TRUCK LOAD MANAGEMENT SYSTEM

By

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> Under Guidance of Internal Guide Dr. Kanubhai Patel

> > Submitted to



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CHAROTAR UNIVERISTY OF SCIENCE & TECHNOLOGY

Acknowledgement

Knowledge in itself is a continuous process. At this moment of our substantial enhancement, we rarely find words to express our gratitude towards those who were constantly involved with us.

The completion of any inter disciplinary project depends upon coordination, cooperation and combined efforts of several resources of knowledge, creativity, skill, energy and time. The work being accomplished now, we feel our sincerest urge to recall and knowledge through these lines, trying our best to give full credit wherever it deserves.

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It's our good fortune that we had support and well wishes of many. We are thankful to all and those names which have been forgotten to acknowledge here but contributions have not gone unnoticed.

With Sincere Regards,

Riya Juthani (17BCA019) Suketu Modi (17BCA027) Lisa Patel (17BCA055)

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❖Project Profile

Project Name: TruckTrans

Type of Application: Android Application

Project Description:

- Truck Load Management System is an Android Application which helps a newly established company for transportation which means a newly established company doesn't have that much capital to invest in buying their own trucks for transporting raw materials from a factory. So this application helps them to rent trucks on a temporary basis.
- Firstly the company, factory and transport agent will register themselves. Then Company will enter the details of good required and will send request to the factory. When factory will accept the request, they will send the same details as a request to the transport agent. If the agent accepts the request then he will have to allot a truck driver for the particular order. Then all the 3 actors will do the payment.

Team Size: 3

Front End: Android IDE (Kotlin)

Back End: Firebase

Tools used: Android



! Introduction to Tools

> Front End Tool: Android

Android is a mobile operating system based on a modified version of Linux Kernel and other open source software, designed primarily for touchscreen mobile devices such as smartphones and tablets. Android was unveiled in 2007, with the first commercial Android Device launched in 2008. The currently stable version is Android 10, released on September 3, 2019. The core Android source code is known as Android Open Source Project. Android has been the best-selling OS worldwide on smartphones since 2011 and on tablets since 2013.

What Is Android?

This operating system have developed a lot in last 15 years starting from black and white phones to recent smart phones or mini computers. One of the most widely used mobile OS these days is android. The android is software that was founded in Palo Alto of California in 2003.

The android is a powerful operating system and it supports large number of applications in Smartphones. These applications are more comfortable and advanced for the users. The hardware that supports android software is based on ARM architecture platform. The android is an open source operating system means that it's free and any one can use it. The android has got millions of apps available that can help you managing your life one or other way and it is available low cost in market at that reasons android is very popular.

The android uses the powerful Linux kernel and it supports wide range of hardware drivers. The kernel is the heart of the operating system that manages input and output requests from software. This provides basic system functionalities like process management, memory management, device management like camera, keypad, display etc the kernel handles all the things.

The android runtime provides a key component called Dalvik Virtual Machine which is a kind of java virtual machine. It is specially designed and optimized for android. The Dalvik VM is the process virtual machine in the android operating system. It is a software that runs apps on android devices.

Android Versions:

Code name	Version numbers	Initial release date
No codename	1.0	September 23, 2008
Petit Four (only internally used)	1.1	February 9, 2009
<u>Cupcake</u>	1.5	April 27, 2009
<u>Donut</u>	1.6	September 15, 2009
<u>Eclair</u>	2.0 – 2.1	October 26, 2009
<u>Froyo</u>	2.2 – 2.2.3	May 20, 2010
Gingerbread	2.3 – 2.3.7	December 6, 2010
<u>Honeycomb</u>	3.0 – 3.2.6	February 22, 2011
Ice Cream Sandwich	4.0 - 4.0.4	October 18, 2011
Jelly Bean	4.1 – 4.3.1	July 9, 2012
<u>KitKat</u>	4.4 - 4.4.4	October 31, 2013

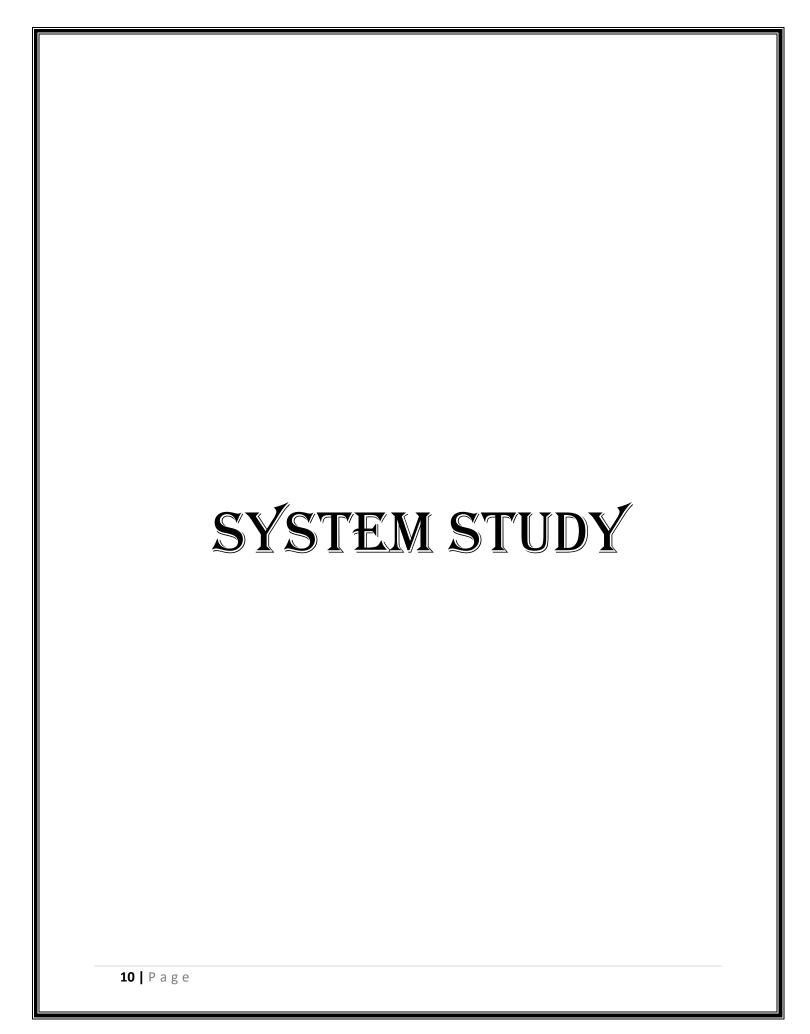
<u>Lollipop</u>	5.0 – 5.1.1	November 12, 2014
<u>Marshmallow</u>	6.0 – 6.0.1	October 5, 2015
<u>Nougat</u>	7.0 - 7.1.2	August 22, 2016
<u>Oreo</u>	8.0 - 8.1	August 21, 2017
<u>Pie</u>	9.0	August 6, 2018
Android 10	10.0	September 3, 2019

> Back End Tool: Firebase

Introduction

In the era of rapid prototyping, we can get bright ideas, but sometimes they are not applicable if they take to much work. Often, the back-end is the limiting factor-many considerations never reply to sever-side coding due to lack of knowledge or time.

Firebase is a backend as a service(Baas) which a started as a YC11 startup. It grew up into a text-generation app development platform on google cloud platform. Firebase is a real time database that allows storing a list of objects in the form of a tree. We can synchronize data between different devices.



❖ An Existing System

• Companies used to call or meet up personally to make the bookings

❖ Need of Proposed System

- By using this application Companies don't need to waste their time in personal meetings.
- Transaction can be done within few minutes.
- For the new startups who don't have so much capital to invest upon buying the trucks, they can hire trucks for as much as time they want.

❖Scope of the Proposed System

- Company Factor and Truck Agent can register themselves.
- Company can send details and request to the factory.
- Factory can accept and send request to Truck Agent.
- Truck Agent can accept request and allot a truck driver to that particular factory.
- Payment can be done online.
- All the 3 actors can manage their profile.

❖<u>Aim and Objective of the Proposed System</u>

- To provide transportation services to newly established companies.
- To enhance the work and demand of transporters.

❖ Feasibility Study

➤ Operational Feasibility

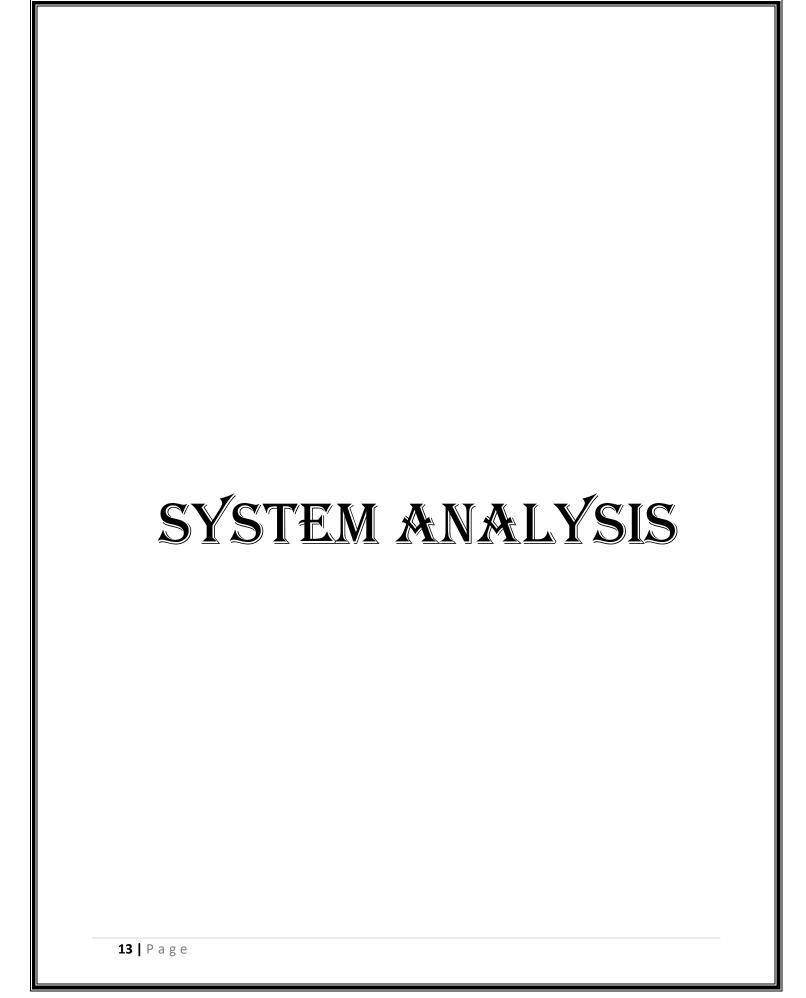
This application is developed for reducing time and other resources of Agent, Company and Factory. It will be used to enhance the work of agents. It can also help factory and company to find any truck driver easily at cheaper cost.

➤ <u>Technical Feasibility</u>

This application is developed to manage the truck agents, factory and company to work with and this application can run minimum version of android but it requires the internet connection.

➤ Economic Feasibility

To develop this application there was no such cost required because this application was developed under the Project Management and the Software provided for the same was totally free of cost and the main benefit for developing this application is that it is user friendly that means anyone can easily understand what the system about.



Requirement Specification (along with System Modules):

✓ Functional Requirements:

- Authentication:
- Registration:
 - ✓ Company, Factory and Agent can register yourself.
 - ✓ Only agent can add multiple truck driver details

• Login:

✓ Through this interface Agent, Company and Factory login into this application, but Truckdriver must have to register them first.

• Forgot Password:

✓ Company, Factory as well as Agent if they don't remember old password they can set new password by answering security questions.

• Profile Management:

- 1. Company:
 - ✓ Company can add all the details of good and request send to the factory.
 - ✓ Company can give feedback to factory.
 - ✓ Company can also do payment online through any other payment mode.

2. Factory:

- ✓ Factory can accept request of company and factory can also send request to agent.
- ✓ Factory can give feedback to Agent.

3. Agent:

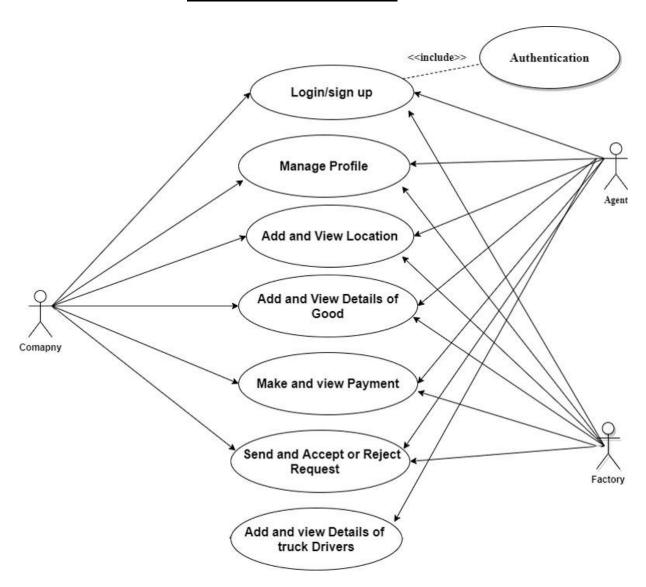
- ✓ Agent can add or manage the truck driver details.
- ✓ Agent can accept or reject the factory request.
- ✓ Agent can assign the truck driver

• Request:

- 1. Accept:
 - ✓ Factory can accept the request and add the details of the good which are to be sent to the agent.
 - ✓ Agent can also accept the request of factory.
- 2. Reject:
 - ✓ Factory or Agent can reject the request of Company/Factory.

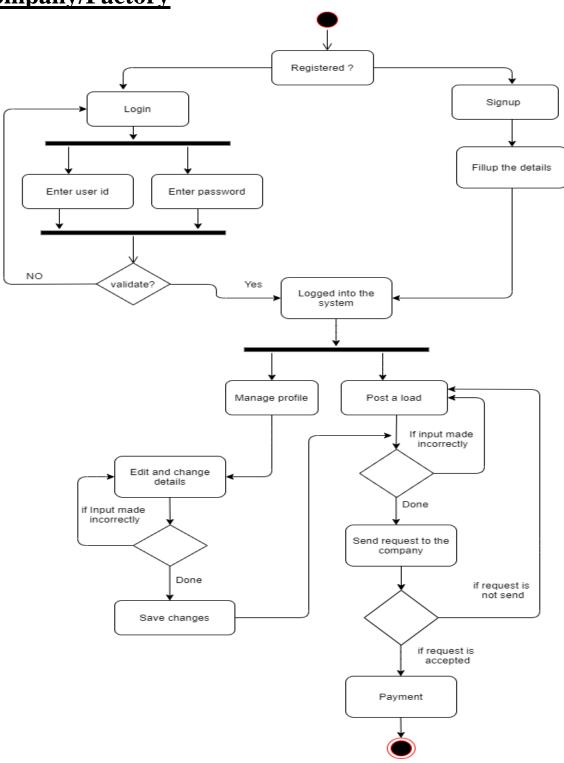
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Use Case Diagram



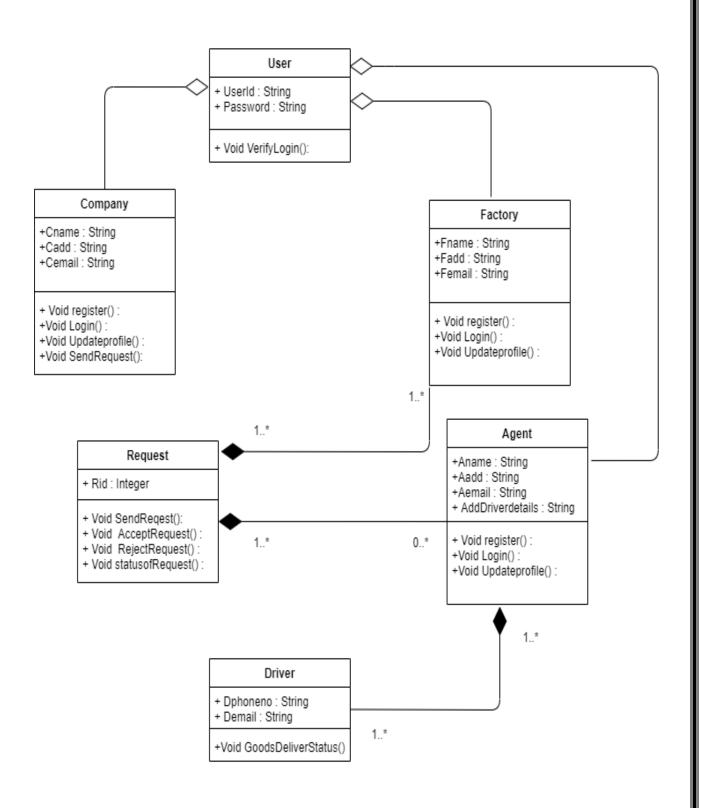
Activity Diagram

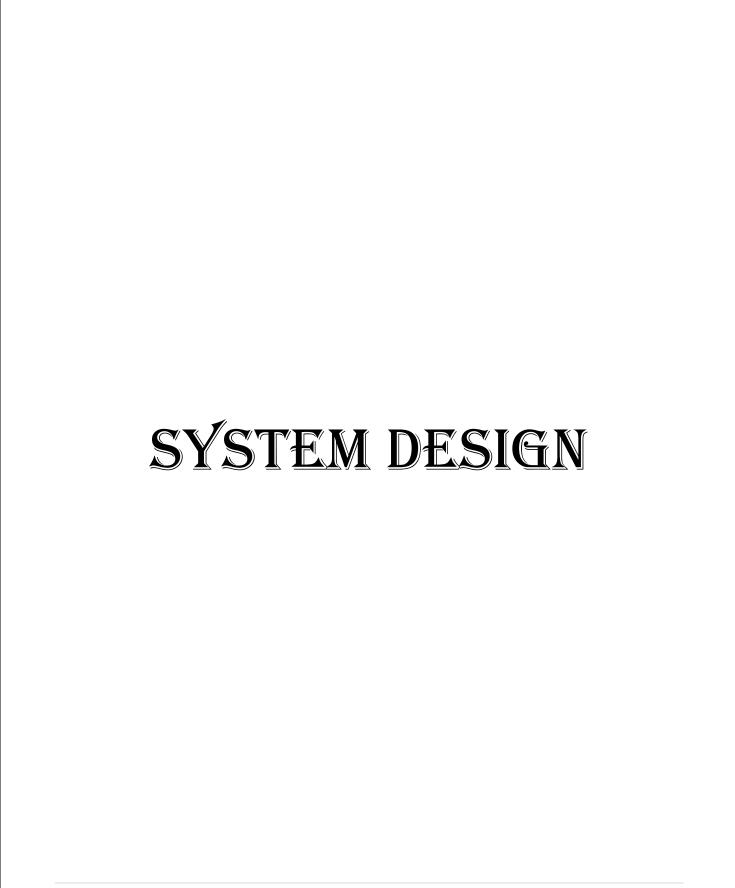
Company/Factory



Agent Registered? Signup Login Fillup the details Enter user id Enter password Logged into the system No validate? Dash board Add truck driver details Manage profile Request Payment If input made incorrectly Rejected Edit or change details If request accepted If input made incorrectly Done view details of goods Yes Save changes

Class Diagram





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<u>User:</u>

Column name	Datatype	Constraint	Description
uid	Varchar(50)	Not null	This will be
			generated
			automatically
			from firebase
fname	Varchar(20)	Not null	-
Iname	Varchar(20)	Not null	-
email	Varchar(20)	Unique key	Must be'@'
password	Varchar(20)	Not null	-
add1	Varchar(50)	Not null	-
add2	Varchar(50)	Not null	-
state	Varchar(20)	Not null	-
city	Varchar(20)	Not null	-
distric	Varchar(20)	Not null	-
cname	Varchar(20)	Not null	-
Mobile	Number	Not null	_
panno	Number	Not null	-
type	Varchar(10)	Not null	-

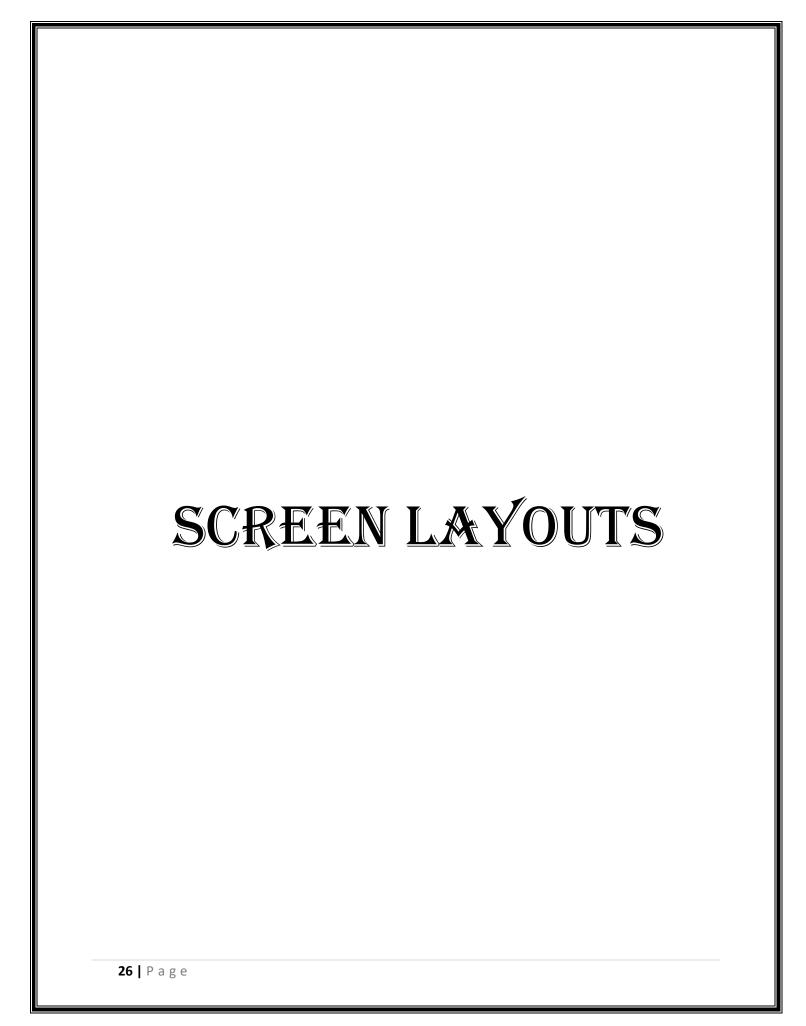
Request:

Column name	Datatype	Constraint	Description
id	Varchar(50)	Not null	This will be
			generated
			automatically
			from firebase
source	Varchar(20)	Not null	-
destination	Varchar(20)	Not null	-
accepted	Varchar(5)	Not null	-
date	date	Not null	-
fromRequest	Varchar(50)	Not null	-
noOfTrucks	number	Not null	-
toRequest	Varchar(20)	Not null	-
typeOfMaterial	Varchar(20)	Not null	-
weight	Varchar(20)	Not null	-

Driver List:

uid	Varchar(50)	Not null	This will be
			generated
			automatically
			from firebase
fname	Varchar(20)	Not null	-
lname	Varchar(20)	Not null	-
mobile	Number	Not null	
add1	Varchar(50)	Not null	-
add2	Varchar(50)	Not null	-
state	Varchar(20)	Not null	-
city	Varchar(20)	Not null	-

distric	Varchar(20)	Not null	-



➤ Splash screen:

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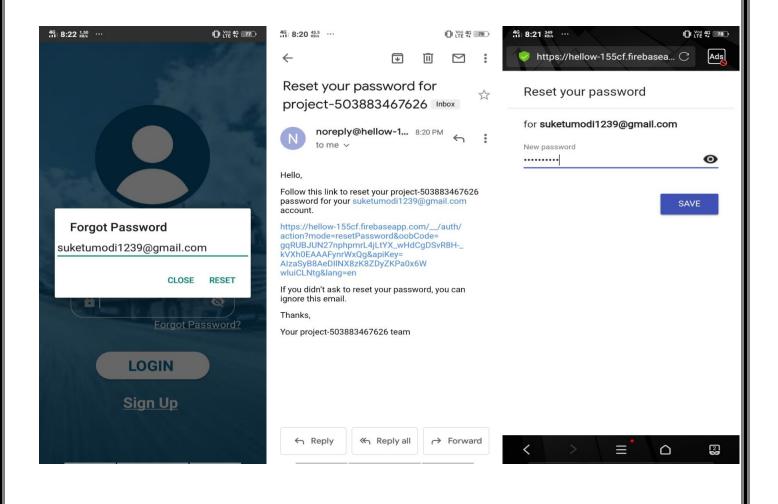
27 | Page

➤ Login page:



> Forgot Password

If the user forgets his or her password then he or she can generate OTP using his or her mail id and can reset new password.

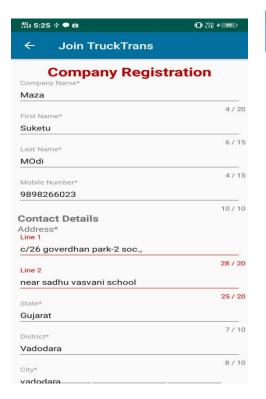


- ➤ Registration page:
 - If user is not registered so here they can register their self from the given options.



➤ Company Registration:

Fill the details of Company Registration.

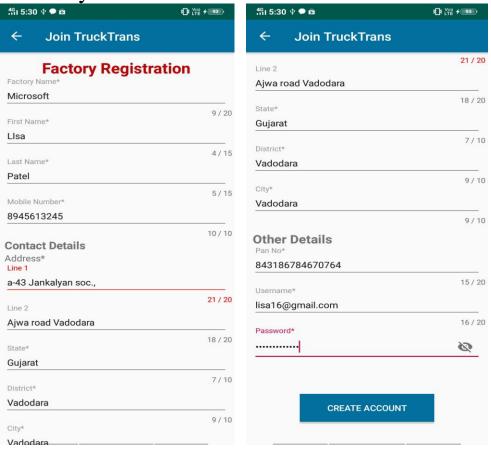




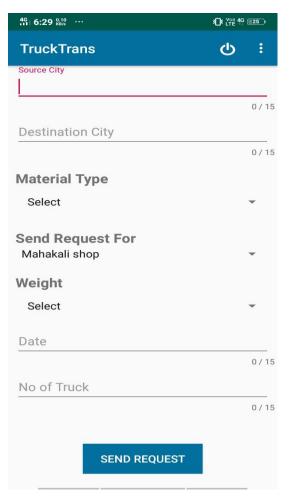
> Factory Registration:

Factory fill the details of goods and send the request

to factory.



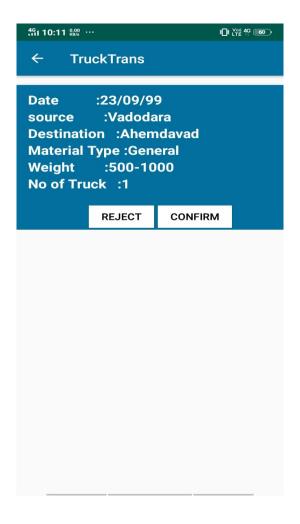
➤ Company dashboard:



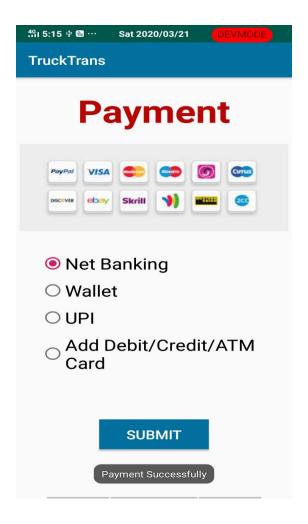


> Request

Company send request to Factory and then after accepting the request Factory sends request to Agent for accepting the order.

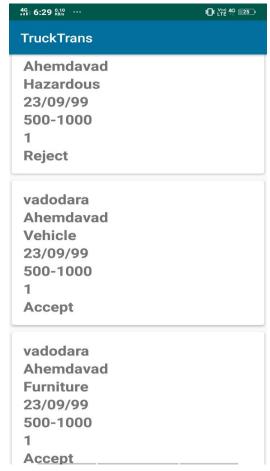


- ➤ Payment:
 - Here is Company makes the payment to factory and factory makes the payment to agent.



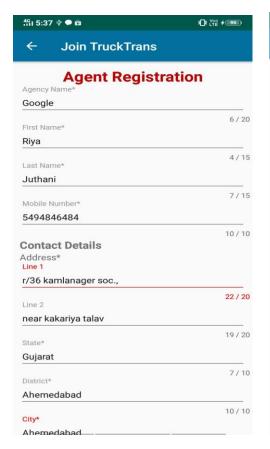
➤ Show Request status

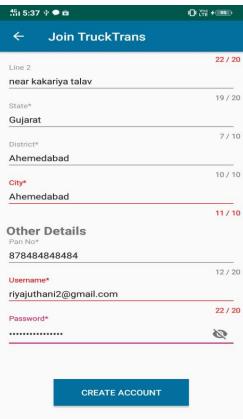
Here Company/Factory can view the status of the request sent.



> Agent Registration:

Fill the details of Agent Registration.





➤ Agent Dashboard

This is the dashboard of agent.



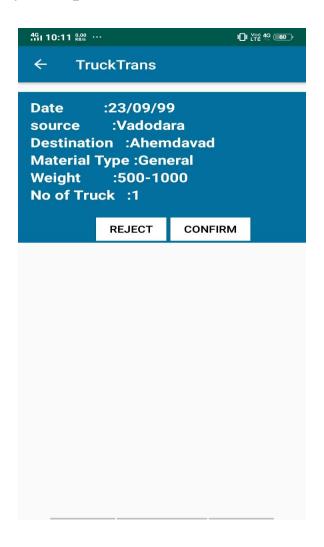






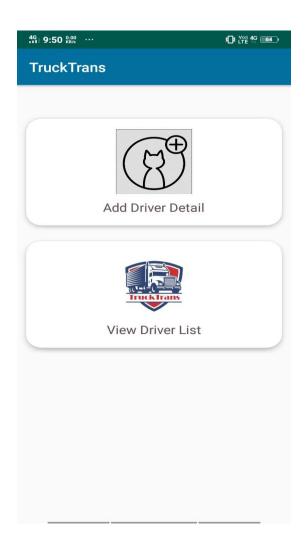
➤ Request

This is the request page where agent can accept or reject factory's request.

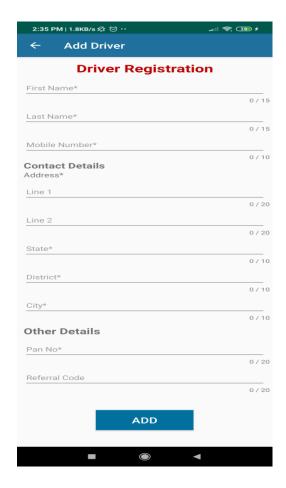


➤ Driver Dashboard

♣This is the dashboard for driver

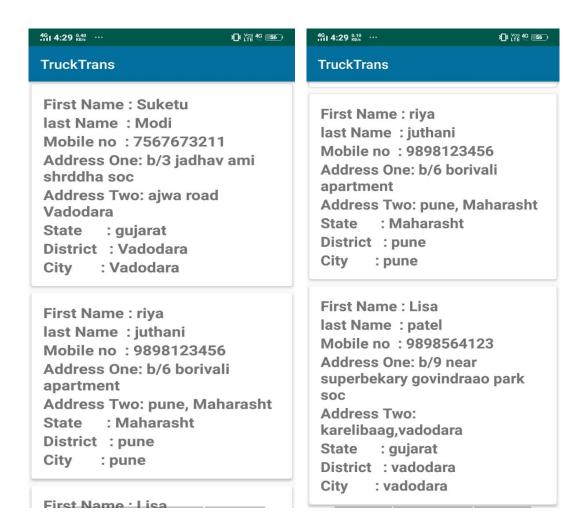


- ➤ Add Truck driver details:
 - ⁴Here, Agent can add the details of Driver.



➤ View Driver Details

♣ Here, Agent can view the details of Driver.

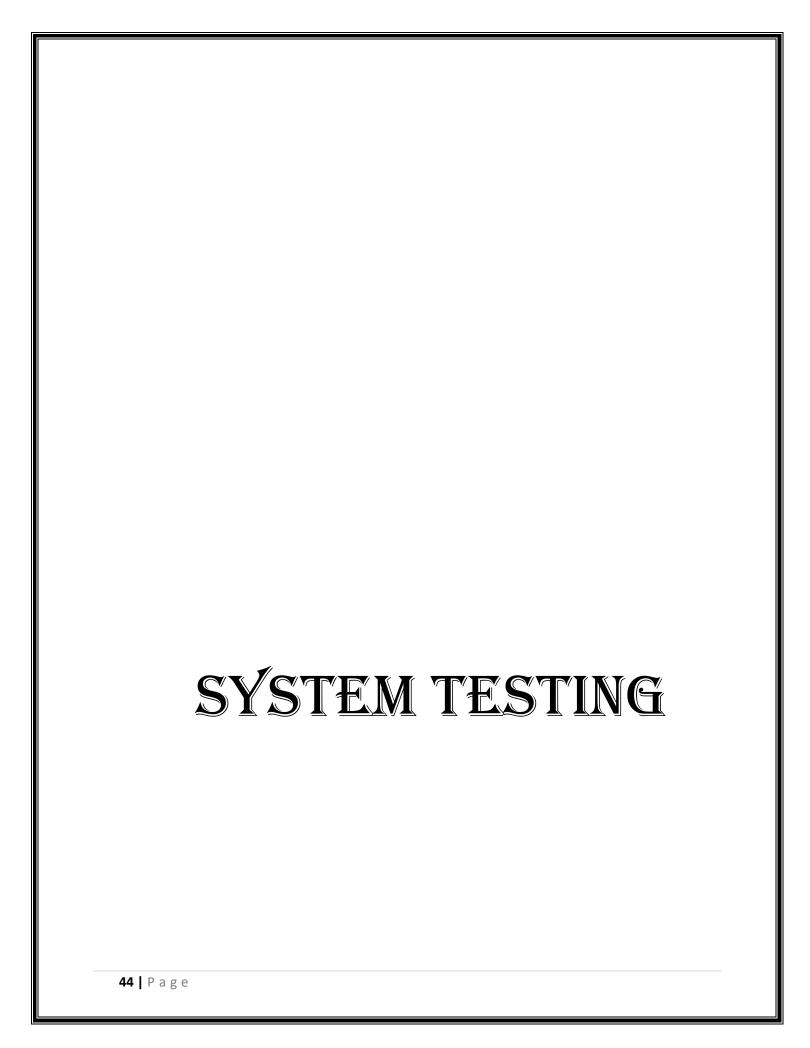


➤ Manage Profile:

Here Company, Factory or Agent can manage their profile







	TEST CASES	
45 P a g e		

> Test cases:

- login page:
 - Check email verification When call authentication on firebase.
 - Check password filed When call authentication on firebase.
- 🖶 Company post a load page:
 - Check all field are inputted or not if not then show an error message.
- Factory post a load page:
 - Check all field inputted or not if not then show an error message.
 - Check the status of request.
- ♣ Agent add the truck driver details page:
 - Check mobile number of truck driver.
 - Only ten digits can be written in number field.
- Registrations page:
 - Company:
 - Check the email id.
 - Check mobile number.
 - Only ten digits input in mobile number field.
 - Check PAN no.
 - Only fourteen digits input in PAN no field.

• Factory:

- Check the email id.
- Check mobile number.
- Only ten digits input in mobile number field.
- Check PAN no.
- Only fourteen digits input in PAN no field.

• Agent:

- Check the email id.
- Check mobile number.
- Only ten digits input in mobile number field.
- Check PAN no.
- Only fourteen digits input in PAN no field.

Request page:

- If request is confirmed then go to the next page.
- If request is rejected then go to the home page.



> <u>FUTURE ENHANCEMENTS:</u>

- ♣ In Future, We will add the online Tracking System wherein company and factory can track the order.
- ♣ We may use this app for other transports like tempos, cars, etc.
- ♣ Company and Factory will be able to give feedback to factory and agent respectively.



BIBLIOGRAPHY/REFERANCE: Referred to the <u>www.stackoverflow.com</u> **↓**I took reference from YouTube. **51** | Page