

## **MAKER: Vehicle Unlocking System**

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## **Vehicle Unlocking System**

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### **Abstract**

In vehicle unlocking system project, we have implemented a new level of security for vehicles based on biometric identification using fingerprint scanner. Whenever a person gives a fingerprint, the fingerprint is matched to the database and if a match is found then the vehicle starts/unlocks.

An android application is used in this project. When the application is installed in the phone for the first time, then the owner of the vehicle has to create his username and password. The user would be connected to the system on vehicle using Bluetooth. This Bluetooth module helps the owner to perform various operations on the vehicle system using his phone. The various options are the following: enrolment of fingerprint, deleting fingerprint, view all and direct start.

To enrol new fingerprints into the system, the owner has to enter the details of the other users (who will use the same vehicle) with name and id and enrol the other users' fingerprint. Up to 9 people's fingerprint can be added to one vehicle with the permission of the owner. The system also provides the facility to add/delete fingerprints but the owner's fingerprint cannot be deleted. Clicking on the view all button will show the names and id of people who have access to vehicle. This application also has a direct start-option for bike and unlock-option for car.

The connectivity of the phone and the vehicle is based on Bluetooth so there is a range limitation which is typically less than 10 meters.