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ANTI-THEFT SYSTEM

for vehicle using GSM & GPS with fingerprint verification

ABSTRACT

This Anti-theft system for vehicle using GSM & GPS with fingerprint verification aims to protect any vehicle from theft. This smart key feature informs the vehicle user in the event there is a threat of theft to his vehicle by any intruder. The system also provides a means for tracking the vehicle in case of lost keys or occurrence of a threat. This system has been developed using the latest technologies which simplifies the life of common people.

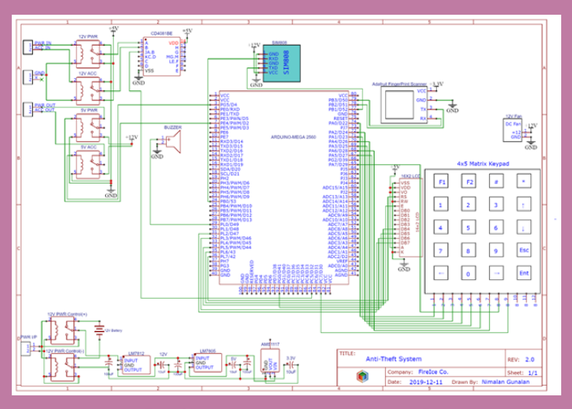
PROBLEM STATEMENT

- ***Number of stolen vehicles is increasing day by day.***
- ***There is no efficient security system to check if the vehicle has stolen.***
- ***There is no additional verification feature in the existing vehicles besides the car key, alarm etc.***

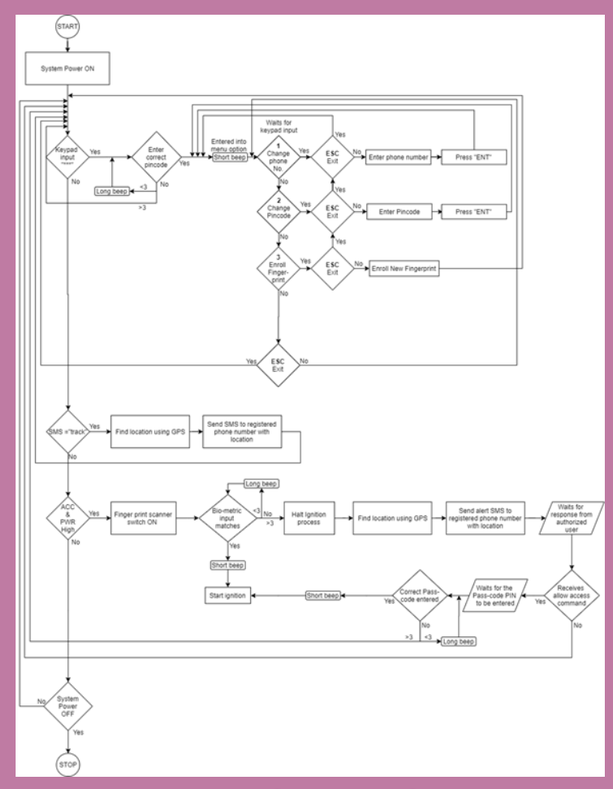
OBJECTIVES

1. ***To provide a bio-metric authentication to start the vehicle.***
2. ***To develop a system that is capable of tracking the vehicle.***
3. ***To develop a system which can send real-time information to the user***

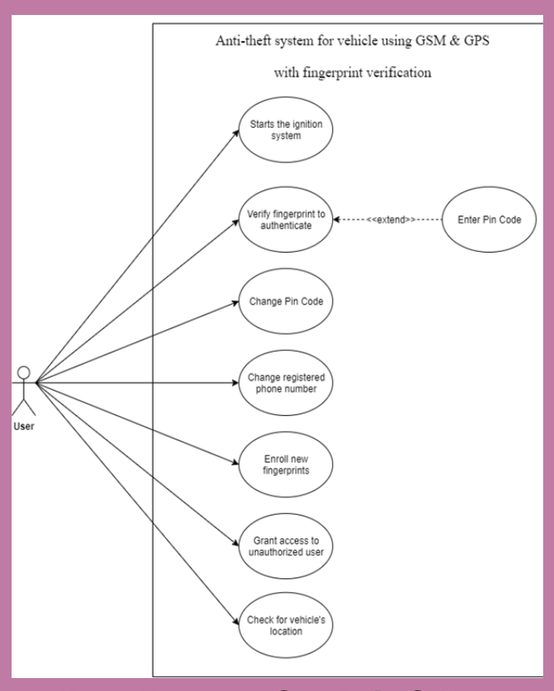
DESIGN & IMPLEMENTATION



Anti-theft system circuit digram



Anti-theft system flowchart



Use Case Diagram of Anti-theft System

OBJECTIVES

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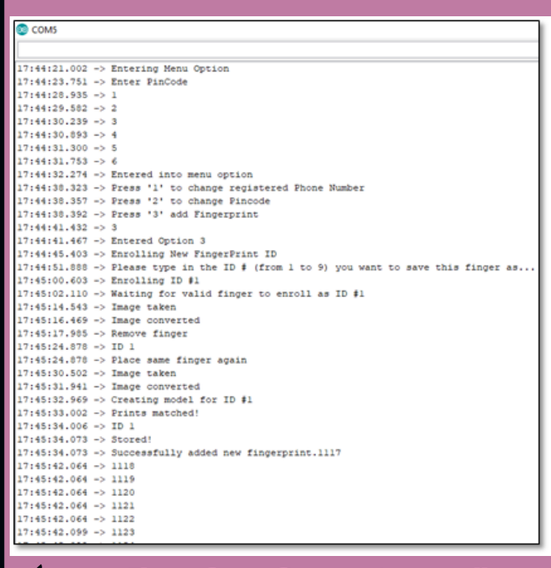
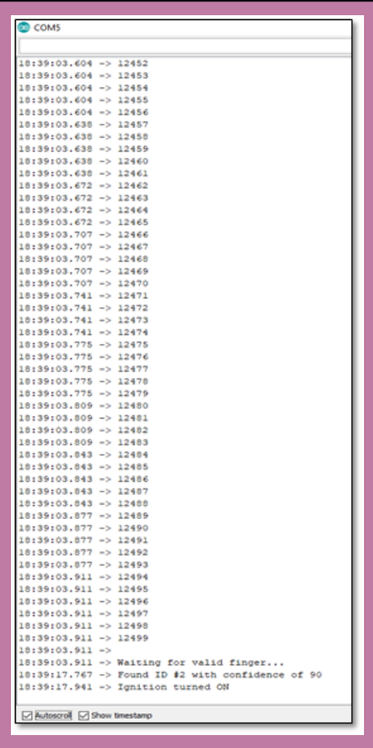
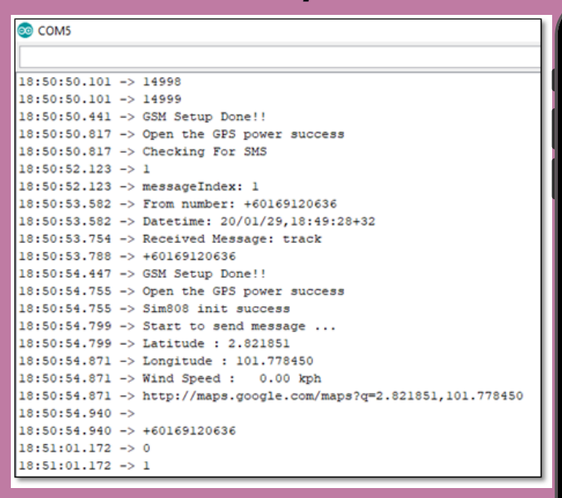
RESULTS



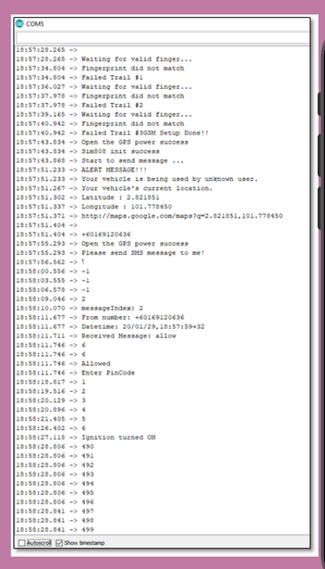
- ***The <u>fingerprint verification process</u> initialized when both PWR and ACC gives input signal as high.***
- ***waits for a finger to be placed on the scanner to be compared with all the registered fingerprint***
- ***if the image matched it turns On the ignition system, shoeing the confidence level.***

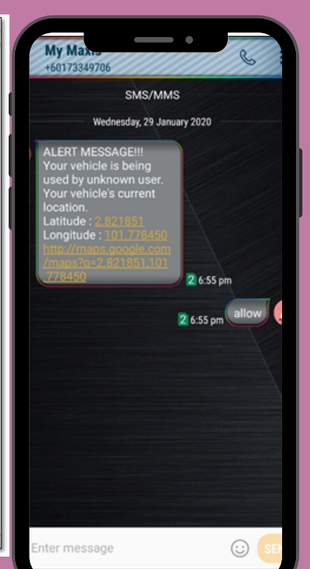


- ***Flow of new <u>fingerprint enrollment process</u>***
- ***Fingerprint enrollment function is called from the menu option when the user selects option "3".***
- ***Once the fingerprint is successfully stored the function breaks and exits menu option.***

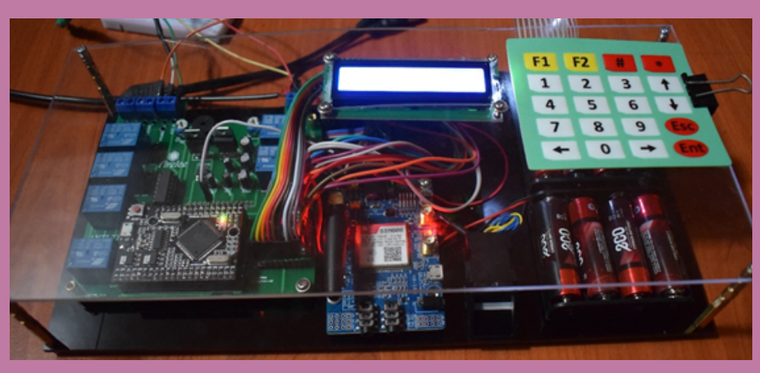


- ***This function is called every 2 minutes to checks for any "track" message is send from the registered phone number***
- ***If the conditions are satisfied it gathers the locations info and sends to registered phone number.***





- ***Takes place when the fingerprint verification fails for 3 times.***
- ***Waits for the authorized user to send a response message.***
- ***Based on the response the system turns ON or OFF the ignition system.***



Full Hardware Components setup

CONCLUSION

- ***This project satisfies all the objectives stated in the initial stage.***
- ***It provides a better security to the vehicle, prevent theft from happening.***
- ***This additional security feature developed for vehicles will definitely be assuring for the vehicle owners.***

REFERENCES

1. ***Z. B. Kumar and N.Bharathi, "Vehicle Anti-Theft System Using Fingerprint Recognition Technique," Open Academic Journal of Advanced Science and Technology, vol. 1, no. 1, pp. 36-41, 2017.***
2. ***F. K. Samuel and Z. Alexander, "Design of Anti-Vehicle Theft System using GSM and GPS with Image Acquisition," Asian Journal of Engineering and Technology, vol. 05, no. 04, pp. 82-92, 2017.***