

# BUS TRACKING APPLICATION



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# INTRODUCTION

Bus tracking application is an application for smartphone that work on Android operating system

This application uses GPS Function

This application at specific pickup point will send the current location of the Bus to students when they request.

This App generate Predictions of bus arrivals at stops along the route.

This application uses a variety of technologies to track the location of buses in real time.

# Problem Faced

- ▶ In the daily operation of bus transport systems, mainly that of buses, the movement of vehicles is affected by different uncertain conditions as the day progresses, such as :
  - ▶ traffic congestion
  - ▶ unexpected delays
  - ▶ Irregular vehicle-dispatching times
  - ▶ other incidents.
- ▶ Many students are late for classes because they decide to wait for the bus instead of just simply using a alternate transportation.

# Solution by Our Application

1

Focus on to providing them more convenience with bus schedule.



2

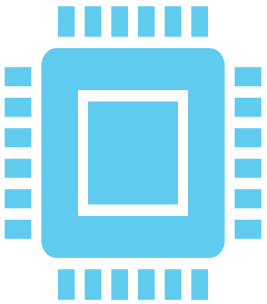
It provides Real-time bus location information so that they may not get delayed.



3

Integrated Google Maps in the Application.

# Requirements

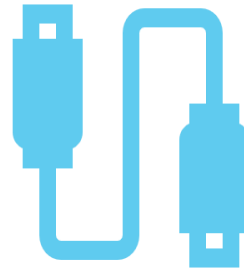


## Hardware Requirements:

Device: Android device

Ram: 4GB or Higher

Other: GPS Enabled



## Software Requirements:

Operating System: Android 6 or Higher

Front-end: XML

Back-end: JAVA

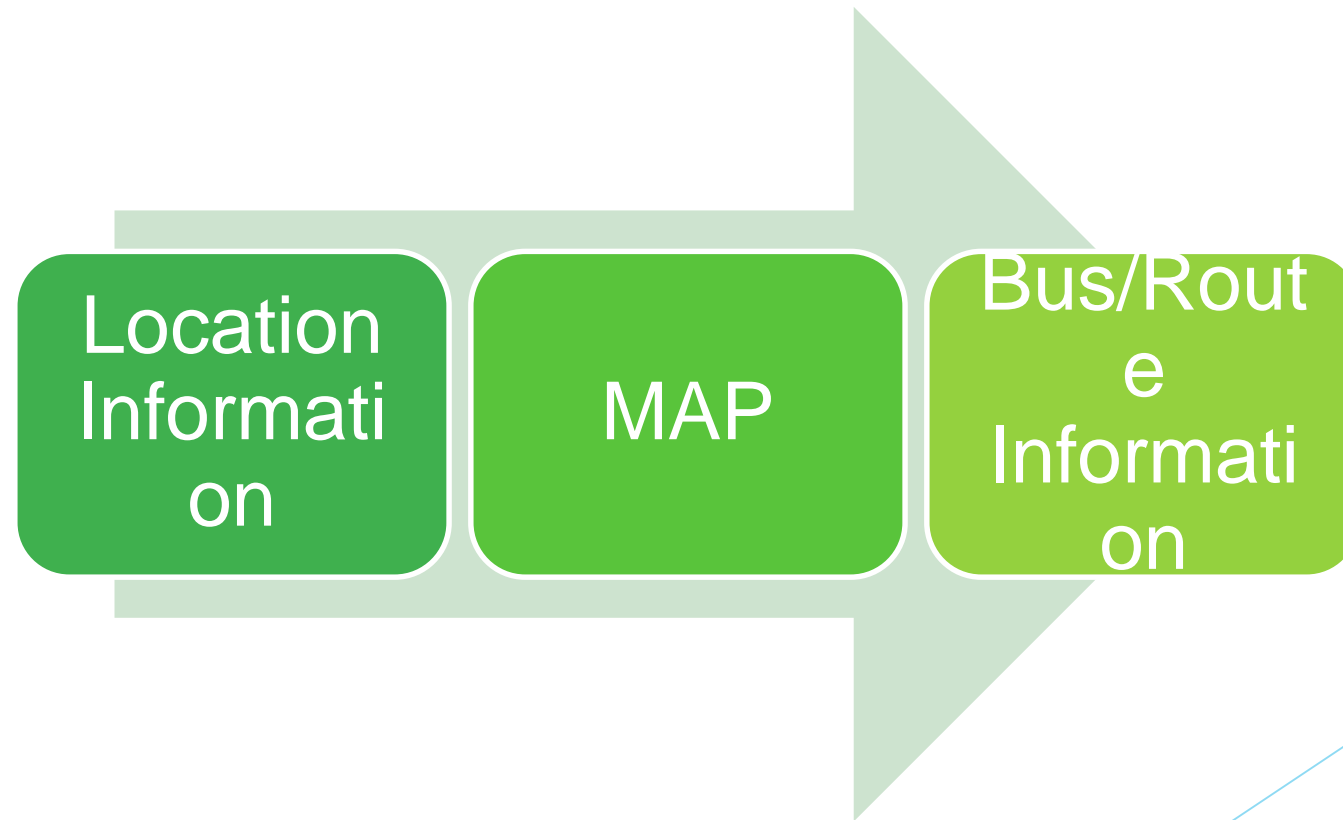
Database: Firebase

Plugins: Android, ADT

# Development Environment

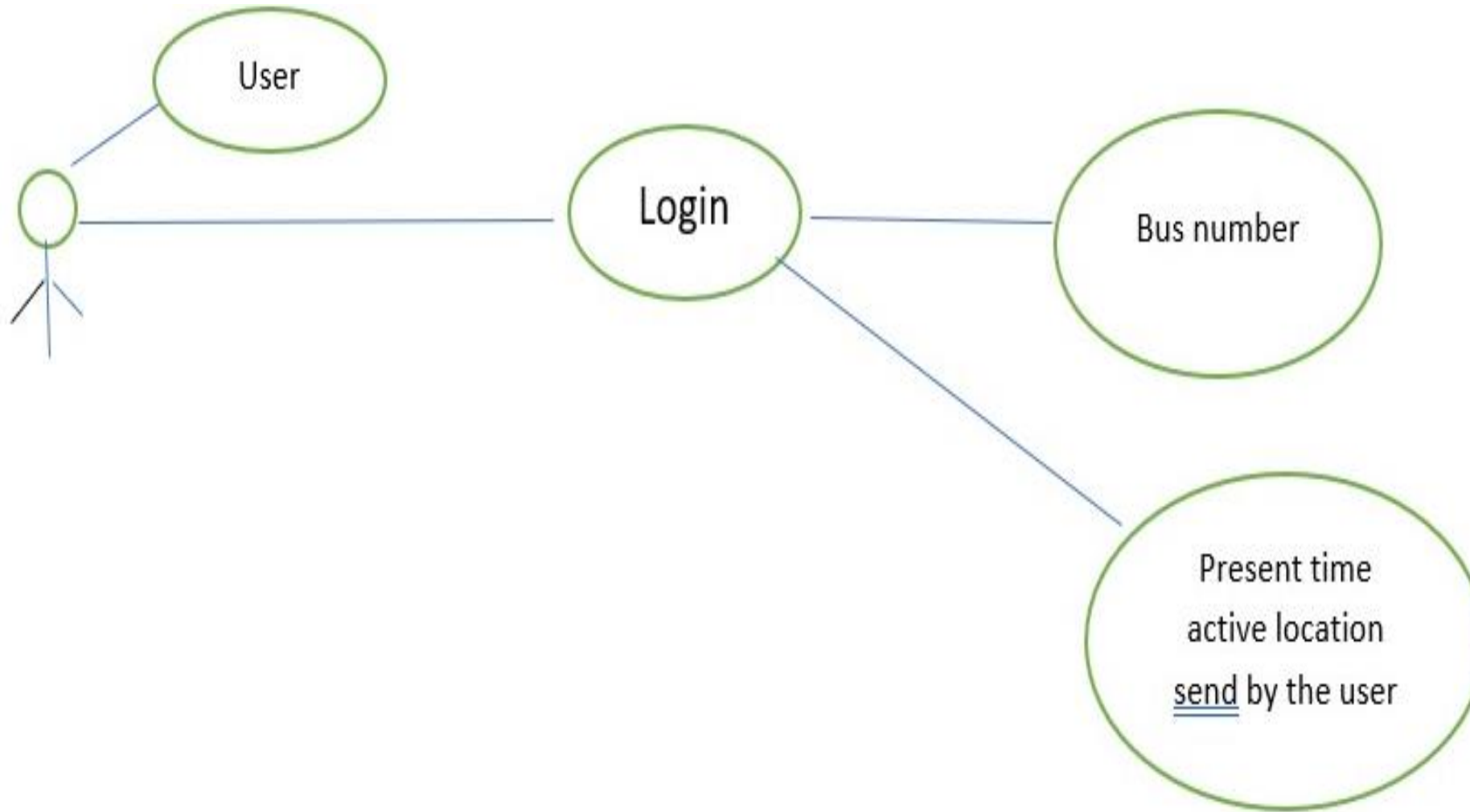
- ▶ The proposed system requires Android Studio that is an open-source software development environment.
- ▶ The Android project has been developed in the Android Studio 6.0, as it has plugins that are mainly used for Android.
- ▶ Integrated Development Environment (IDE) is used in Android development in Order to make straight forward and quick.
- ▶ Android is basically a multitasking platform.
- ▶ ADT (Android Development Tools) is a plugin developed by Google.
- ▶ Its main purpose is for developing android mobile application.

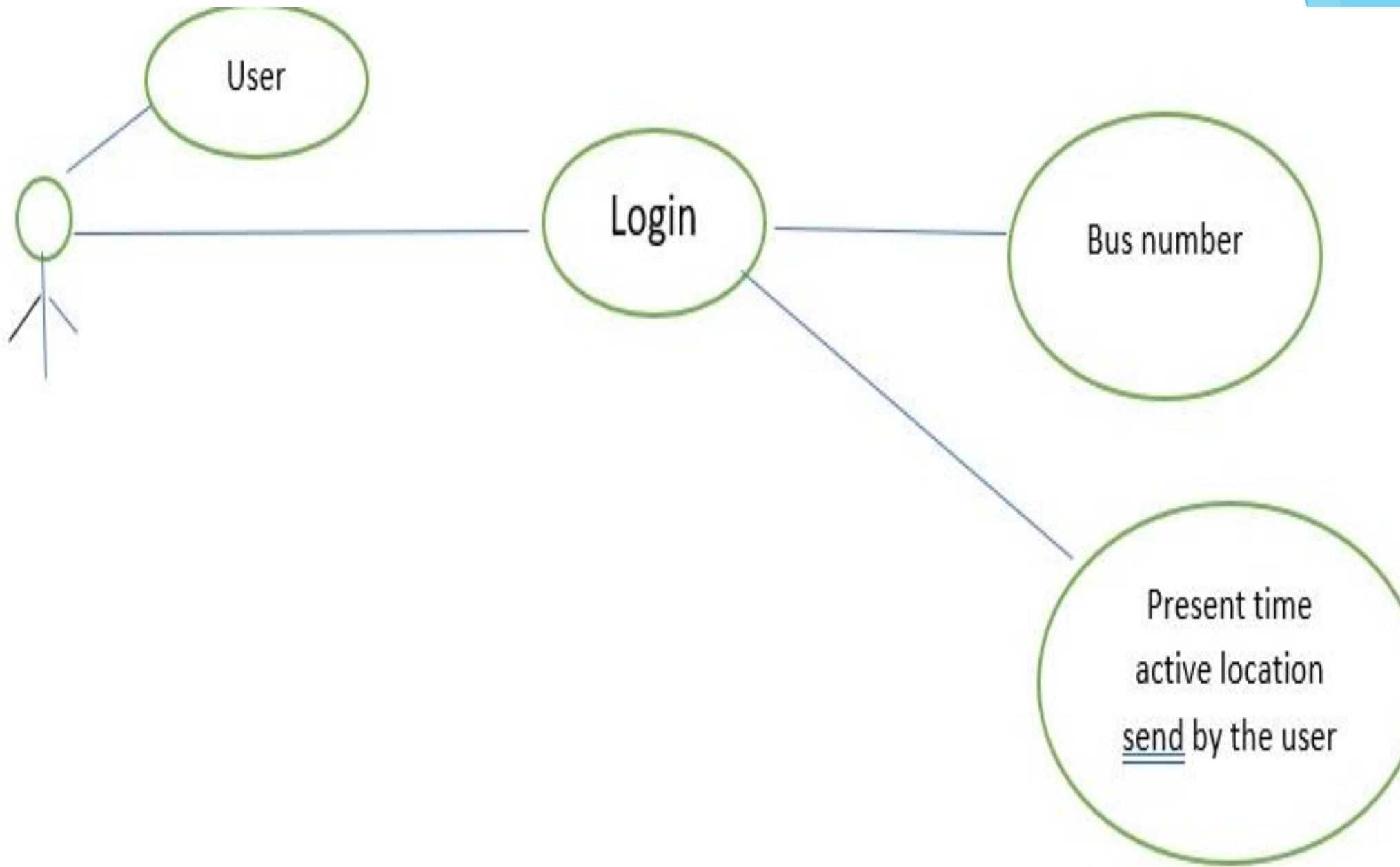
# Project Module





# USE CASE DIAGRAM





# Login Activity

Bus Tracking



Welcome Back  
Sign In Into Your Account

Sign In

Registration Id

Password

Sign In

New User

# Sign Up Activity

Bus Tracking




Welcome To Bus Tracking App

Sign Up

Sign Up

# Personal Detail Activity

Personal Detail

sourabh

Email Id  
88277shiv@gmail.com

Mobile Number  
6266097183

Registration Number  
21MCA10074

Password  
12345

# Home Activity

## Hello, Sourabh


Personal Details

See Bus Details

Find Bus Location

# Bus Details

Bus Details



Bus Details

Vit To Bhopla

Vit to Aasta

Vit to Sehore

# Firestore Database

`https://bus-tracking-app-31f0c-default-rtdb.firebaseio.com/`

- ▶ Buses
- ▶ Driver
- ▶ Users



## ▼ — Buses

### ▼ — BUS001

busId: "BUS001"

latitude: ""

longitude: ""

▼ — Driver

↓  
▼ — DRI001

— driverEmail: "abc@gmail.com"

— driverLincese: "79N78Y58000"

— driverMobileNo: "8975451578"

— driverName: "saurabh"

— driverPassword: "123456"

— reId: "DRI001"

▼ — Users

▼ — 21MCA10074

eId: "88277shiv@gmail.com"

mobileN: "6266097183"

passW: "12345"

reId: "21MCA10074"

rerturnPass: "12345"

userN: "sourabh"

# Disadvantages

- GPS based location system may not work properly during inappropriate weather conditions

# Advantages

- ▶ Reduces traffic in clumsy areas.
- ▶ Makes people to avoid unexpected delays.
- ▶ Improves scheduling of vehicle timings.
- ▶ Easy to catch local transports.

# Future Scope



- ▶ This project will be put up on the cloud platform, so that it will be accessible by every Android user.
- ▶ The application will prove beneficial for every bus traveler, or even tourists. Not just buses, but this application will be useful for every person travelling by any means of transport.
- ▶ The Location Tracker will give the exact location of the bus which will make it easy for the passengers to travel.



THANK YOU