**ADVANCED BUS WITH AUTOMATIC TICKETING, STUDENT PASS FACILITY, BALANCE CALCULATION AND SMS ALERT**

**ABSTRACT:**

The aim of this project is to implement advanced bus with automatic ticketing, student pass facility, balance calculation and SMS alert. This system is used for automatic ticket generation, student bus pass information as well as balance calculation for each ticket and balance, validity alert message on user’s mobile phones.

The most of people in India uses bus travelling facility in their daily routine life. The manual use of bus reservation is presently very troubled thing and also consumes a lot of time by having to stay on a long queue. For this reason, an efficient system is to be proposed in this project to ease the issue of bus ticketing within the country.

Technological development has resulted in a boundary free digital world. This development has resulted in transaction through virtual money instead of real ones. One of the most popular forms of online trading is E-ticketing. Android Phones can reduce the trouble of the customers to stand in queue and book the tickets. With the use of RFID smart cards the overhead of waiting for ticket was reduced but the user should always remember to carry the card with him. This project deals with the development and implementation of smart ticket generator application which is more effective and simple than current ticketing system.

This project uses ARDUINO board along with RFID module, motor driver IC, dc motor, buzzer and LCD display, GSM module, 4\*4 keypad matrix and voltage regulator circuitry. The passengers are getting ticket only when their RFID card details are matched. But firstly you to recharge your RFID card of 1000rs. And after using that card the balance is deducted automatically depend on destination.

Whenever the card is tagged then the status will be displayed on LCD and SMS also received by the card holder. Example is shown for 4 cards but it can be extended to many numbers. An arrangement is made such a way that, when student was tagged his card for pass then it will show the validity date of that pass. When card balance is less than or equal to 50rs. Then you have to recharged your card and also gets SMS alert.

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**BLOCK DIAGRAM:**

