SALVAGE VALUE SYSTEM

A Minor Project Report

Submitted To

Chhattisgarh Swami Vivekanand Technical University
Bhilai,India

For

The Partial Fulfillment of Degree

of

Bachelor of Technology

in

Computer Science & Engineering

By

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Session:2021 - 2022

DECLARATION BY THE CANDIDATE

We the undersigned solemnly declare that the Minor project report entitled ***"SALVAGE VALUE SYSTEM"*** is based our own work carried out during the course of our study under the supervision of **Assistant Prof. Anand Tamrakar.**

We assert that the statements made and conclusions drawn are an outcome of the project work. We further declare that to the best of our knowledge and belief that the report does not contain any part of any work which has been submitted for the award of any other degree/diploma/certificate in this University/Deemed university of India or any other country.

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CERTIFICATE BY THE SUPERVISOR

This is to certify that the Minor project report entitled **"SALVAGE VALUE SYSTEM"** is a record of project work carried out under my guidance and supervision for the fulfillment of the award of degree of Bachelor of Technology in the faculty of Computer Science & Engineering of Chhattisgarh Swami Vivekananda Technical University, Bhilai (C.G.) India.

To the best of my knowledge and belief the report

i) Embodies the work of the candidate himself

ii) Has duly been completed

iii) Fulfills the partial requirement of the ordinance relating to the B. Tech. degree of the University

iv) Is up to the desired standard both in respect of contents and language for being referred to the examiners.

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CERTIFICATE BY THE EXAMINERS

The project report entitled "***SALVAGE VALUE SYSTEM"*** has been examined by the undersigned as a part of the examination of Bachelor of Technology in the faculty of Computer Science & Engineering of Chhattisgarh Swami Vivekanand Technical University, Bhilai.

Internal Examiner	**External Examiner**
Date:	**Date:**

ACKNOWLEDGEMENT

Working for this project has been a great experience for us. There were moments of anxiety, when we could not solve a problem for the several days. But we have enjoyed every bit of process and are thankful to all people associated with us during this period we convey our sincere thanks to our project guide **Assistant Prof. Anand Tamrakar.** for providing me all sorts of facilities. His support and guidance helped us to carry out the project. We owe a great dept. of his gratitude for his constant advice, support, cooperation& encouragement throughout the project we would also like to express our deep gratitude to respected **Dr. J P Patra** (Head of Department) for his ever helping and support. We also pay special thanks for his helpful solution and comments enriched by his experience, which improved our ideas for betterment of the project. We would also like to express our deep gratitude to respected**. Dr. Alok Kumar Jain** (Principal) and college management for providing an educational ambience. It will be our pleasure to acknowledge, utmost cooperation and valuable suggestions from time to time given by our staff members of our department, to whom we owe our entire computer knowledge and also, we would like to thank all those persons who have directly or indirectly helped us by providing books and computer peripherals and other necessary amenities which helped us in the development of this project which would otherwise have not been possible.

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ABSTRACT

This study was aimed at determining the factors of a student's academic performance in universities that can prove to be beneficial to the student as well as the faculties in planning their future course in academics. The data analysis included the calculation of student's academic performance report before and after using the graphical analysis as well as the whole department's result. The results showed a significant improvement in teaching quality as well as the academic performance of the students. The teachers were able to better understand areas of concern and students who needed more attention. The various graphical representations of these factors can help the students score better in their exams and the faculties in their course. These statistics can also prove to be helpful for students in self-improvement. The study found out that most of the students wanted to use this data and graphical analysis to better themselves in academics. Their individual subject marks helped them determine their weaknesses and strengths in academics. For the faculties it helped to filter out the students who are weak as well as the areas of their weaknesses. This helped in better overall performance of the branch or department in the coming examinations. Also, students can rate their faculties on their lectures which improved teaching quality from the faculty's end.

LIST OF ABBREVIATIONS

HTML	Hyper Text Markup Language
CSS	Cascading Style Sheet
PHP	Hypertext Preprocessor
OS	Operating System
RAM	Random Access Memory
ROM	Read Only Memory
SDLC	Software Development Life Cycle
UI	User Interface

LIST OF FIGURES

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Chapter 1:

Introduction

1.1 Project Overview:

- The value or worth of a long-term or physical asset after its useful life is called the scrap value of the asset. The assets may not be used as a comprehensive machine, but if broken down to individual components, the scrap may be used somehow. These scrap materials could then be processed to yield some scrap value before they can be reused. The value they generate at this stage is called scrap value or residual value.

- So, how is the scrap value of a leased car decided?

  While it's the leasing firm that determines the scrap value, there are multiple factors that contribute to it such as:

  - Market conditions
  - Safety
  - Car's condition at the time of the lease
  - Resale value
  - Gas prices
  - Technological advancements

- Often, the demand and supply of the scrap materials determine the scrap value. It is the assessed cost at which a fixed asset can be sold after considering its full depreciation. The asset is usually is disintegrated into its components with each component valued and sold separately.

- According to the Vehicle Scrappage Policy 2021, heavy commercial vehicles older than 15 years will be phased out from April 1, 2022, whereas personal vehicles older than 20 years will be phased out from June 1, 2023.

- Noting that the number of vehicles older than 15 years will reach over 2.1 crore in India.

- Instead of scrapping the vehicles, there could be one more economical alternative that is fragmentation and recycling of scrap vehicle. With this idea, we would be proceeding with our project named **Salvage Value System.**

- After an overall evaluation of the vehicle, a fair report will be provided and the value of vehicle would be on the basis of fragmented evaluation not as a scrap which will be higher than the value provided by scrapping the vehicle.

1.2 General Description:

User Characteristics:

- The target audience for **Salvage Value System** website is the individuals looking for selling or buying old vehicle.
- The users for this system are:
    - **Users** – They can sell/Buy the Vehicle on the website without any hassle.
    - **Admin** - Who manages the backend of the website.

Product Perspective:

- The website only requires a stable internet connection and a web browser. The minimum hardware requirements for the product are specified in this document.


STEERING WHEEL
IGNITION
WHEEL
EXHAUST
SHOCK ABSORBER
BRAKE
BATTERY
1 3 5
2 4 R
TRANSMISSION
OIL
ENGINE

Chapter 2:

Project RequirementAnalysis

2.1 Software requirements:

Software plays a vital role in the development of any system. No matter in which language does the application has been developed. Software is that important part in any application that gives immense support in the development of any system. Software is a set of programs or coding that has been made for the better and easy performance of the computer. In this project we have also used different software for developing it in an efficient manner.

Developer end:

Operating systems: Windows 7 or later
Compatible tools: XAMPP 1.7.3.2
Front-end: HTML, CSS, Bootstrap
Server: PHP, MySQL

User end:

- Active Internet Connection
- Any Browser (Chrome, Firefox, Edge, etc.)

2.2 Hardware requirements: -

The role of hardware is as important as that of the software. If software requires adequate and accurate software, then it will also require a good hardware. The hardware configurations should be according to the need of the software that is being developed. The improper configurations of the hardware may lead to the undesirable result of the system being developed. The basic hardware required in our project is the RAM, ROM and the processor of the system that is being used in the development of the project.

Developer's Requirement:

- Intel Core i3 processor or above, 2 GHz or higher.

The processor is a logical circuit that responds to fundamental instructions and processes them in order to run a computer system. It is a prerequisite si n c e a computer cannot function without it. Every time, an updated processor should be utilized to ensure that there is no misbehavior on the part of the processor.

- The disk requirement is 500GB.

Another significant component of a computer system is the read-only memory (ROM). The ROM holds the computer's memory that can only be read and not updated to. The ROM enables us to both the computer system whenever we turn it on. It does so by exposing some functionality.

- It requires a minimum of 4GB RAM. (Recommended 8GB).

- Internet Connection(1MBps).

So, with the support of the above-mentioned hardware explanation, we can readily comprehend the significance of hardware in the creation of any computer system project. A system cannot function correctly without ideal hardware, hence appropriate and precise hardware is required while building or running any system

End User's Requirement:

- Intel Core i3 processor or above, 2 GHz or higher

- Storage Required 100 MB.

- RAM: 2Gb or Above.

RAM is short for "random access memory" and RAM is one of the most fundamental elements of computing. RAM is the super-fast and temporary d a t a storage space that a computer needs to access right now or in the next few moments.

Chapter 3:

Problem Identification & Design

3.1 Flow Chart

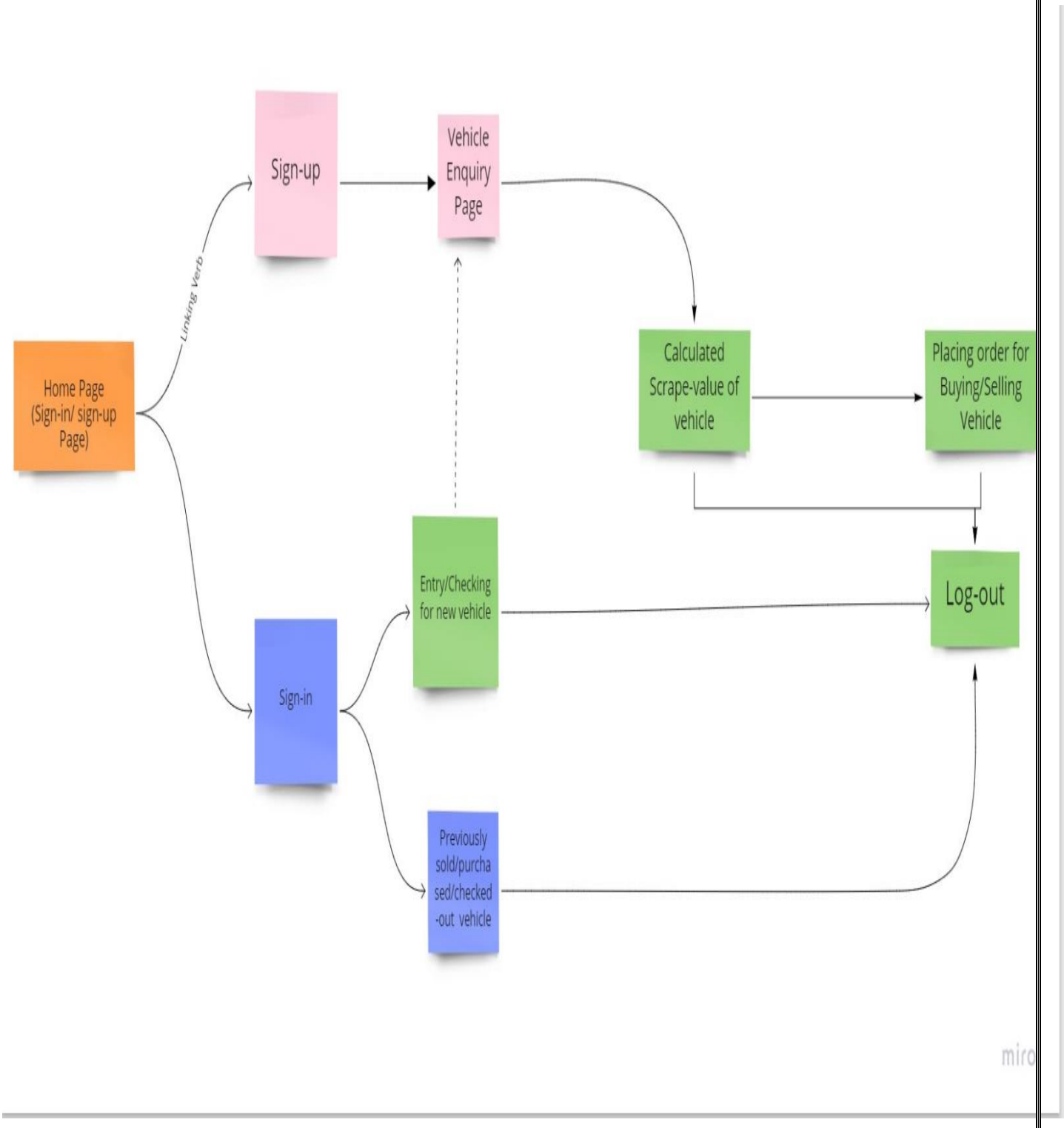

Fig. Flow Chart

3.2 Data Flow Diagram

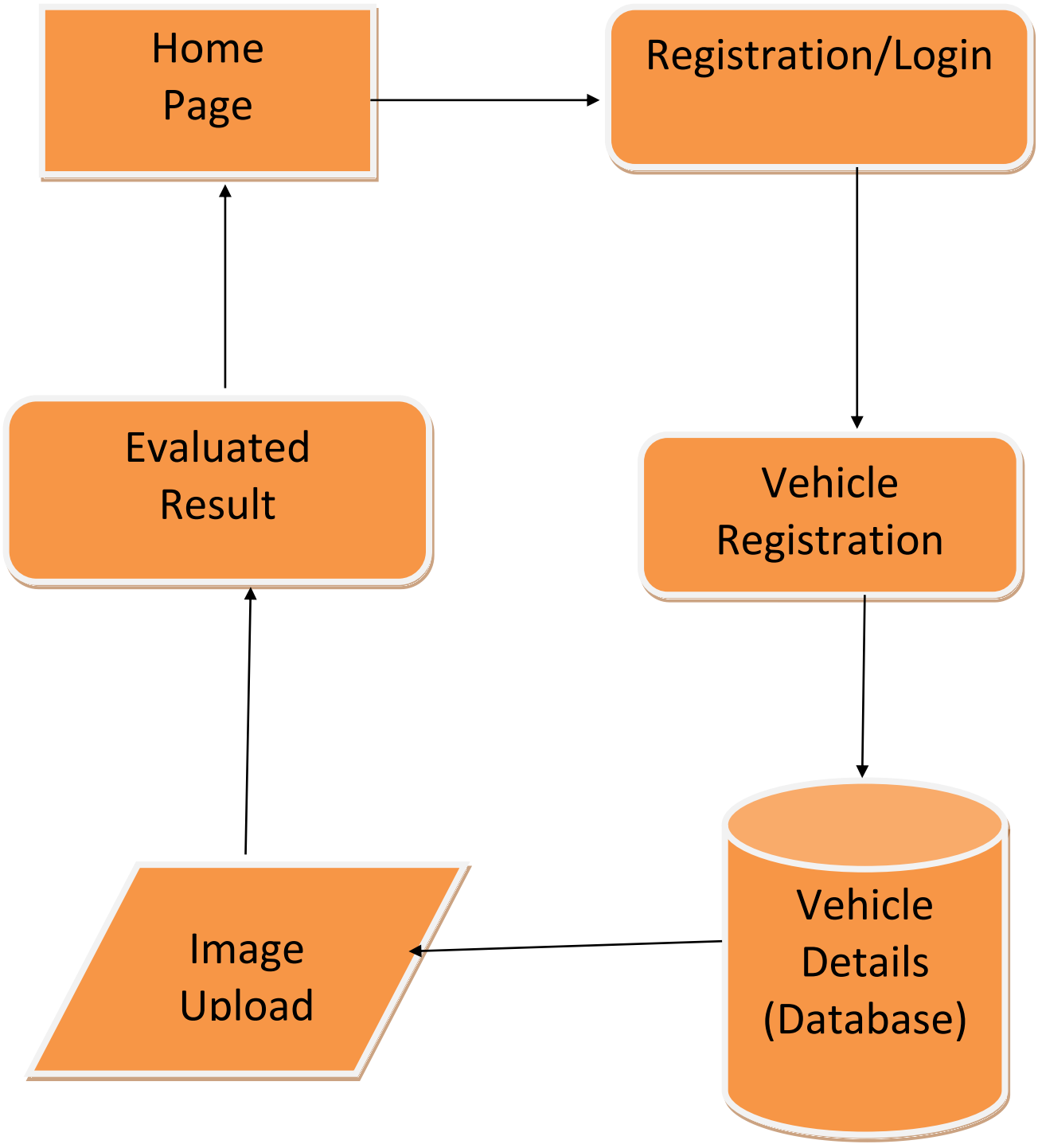

Fig. Data Flow Diagram

Chapter 4:

Methodology

4.1 Waterfall Model:

The model uses to build this project is waterfall model. The Waterfall Model was the first Process Model to be introduced. It is also referred to as a linear-sequential life cycle model. It is very simple to understand and use. In a waterfall model, each phase must be completed before the next phase can begin and there is no overlapping in the phases.

The Waterfall model is the earliest SDLC approach that was used for software development.

The waterfall Model illustrates the software development process in a linear sequential flow. This means that any phase in the development process begins only if the previous phase is complete. In this waterfall model, the phases do not overlap. Waterfall approach was first SDLC Model to be used widely in Software Engineering to ensure success of the project. In "The Waterfall" approach, the whole process of software development is divided into separate phases. In this Waterfall model, typically, the outcome of one phase acts as the input for the next phase sequentially.

The sequential phases in Waterfall model are –

- **Requirement Gathering and analysis** − All possible requirements of the system to be developed are captured in this phase and documented in a requirement specification document.

- **System Design** − The requirement specifications from first phase are studied in this phase and the system design is prepared. This system design helps in specifying hardware and system requirements and helps in defining the overall system architecture.

- **Implementation** − With inputs from the system design, the system is first developed in small programs called units, which are integrated in the next phase. Each unit is developed and tested for its functionality, which is referred to as Unit Testing.

- **Integration and Testing** − All the units developed in the implementation phase are integrated into a system after testing of each unit. Post integration the entire system is tested for any faults and failures.
- **Deployment of system** − Once the functional and non-functional testing is done; the product is deployed in the customer environment or released into the market.

- **Maintenance** − There are some issues which come up in the client environment. To fix those issues, patches are released. Also, to enhance the product some better versions are released. Maintenance is done to deliver these changes in the customer environment.

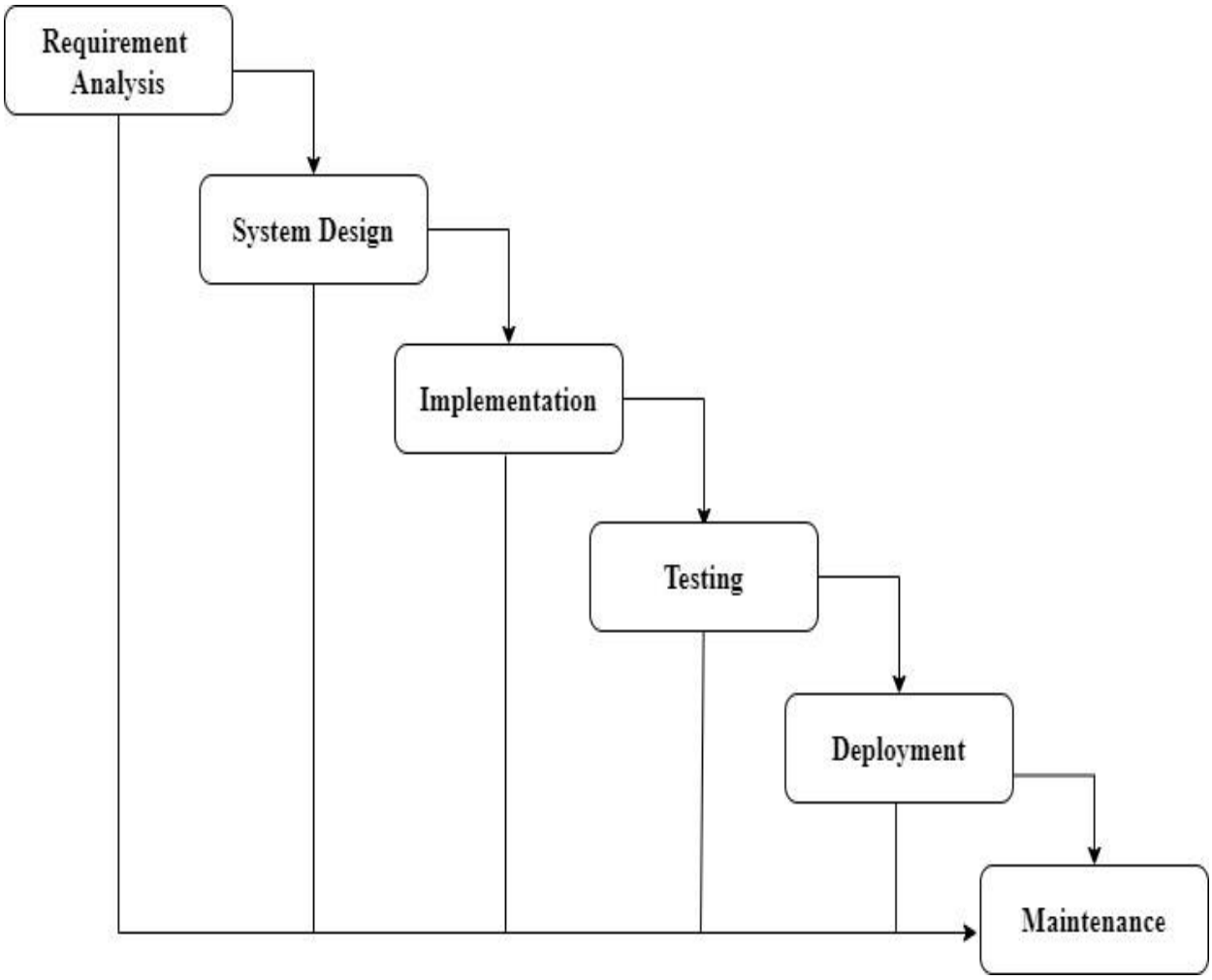

Fig. Waterfall Model

Chapter 5:

SNAPSHOTS

5.1 Snapshots:

Frontend:

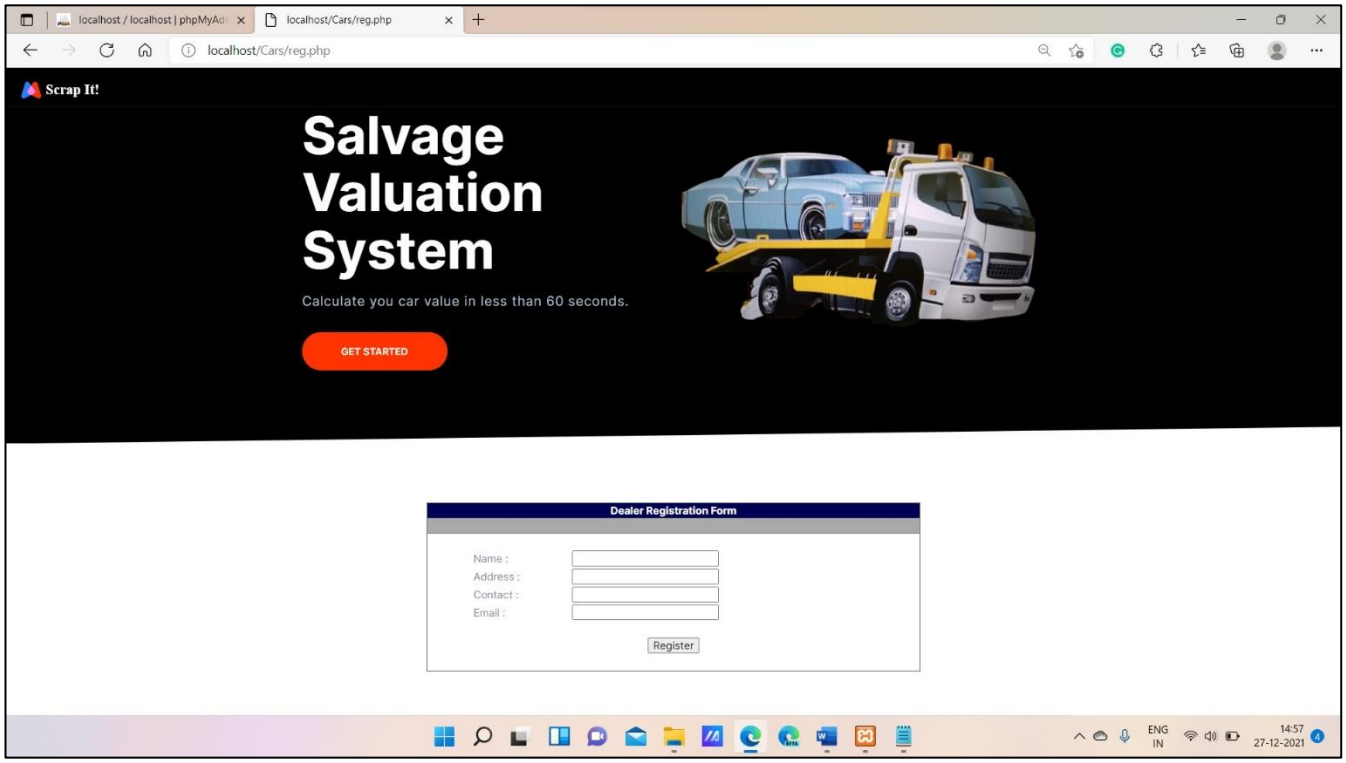

Fig. User Registration/Home Screen

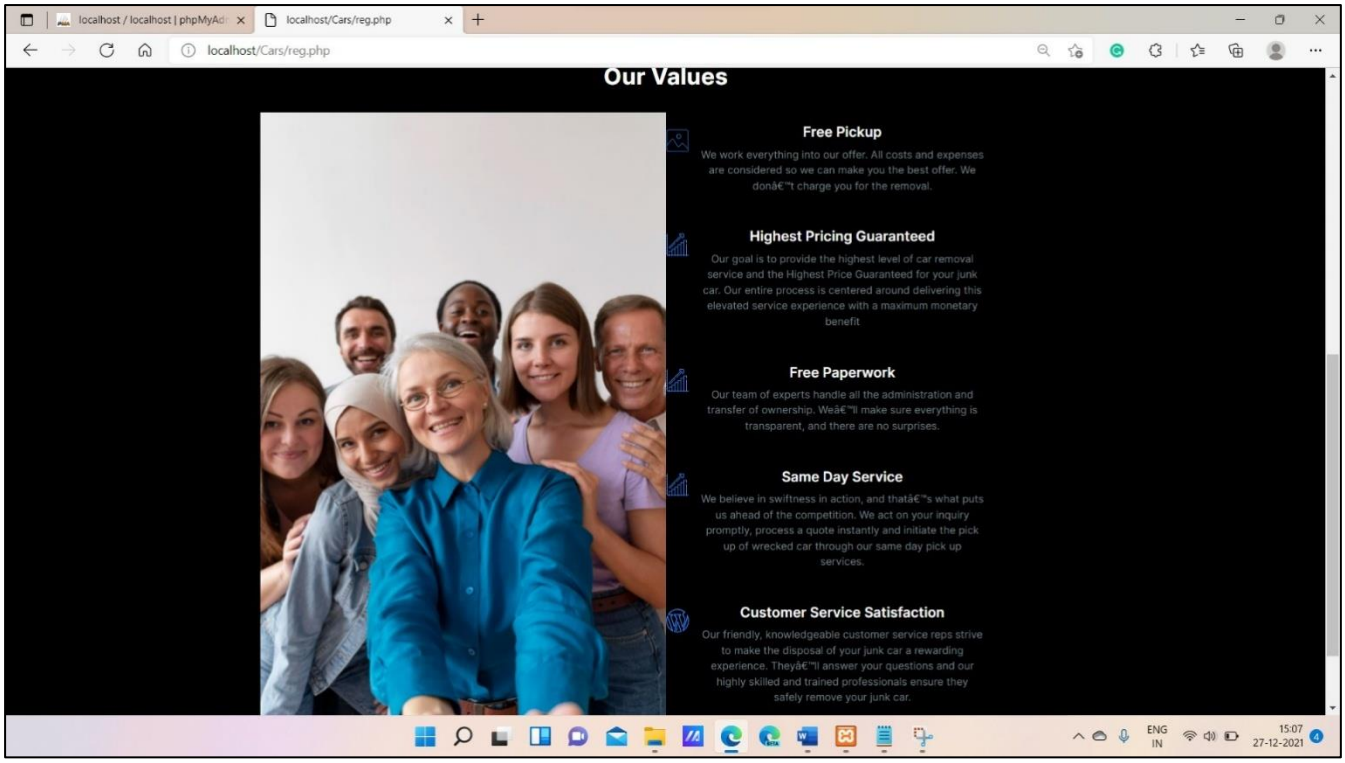

Fig. User Registration/Home Screen

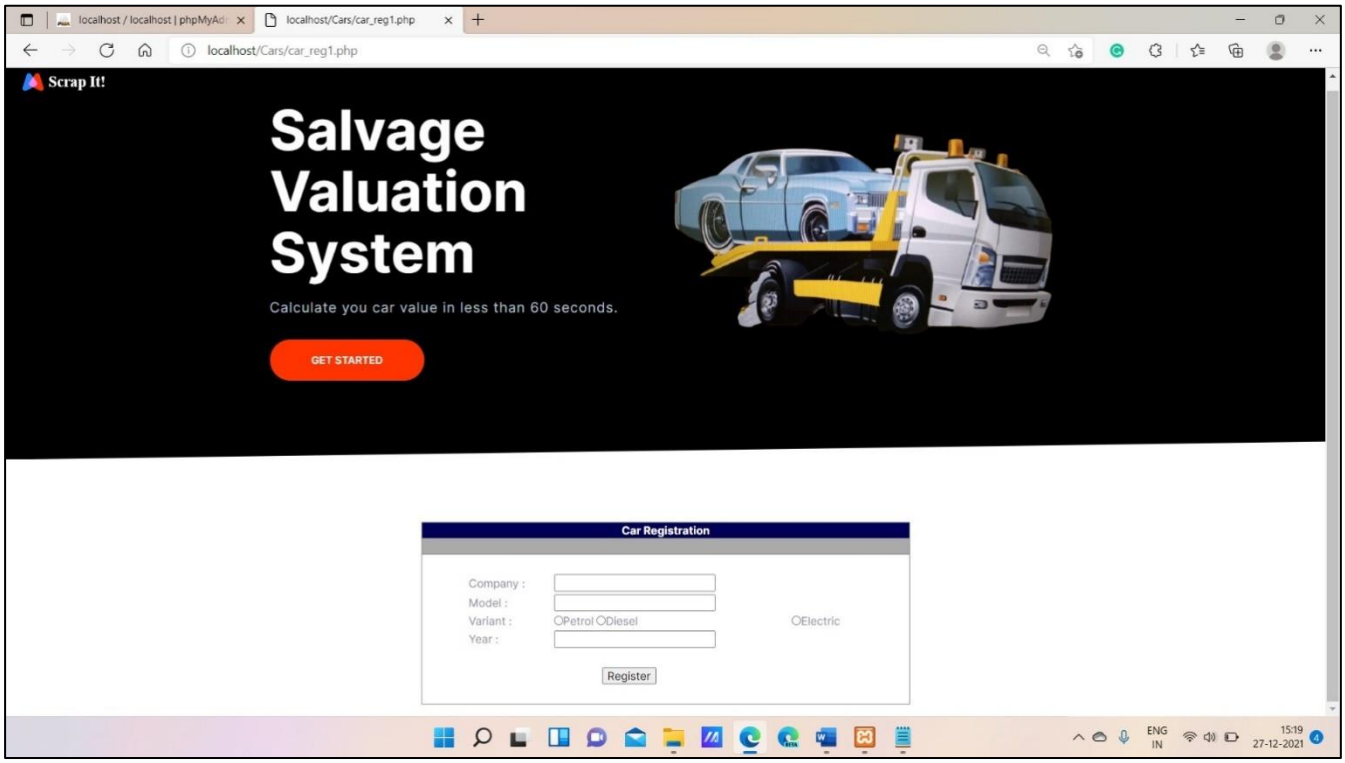

Fig. Car Registration Page

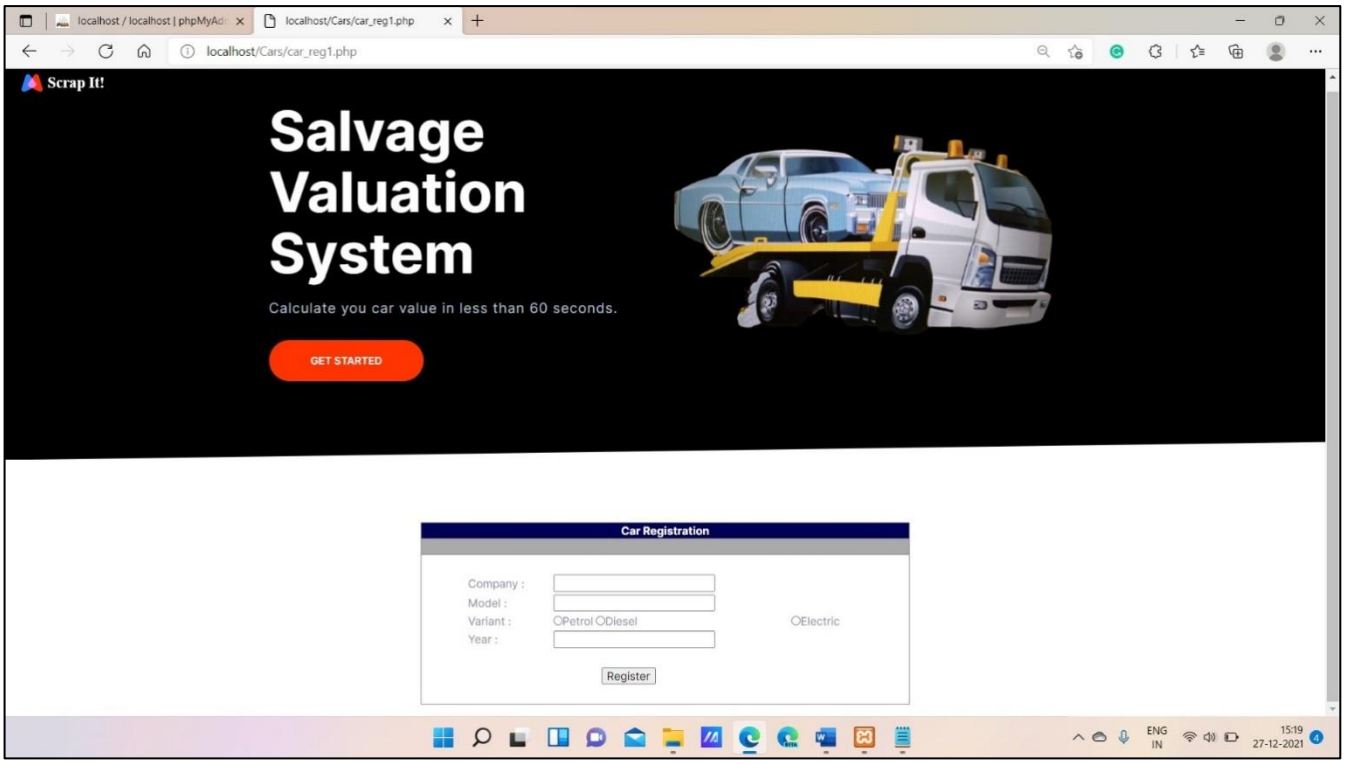

Fig. Car's Details Page

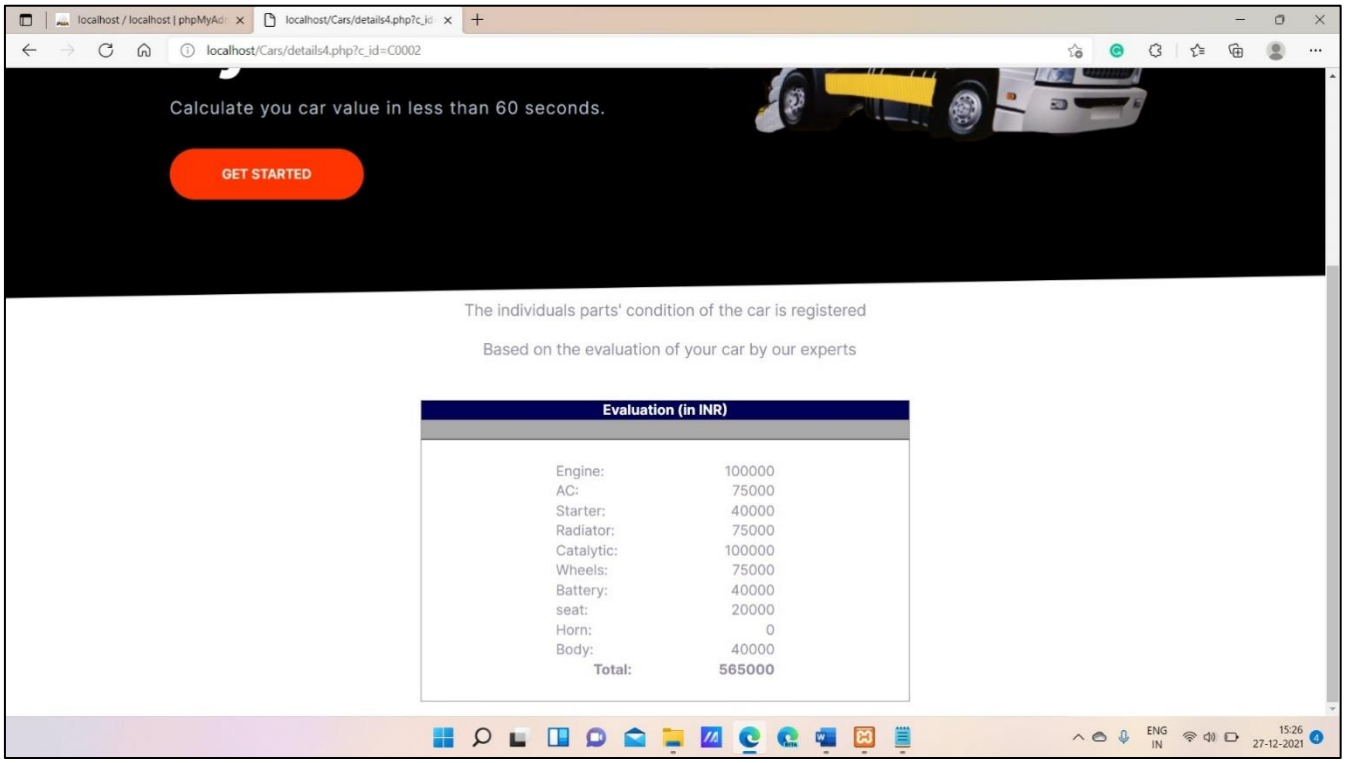

Fig. Car's Valuation Page

5.2 Databases:

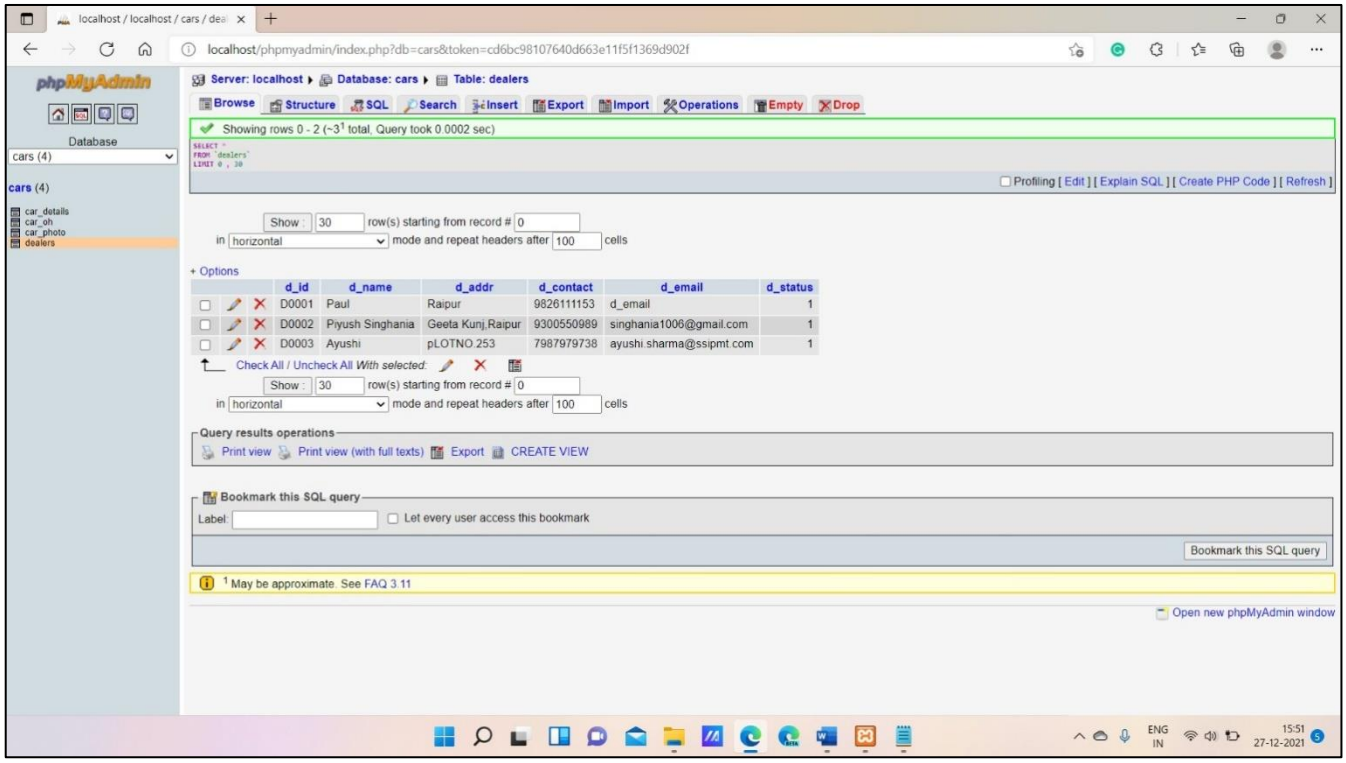

Fig. User's Database

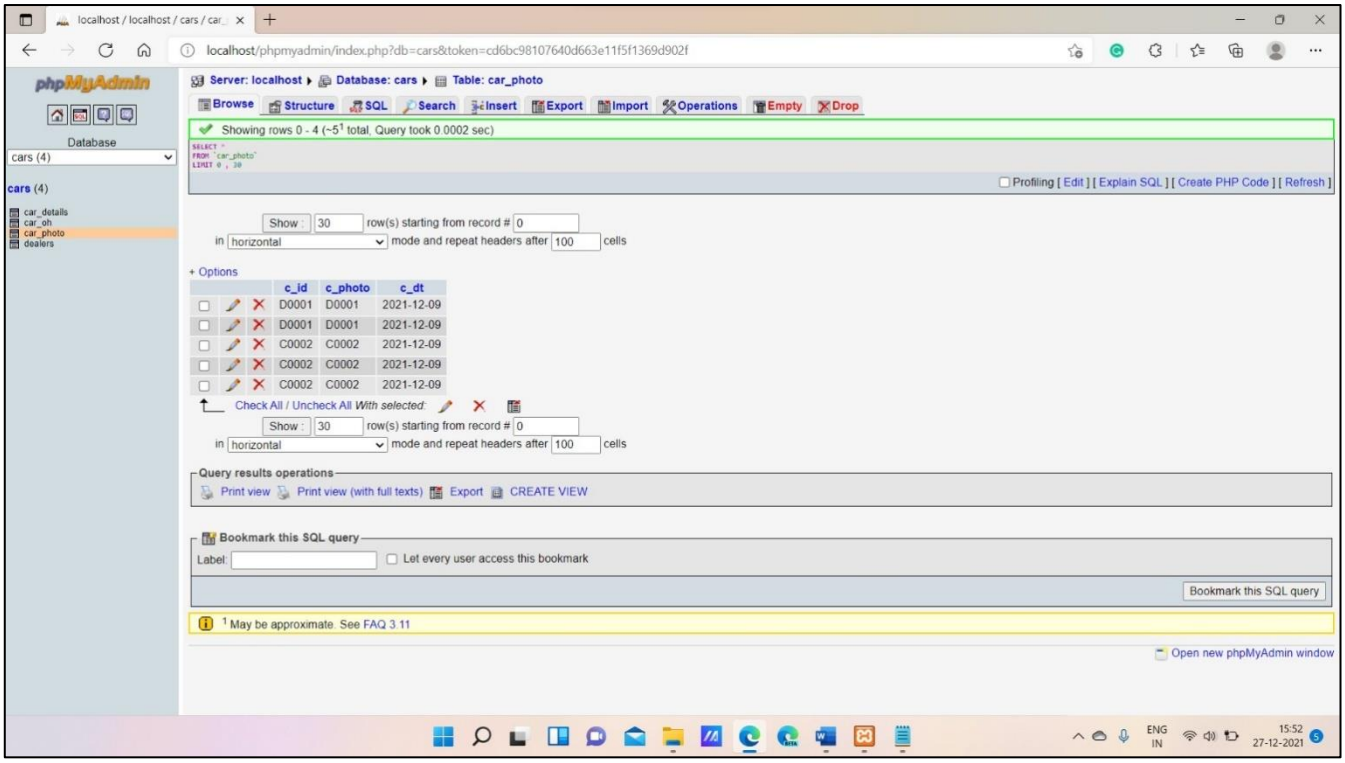

Fig. Images Database

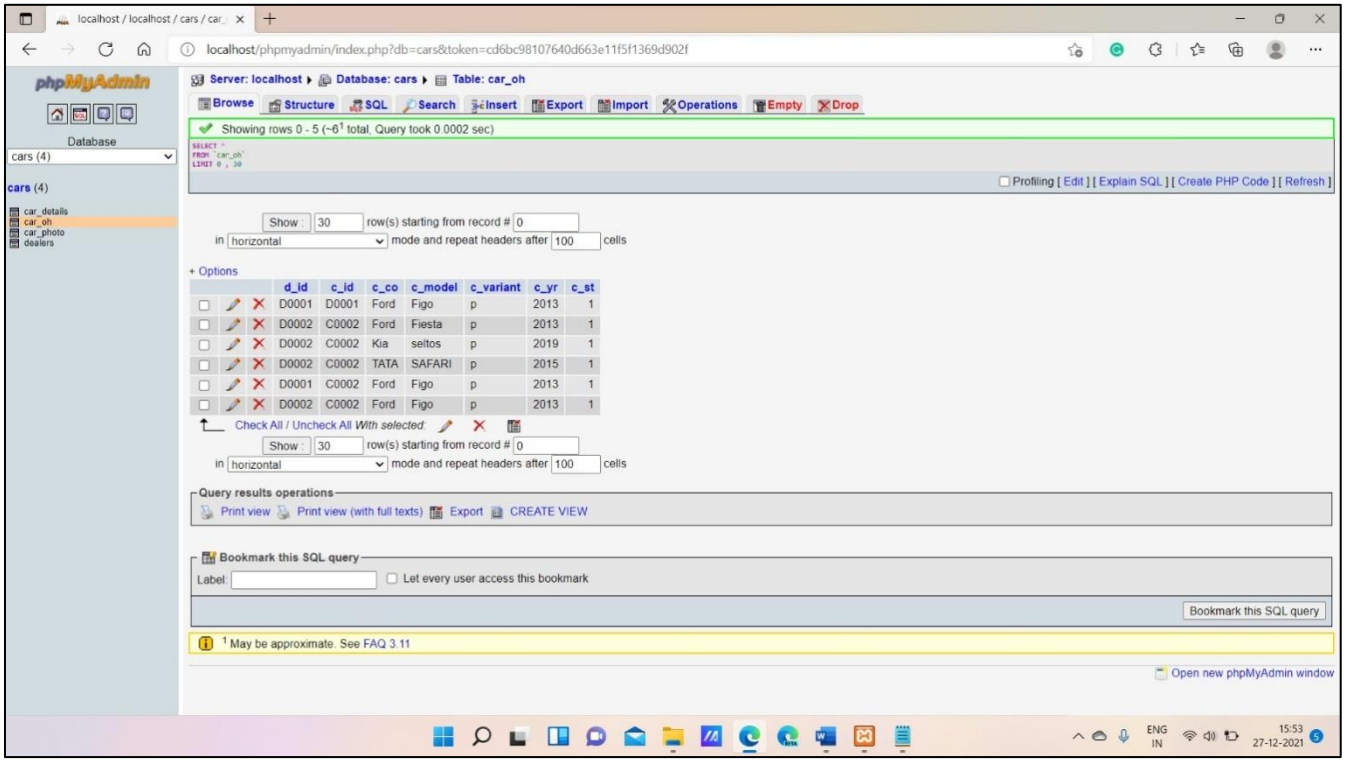

Fig. Car's Database

Chapter 6:

Testing

6.1 Testing:

Various kinds of testing have been done in this project these tests include unit testing & integration testing. The result of each of these tests is shown below. Testing covers a wide range of areas where any verification & validation of software functionality can occur.

6.1.1 Software Testing:

- Software testing is an investigation conducted to provide stakeholders with information about the quality of the product or service under test. Software testing can also provide an objective, independent view of the software to allow the business to appreciate and understand the risk of software implementation.

- Software testing can be stated as the process of validating and verifying that a computer a program/application/product:

  - Meets the requirement that guided its design and development,
  - Works as expected,
  - Can be implemented with the same characteristics,
  - And satisfies the needs of stakeholders.

  - Software testing, depends on the testing method employed, can be Implemented at any time in the development process. Traditionally most of the test effort occurs after the requirement has been defined and the coding process had been completed, but in the agile approaches most of the test effort is ongoing. As such, the methodology of the test is governed by the chosen software development methodology.

  - Different software development models will focus the test effort at the different points in the development process. Newer development models, such as agile often employ test driven development and place an interest portion of the testing in the hands of the developer before it reaches a formal team of testers.

6.1.2 System Testing:

- System testing of software or hardware is testing conducted on a complete integrated system to evaluate the system compliance with its specified requirements. System testing falls within the scope of black box twisting and as such should require no knowledge of the inner design of the code or logic.

- As a rule, system testing takes, as its input, all the" integrated" software components that have successfully passed integration testing and the software system itself integrated with any applicable hardware system. The purpose of integration testing is to detect any inconsistence between the software units that are integrated together or between any of the assemblage and the hardware.

6.1.3 Integration Testing:

- Integration testing (sometimes called integration and testing, abbreviated "I&T") is the phase in software testing in which individual software modules are combined and tested as agrup.it Occurs after unit testing and validation testing.

- Integration testing takes as its input modules that have been unit tested, groups them in larger aggregates, applies tests defined in an integration to aggregates, applies tests defined in an integrated system ready for system testing.

Chapter 7:

Discussions & Result

7.1 Discussions and Result:

Unlike the vehicle scrappage policy this project will not only scrap the vehicle but also make reuse of various parts thereby giving more value to the customer.

Applications and Benefits of this project:

- The biggest benefit of the vehicle scrappage policy is the reduction in pollution. Once vehicles with high emissions are taken off the road, the air pollution will come down.
- The removal of old vehicles from the road will lead to a boost in the purchase of new vehicles.
- As new vehicles come with many more safety features than the older ones, the user even benefits from a higher safety.
- The vehicle scrappage centers set by the government will create huge employment opportunities.

End Users of this project:

- Anyone who wants to scrap their old vehicle under the Indian Government's Scrape Vehicle Policy or for personal interest of resale of automobile will be the end user of this project.

Chapter 8:

Features and Functionalities

8.1 Features:

- The Car Valuation Tool is a free tool designed to help you get the estimated resale value of your car within seconds. Our car valuation algorithm is updated on a real-time basis which means that it's in sync with the latest changes and market developments. However, the figures shown during online valuation are just an estimation and are subject to change post your car's inspection at the store.

- To get the estimated value of your car, you don't even need to register to get the valuation done, what you have to do is add basic details about the condition of car parts like Air Conditioner, radiator, wheels, body etc.

- Pricing or valuing a car is crucial for insurance purposes as well as for buying and selling a car. Considering the fact that underpricing your car can lead to you losing money on selling it. Also, you'll receive a lower claim payout under your insurance policy for a total loss event like car theft. Used car valuation helps the sellers get an idea of what their car is worth and how much they should expect to get for their car. When it comes to the buyers, they too get an idea of what's the maximum amount they should be paid while buying a particular car. This way the tool proves to be beneficial for both parties.

8.2 Functionalities:

- A circular economy depends on reuse, sharing, repair, refurbishment, remanufacturing and recycling of resources to create a closed-loop system, minimizing the use of resources, generation of waste, pollution and carbon emissions.

- When a car is scrapped, apart from metals including iron and steel, many other parts may emerge that can be refurbished and ploughed back into use. Recycled steel from scrap, even seats and plastic parts, have value in the scrap economy. It is similar to the economic activity of scrappage of old ships, like in Alang shipbreaking yard in Gujarat.

Chapter 9:

Benefits and Future scope

9.1 Benefits:

- Auto recycling does a lot more than just save customers money on car repairs. It also prevents car parts from ending up in landfills or just dumped somewhere. This greatly decreases the chance of soil and water contamination from chemicals, such as antifreeze, brake fluid and motor oil.

- Buying used car parts has a much bigger positive impact on the environment than most people realize. Auto recyclers remove parts and process them properly for resale to the public, ensuring all fluids are removed and recycled. Recycling used cars and their parts help prevent automotive waste and reduces the need to manufacture new parts.

9.2 Future scope: -

- Our application currently only works on static data and displays information which has to be changed at regular time intervals for getting the proper visualization of information. To further improve the web application, we can make use of machine learning and data science technologies. Through this the students and teachers can benefit even more as they would also be able to get future predictions based on the current data.

- This application is currently web-based application and performing all the task, but user must have full internet access to use the application. As previously told the application is web-based user need browser to open it but in future we are going to build an application for this so that there will be no need of internet and browsers user can easily add, update and able to get output in their scrap car anytime anywhere in the graphical form that will make it easy to understand. The application will also predict based on the output where the student needs to focus and need to improve that feature will be added in future mobile application.

Chapter 10:

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