UNIVERSITI TEKNOLOGI MARA

ENHANCED CAR LOCATION TRACKING USING BLYNK APPLICATION

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ABSTRACT

Even in this modern era cars can still be hijacked, stolen, and taken apart to be sold as spare parts, that is why there will always be a need for retrieving a vehicle once stolen. Besides, not all safety measures are guaranteed to work on car thieves. So having a way to track down the stolen vehicle to retrieve it back would be the best solution. This project is the solution as it aims to send information regarding the device's location to the user. The device would be planted inside the vehicle and send the information to the user's smartphone through the internet. Another objective of this project is for users to keep track of elderly or disabled people's location in case they go on a drive by themselves. Other than that, this is most beneficial for those who do car renting services as the chances of the car being stolen are high due to strangers being the ones renting it. This project uses IOT (Internet of Things) Technology to monitor and send information through the system. This project utilises the Arduino board as the microcontroller and the main unit of this project. The hardware is separated into 2 categories which are input and output. The input consists of a GPS module to locate the location of the device. On the other hand, the output consists of an LCD and GSM Module to display the coordinates and send the data to the smartphone. The software uses Arduino IDE and Proteus to write and upload the program to the microcontroller and to design the PCB that will be used as the base of the hardware. For IoT, Blynk is used to display the coordinates and the location of the device planted in the vehicle.

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INTRODUCTION

1.1 Introduction

This project focuses on implementing the GPS (Global Positioning System) technology and using it to track the location of cars. The project will include hardware and software applications. The hardware will include the project itself which consists of Wemos D1 as the microcontroller, GPS module as the input of the project, GSM module and LCD as the output of the project. The software consists of Arduino IDE as a way to download the code to the microcontroller and Proteus as a means to design the Printed Circuit Board (PCB) of the project. This project will also include the Internet of Things (IoT) as a way for the user to communicate with the device remotely.

The integration of Global Positioning System (GPS) technology into various applications has significantly transformed how we navigate, monitor, and manage assets, vehicles, and personal devices. GPS technology, initially developed for military purposes, has emerged as a ubiquitous tool in modern society, offering precise location tracking and real-time data acquisition capabilities.

1.2 Background Study

The evolution of GPS technology has seen a shift from its exclusive military use to becoming an indispensable asset across diverse sectors. The constellation of satellites orbiting Earth enables GPS devices to accurately determine their geographic coordinates, facilitating applications ranging from navigation and logistics to emergency response systems.