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## SMART BUS ANDROID APPLICATION

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### ABSTRACT

The Smart bus android app is revolutionary application which aims to reform the public transportation bus system. The existing system of bus transportation has many drawbacks such as no real time information about whereabouts of bus, problem of change, traditional methods for monthly passes for student's professionals etc. In Smart bus android app we have worked on all the setbacks of the existing system mentioned above. The smart bus application can be used by anyone to purchase the ticket or to enquire about information. The smart bus also provides paperless solution to traditional pass services therefore helping in eco-friendly environment. It's a real time application which will provide details like bus driver, bus route, bus stops along with that the real time location will also be provided on the map for the users. This application also solves the problem of change; basically, in many scenarios the conductor does not have change money and passengers just forget the change and get off the bus. Therefore, we have in app wallet system where each account will hold up some points, points can be purchased or can be get refunded as change from the conductor instead of cash change.

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### I. INTRODUCTION

In order to solve these problems & enhance current bus service system we have devised three main functionalities such as:

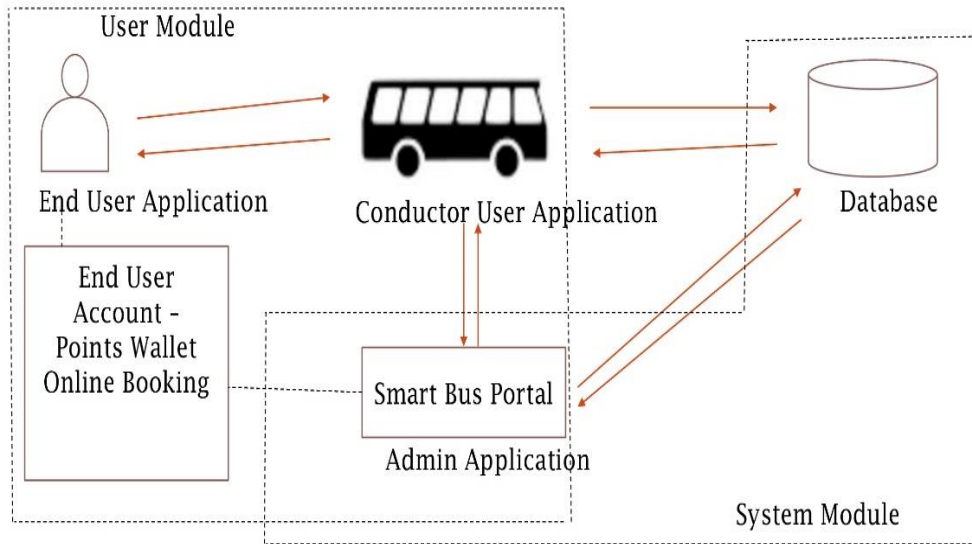
- 1] Change based on points – most of the times the buses are quite full of passengers due to which the conductors might low on change and many passengers are left with no option but to leave the change which bothers the pocket weights. Therefore, we're introducing the change system including points. As every single user and conductor will be or can be using the app the conductor can provide the change to the passenger even, he did not have any in the form of points in the app.
- 2] Monthly pass system – The app we're proposing has a feature which enables the user to buy the tickets, here the payment can be done through points or real-world money by UPI. As well as the users can buy points using money and they can buy monthly pass using the points, which will ultimately result in saving the money.
- 3] The app will also provide some insightful information on buses such as the bus route information, bus number, stops along with the live location of bus in the route, so the users can estimate the journeys and time as their convenience.

### II. METHODOLOGY

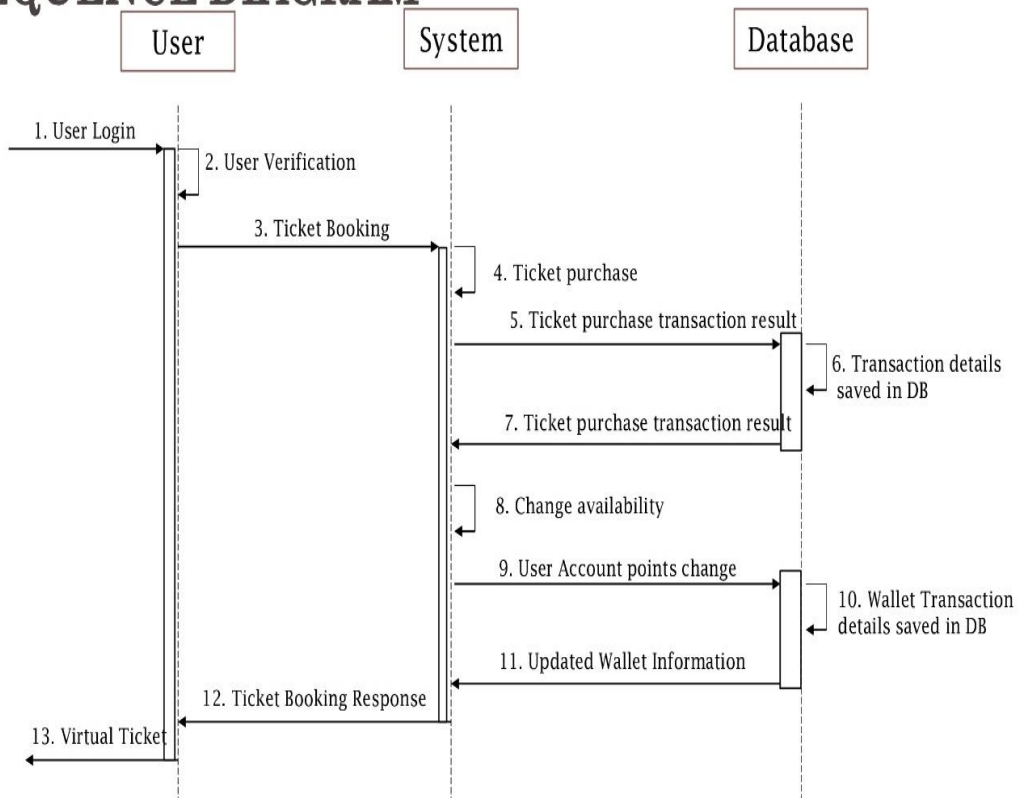
The Incremental model is going to be followed through the all phases for this project. First the planning and designing phases will be done where all the aspects of the project will be discovered through the brainstorming, studying past researches, projects, papers in the same field. Then the implementation and testing will be done on the developed prototype and based on the necessity we might repeat the phases to make application adaptable and flexible. For the user interface we will be using android and as for the API we'll be using google location API to show location on the map.

III. MODELING AND ANALYSIS

# SYSTEM ARCHITECTURE

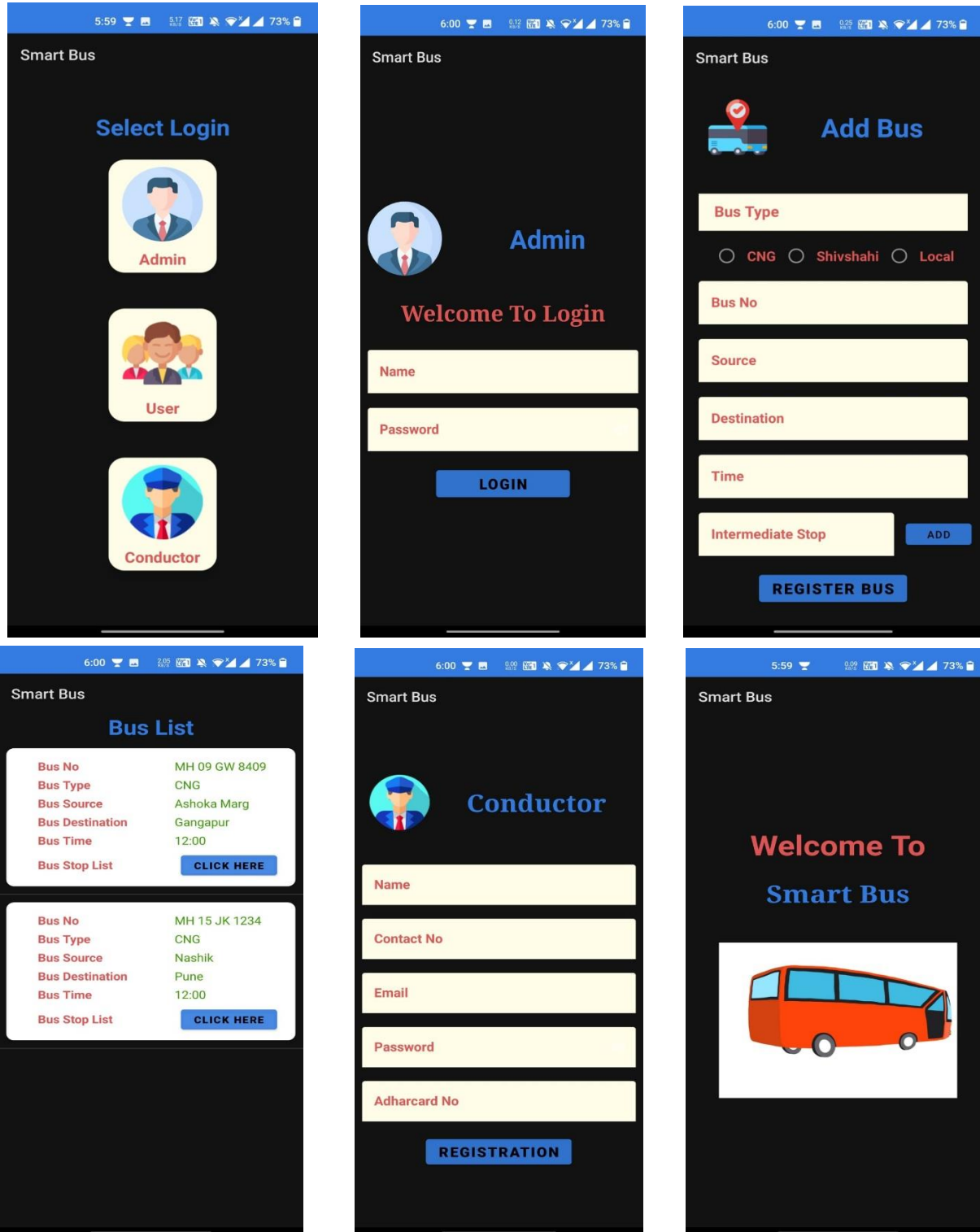


## SEQUENCE DIAGRAM



#### IV. RESULTS AND DISCUSSION

The Smart bus android application prototype is designed to remove all the setbacks of existing system.



#### V. CONCLUSION

The Smart bus android application prototype is designed to remove all the setbacks of existing system. This application has a points system which can be used to in purchase of tickets and passes which same can be done using real money. Along with that the application will provide the live location of buses with insights like bus number, driver information, route information etc. This application can be a stepping to reform the public

transmission as we've included tickets and passes procedure which previously used to take a lot paperwork can be done without any papers at all, so we can also say that this may lead to paper free public transmission environment.

## **VI. REFERENCES**

- [1] S. Priya, B. Prabhavathi, P. Shanmuga Priya, B. Shanthini, An Android Application for Tracking College Bus Using Google Map, International Journal of Computer Science and Engineering Communications. Vol.3, Issue 3, 2015, Page.1057-1061, ISSN: 2347-8586
- [2] Mane, Mr & Khairnar, Dr. Vaishali. (2014). Analysis of Bus Tracking System Using GPS on Smartphones. IOSR Journal of Computer Engineering. 16. 10.9790/0661- 162128082.
- [3] Chakradhar Rao CH, Pushpalatha P, and Aditya Sundar N," GPS Based Vehicle Navigation System using Google Maps", International Journal of Computer Science and Information Technologies, Vol.4, Issue.6, pp.1346-1352, 2013.
- [4] Karan Punjabi, PoojaBolaj, PratibhaMantur, SnehaWali, "Bus Locator via SMS Using Android Application", International Journal of Computer Science and Information Technologies, Vol. 5 (2), pp.1603-1606, 2014.
- [5] Rohitaksha K, Madhu C G, Nalini B G,Nirupama C V, "Android Application for Vehicle Theft Preventionand Tracking System", International Journal of Computer Science and Information Technologies, Vol. 5 (3), pp.3754-3758, 2014.