



DESIGN OF A GPS BASED VEHICLE TRACKING SYSTEM

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Currently almost of the public having an own transport, the safe of transport sector is very important for public transport. The development of satellite communication technology is easy to identify the vehicle locations. The place of the vehicle identified using Global Positioning system (GPS) and Global system mobile communication (GSM) [1]. The GPS/GSM based system is one of the most important systems, which integrate both GSM and GPS technologies. In this thesis its proposed to design an embedded system which is used for tracking and positioning of any vehicle by using GPS/GSM [2]. The current design is an embedded application, which will continuously monitor a moving vehicle and report the status of the vehicle on demand.

It is necessary to send the data received by the GSM and GPS modules connected to the Arduino to the user's phone via SMS. We need to create a program to display the coordinates from the Google map using the input data (figure-1).

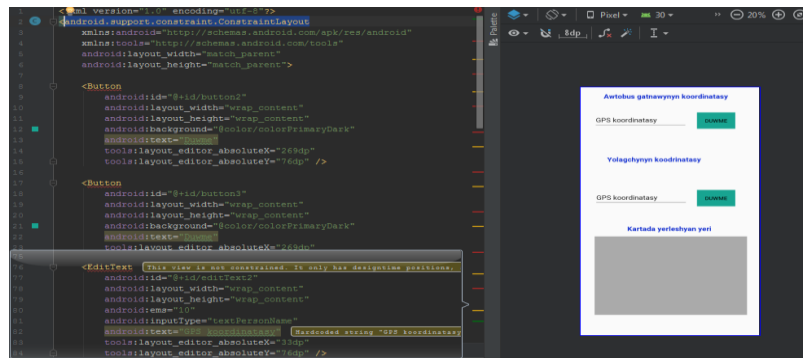


Figure 1. A window of an application developed in Android studio

Android studio platform used for it. Applications in Android studio written in Java. The user enters the phone application and clicks the button by entering the address of the vehicle route he need and his own coordinate and the distance between the vehicle and the passenger is displayed on the map [3]. The current design is an embedded application, which will continuously monitor a moving vehicle and report the status of the vehicle on demand. The proposed system operated efficiently and was cost effective. It is beneficial to vehicles that follow a specific travelling route on a daily basis. Also further enhancements like breakdown alert and over speeding alert can be made in to the system.

REFERENCES

- [1]. M. Lokhnade, V. G. Purinak “Real time vehicle tracking system using GSM and GPS with fuel and speed indicator”, International Journal of Innovation in Engineering, Research and Technology, ICITDCEME’15 Conference Proceedings, pp. 1-4.
- [2]. Argha Ghosh, “Vehicle Tracking System using Internet of Things,” Project Report for Master of Computer Applications, 2018
- [3]. Д. Е. Намиот, В. П. Куприяновский, С. А. Сиягов “Инфокоммуникационные сервисы в умном городе”, International Journal of Open Information Technologies, vol. 4, no. 4, 2020 (in Russian)