# 1. Introduction

## 1.1 Project Description

## 1.2 Problem Statement

The Nigerian Public transportation sector is characterized by inefficiencies, lack of infrastructure and safety concerns. About 211.30 million users board and use public transportation for their day-to-day activities. Most of the individuals who use public transportation system in Nigeria rely heavily on it because they do not have private vehicles of their own and due to the high cost of PMS in Nigeria, it is economical to ply the roads in public vehicles. Other services used by Nigerians to transport themselves from one place to another include cab hailing services, however, because of the cost involved and the sub urban nature of most parts of Nigeria, a lot of Nigerians cannot afford to use cab hailing services.

There has been a growing concern of safety and incessant increase in social vices which have been committed and are on the increase, due to lack of a proper monitoring system in the transportation sector in Nigeria. There has been a range of crimes committed against humanity without a backlash to offenders, which has encouraged more crime. Also, people who have at one point or another lost their property in public vehicles in Nigeria almost always never retrieve them.

\*\*provide algorithmic representation of the problem

## 1.3 Company Profile

# 2. Literature Survey

## 2.1 Existing and Proposed System

## 2.1.1 Existing System

## 2.1.2 Proposed System

The Idea behind the project: **reCab** is to be to create a platform that will be able to assure individuals who ply the roads in Nigeria on a day-to-day basis that both themselves and their properties are safe from the vices that come with boarding public vehicles. The execution of this project will largely be most successful if we can secure a public-private partnership, which will oversee the registration of public vehicle owners, their documents, and the driver details. Upon registration, a unique Identification number will be issued to every registered public vehicle which will be printed on visible sides of the vehicle for riders to be able to read seamlessly.

\*\*provide algorithmic representation of the solution

## 2.2 Feasibility study

A feasibility study is specifically used to observe approximately the present and the proposed system used on this and what are regulations we are following to expand the utility. It may be measured in distinct ways and points of view. The operational cost observed even in developing this application and the price of growing the machine.

* Technical Feasibility
* Operation Feasibility
* Economic Feasibility

### 2.2.1 Technical Feasibility

In this machine, feasibility has a look at the requirements evaluated according to the client. The technical team will take a look at whether it could be evolved with the existing system of the employer or no longer. What must be the output and what's the efficiency-based totally on the technology used in the system? It is especially based on the design of the system. The feasibility observe is specifically prepared to reveal that the machine will work in a modular way. It will evaluate the different modules one by one.

* Will the imperative advancement improve at performing what is recommended?
* Will the designed hardware incorporate the specific measures to keep the actualities expected to embrace the modern structure?
* Does the planned structure give a measurable counter to request and lucrative least respect to the number or region of benefactors?
* Could the plan be recreated if arranged?

### 2.2.2 Operational Feasibility

The universal operation executed through the machine is come below this section how the machine is going to work and the general technique of the application. The proposed system works in accordance with the requirements given by the admin. It could be very smooth to operate the gadget. After developing some accounts consumers can, enter into the system and can use the software according to their interests. In this, the admin has the whole manipulation of the machine, in step with the preparation given by using the admin the entire paintings will system.

Is there a conciliating column for the company from the supporters?

* Will the plan be used and controlled reasonably on the off chance that it is being made and finished?
* Is there any column from the supporters that will harm the trustworthy framework central terms?

### 2.2.3 Financial Feasibility

The proposed system is simple to apply and it is less expensive than the existing gadget. Before growing any software there ought to be an estimate that we will observe in the whole system of development.

## 2.3 Tools and Technologies used

### 2.3.1 Ionic Js

### 2.3.2 Node Js

### 2.3.3 MongoDB

### 2.3.4 Postman

### 2.3.5 GitHub

### 2.3.6 Visual Studio Code

## 2.4 Hardware and Software Requirements

### 2.4.1 Hardware requirements:

|  |  |
| --- | --- |
| Processor: | Intel core i3 |
| Speed: | 2GHz |
| RAM: | 4 GB |
| Hard Disk: | 1 TB |
| Monitor: | SVGA |

### 2.4.2 Software Requirement:

|  |  |
| --- | --- |
| Operating System: | Windows 8.1 |
| Application Server: | XAMPP, Redis Server |
| Front End: | Angular.js, Ionic.js |
| Scripts: | PHP. |
| Server side Script: | Node.js. |
| Databases: | SQL, Mongo DB. |

# 3. Software Requirement Specification

## 3.1 Users

## 3.2 Functional Requirements

List and describe the key features that will be delivered in the MVP version. These should represent the most essential functions to validate the product idea.

1. check in/check out feature – With this feature, users can signify that they have boarded a vehicle. The Idea behind this is to make the interface as simple as possible (Reference to the image on 4.2.ii) so that a user’s location can be tracked even when they have not specified a destination yet.
2. Driver information confirmation – detailed description of the driver including their picture, name, vehicle model, plate number, phone number and home address.
3. SOS feature – This should be a functionality that can be activated even when the device is locked. This can either be activated either using the power button or the volume buttons.
4. report: Can be accessed from the Menu. With this feature, users of the app can report riders who are either riding with unregistered vehicles or riders that try to abuse them.
5. Ride History: This can be accessed from the Menu. Users can use this feature to check a history of their rides so they can use it to aid investigation or to report a missing item.
6. Rating and feedback: this feature will be presented at the end of every ride. Users can use this to rate drivers so that other riders can be able to know just who will be driving them.

## 3.3 Non-Functional Requirement

1. Reliability: Giving the correct records under any situation it assesses whether the given facts are correct or not.
2. Maintainability: The structure is anticipated for or to deal with any sort of customer becoming a member. The support might be given by the encouraging affiliation or even the admin can have the control board for the best company. If in the future, there is a crash of system occurrence then the technical crew is answerable for this.
3. Robustness: It's basically that the structure must be less tolerant regarding unlawful customer facts. Goof Checking ought to be verifiable for the system to restrict structure frustration.
4. Portability: The device has to be portable in its approach, it must aid all of the running operating systems. The suggested system is portable in this type of way that we can use in different systems.
5. Security: The system is extra steady along with every module has some security for login so it’s far steady to unauthorized access. To provide the fine security we brought the login alternative so unauthorized customers can't get admission to the system.

# 4. System Design

## 4.1 System Perspective

## 4.2 Context Diagram

# 5. Detailed Design

## 5.1 Use Case Diagram

## 5.2 Class Diagram

## 5.3 Sequence Diagram

## 5.4 Activity Diagram

## 5.5 Collaboration Diagram

## 5.6 ER Diagram

## 5.7 Physical Design

# 6. Implementation

## 6.1 Screenshots

# 7. Software Testing

## 7.1 Testing Methodologies

# 8. Conclusion

# 9. Future Enhancements

# Appendix A Bibliography