

House Name

Place

Pin

District

Phone Number

Father's Name

Aadhar number

Email id

Password

Upload

 Drop file here or [click here](#)

Sign Up

Figure 2.10: Sign UP

2.5.11 profile

This is profile page.



The image shows a mobile application interface for 'Scrapnet: Scrapping of Cars'. At the top, the title 'Scrapnet: Scrapping of Cars' is displayed in purple. Below the title is a profile icon of a woman with brown hair wearing a red shirt. Under the icon, the word 'Profile' is written in green and underlined. The main section of the page contains a series of input fields for user information, each with a label on the left and a text box on the right. The labels are: Name, House Name, Place, Pin, District, Phone Number, Father's Name, Aadhar number, Email id, Password, and Upload. The 'Upload' field has a file upload icon and the text 'Drop file here or [click here](#)'. At the bottom of the form is a large, rounded button with the word 'Update' in purple.

Scrapnet: Scrapping of Cars


Profile

Name

House Name

Place

Pin

District

Phone Number

Father's Name

Aadhar number

Email id

Password

Upload


Drop file here or [click here](#)

Update

Figure 2.11: Profile page

2.5.12 Vehicle

details

This is vehicle detail page.



The image shows a mobile application interface for "Scrapnet: Scrapping of Cars". The page is titled "Vehicle Details" in green. It contains a form with the following fields: Vehicle Name, Registration Number, Engine Number, Chassis Number, Fuel Type, Date of Registration, Owner's Name, Aadhar number, Registered office of the RTO, and Fitness_Pollution_Details. Each field is represented by a text input box with a label above it. Below these fields is an "Upload" section with a file upload icon and the text "Drop file here or [click here](#)". At the bottom of the form is a large "SUBMIT" button.

Scrapnet: Scrapping of Cars

Vehicle Details

Vehicle Name

Registration Number

Engine Number

Chassis Number

Fuel Type

Date of Registration

Owner's Name

Aadhar number

Registered office of the RTO

Fitness_Pollution_Details

Upload

Drop file here or [click here](#)

SUBMIT

Figure 2.12: Vehicle detail page

2.5.13 Requests

This page for Requests.



Figure 2.13: Requests

This page for verified details.

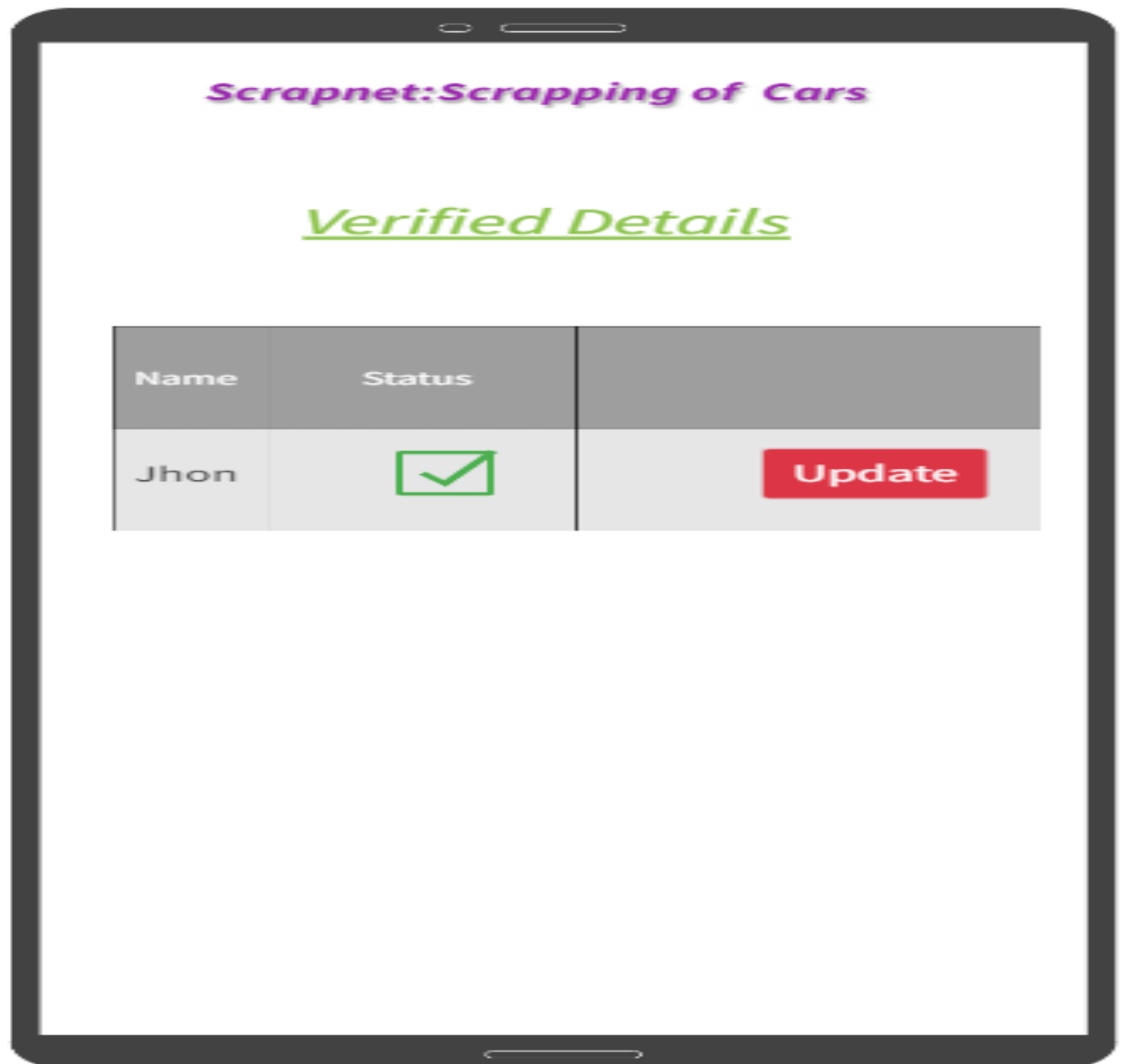


Figure 2.14: Verified Details

2.5.15 User status and download certificate

This page for user status and download certificate.

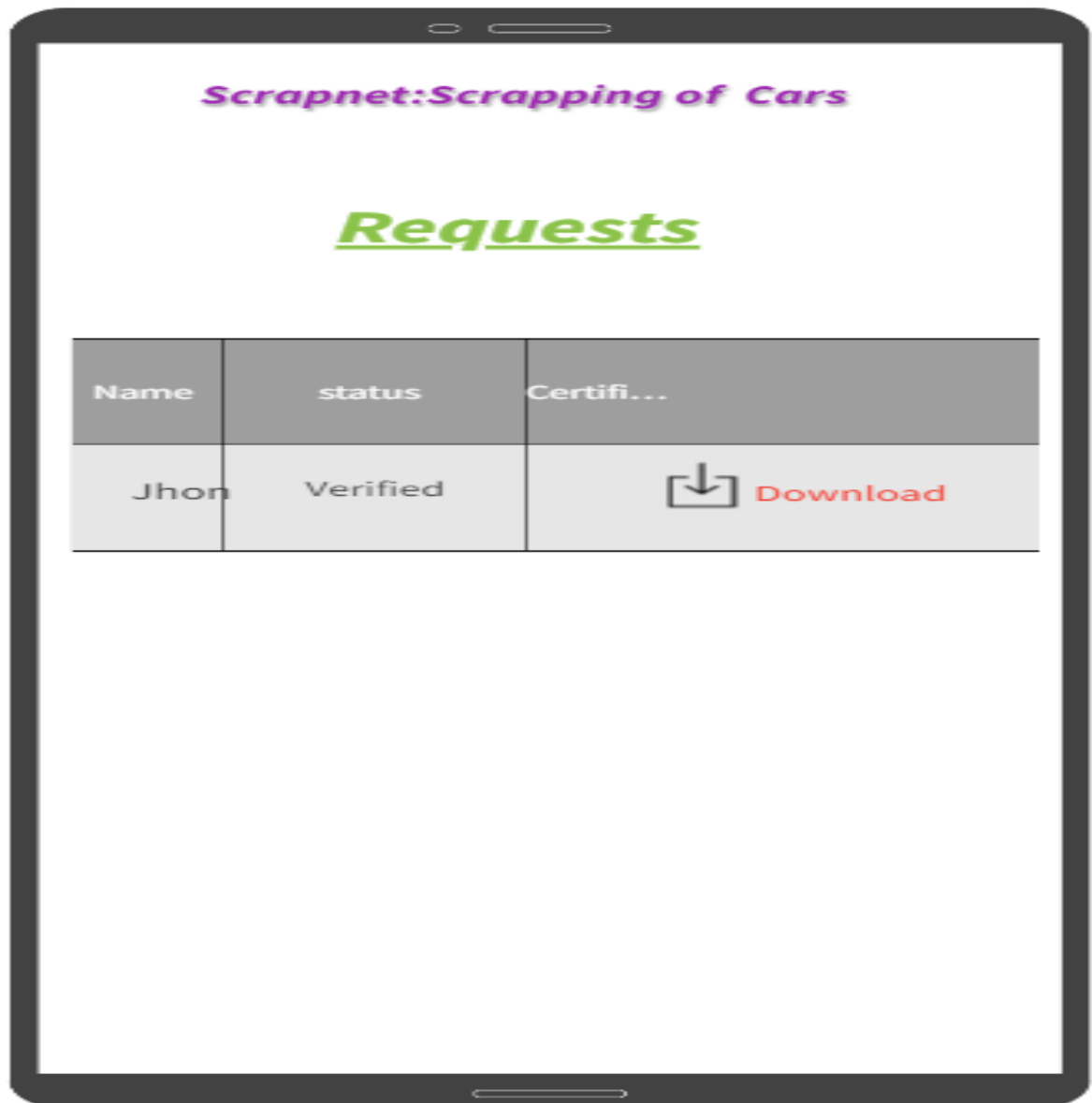


Figure 2.15: User status

This is view the status page.

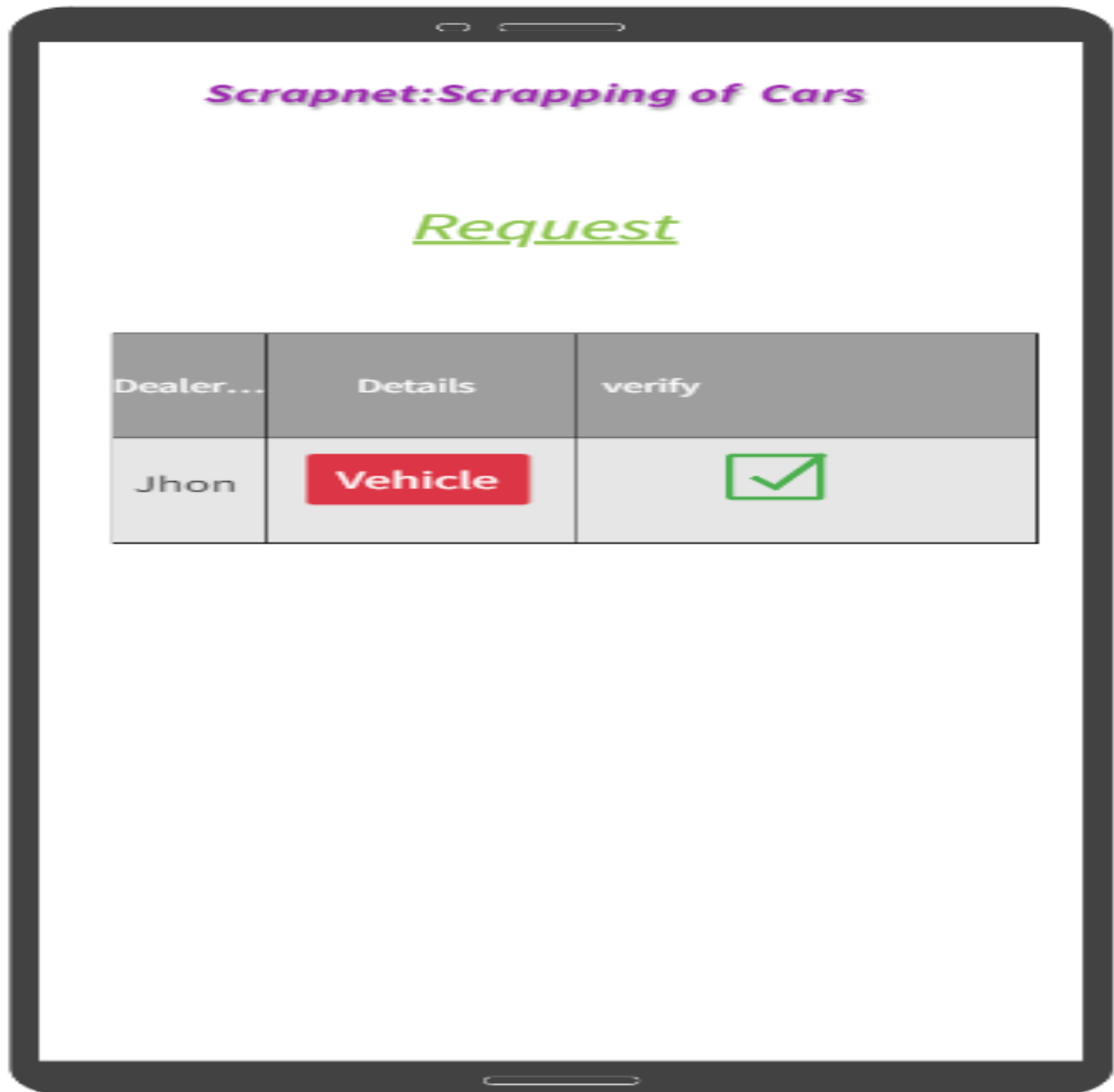


Figure 2.16: RTO status

2.5.17 Deregister

This is Deregister page.

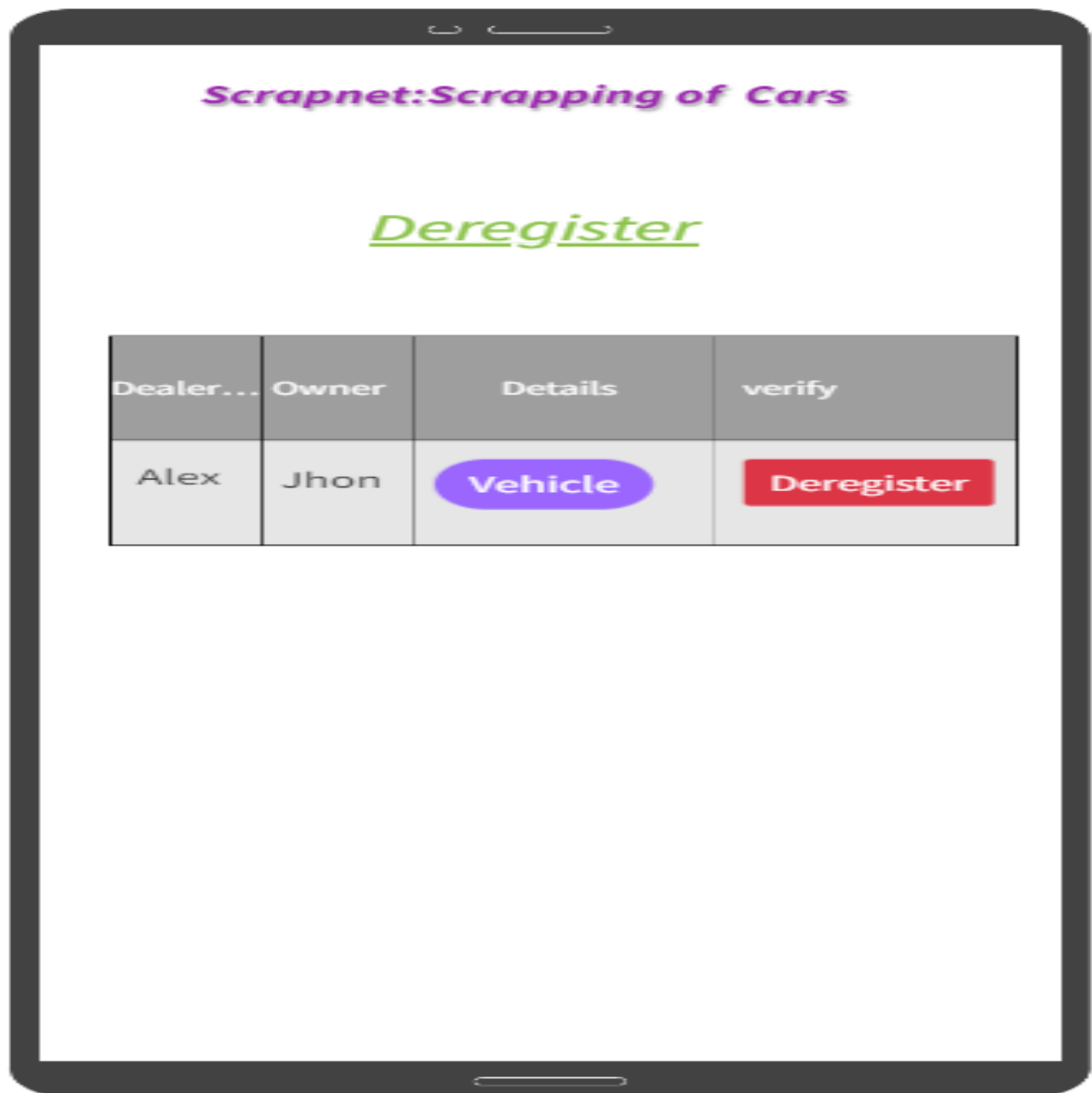


Figure 2.17: Deregister