An-Najah National University

Faculty of Engineering and IT

Department Name: Telecommunication Engineering

Course Name: graduation project   **Number: (10646589)**

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name of the Project: Vehicle Tracking Based on GSM&GPS

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Abstract:

The Vehicle Tracking Based on GSM&GPS project brings together innovative approaches combining both GPS &GSM technology to create a vehicle tracking system that is both efficient and practical. Its functioning relies on a smartphone and the Arduino UNO, offering cost-effective usage in numerous industries.

By using GPS tech, our Vehicle Tracking System tracks the vehicle's movement—accurately determining longitude and latitude data. This information is then transmitted through the GSM network which uses cellular towers- sending & receiving data in text message form; this includes identifying visualizations of each respective location on a map.

Adding an ignition sensor provides a level of security. It sends a text message warning whenever someone tries to steal the vehicle acting as a deterrent, against theft. This aligns with the goal of reducing vehicle theft as it gives users a way to monitor, control and protect their vehicles.

The incorporation of a control system, for a DC motor into the framework of an Arduino Uno, GPS GSM module and an ignition sensor signifies an approach to managing vehicles. This system allows users to have control over the DC motor by sending SMS commands. The simplicity and ease of use of this mechanism is demonstrated by instructions like "turn vehicle on" which activates the DC motor.

The data is sent in as a text message, which includes the longitude, latitude, and location on the map. The message can be received on a mobile phone or any device capable of receiving text Messages. This project holds particular significance in detecting stolen vehicles, as it enables swift and precise recovery of the vehicle.

Overall, Vehicle tracking systems have many applications today and will continue to develop in the future due to the value of the service they provide in terms of tracking vehicles and knowing their location at any time.