EMBEDDED SYSTEMS PROJECT
GPS TRACKING SYSTEM

THE PROJECT REPORT

Spring2023

Submitted to:

Dr. Ashraf Salem

The Report index and Contents:

This Report is structured to explain the project and its development through some points arranged through this index gotten from the project pdf.

0. THE TEAM'S DETAILS

This summary provides the salient points about the teams and its individual members' details:

- **0.1.** Team members

- **0.2.** Team leader

1. DELIVERABLES

- **1.1.** Source Code

- **1.2.** Short video Google Drive link

- **1.3.** Github Repo Link

- **1.4.** Members' contribution table

0.   THE TEAM'S DETAILS

0.1. Team Members:

Team Members	ID
Ahmed Abd El-Samie Ahmed	2000176
Omar Hatem Abdelgamel	2000347
Abdelrahman Sherif Moastafa Eltayar	2000444
Ahmed Ayman Farouk	2000040
Mostafa Khaled Mohammad	2001060
Ahmed Amr Ahmed	2000137

0.2. The Team Leader

Name: Mostafa Khaled Mohammad

ID: 2001060

1. POWER SUPPLY CIRCUIT

- **1.1.** Source Code

The source code is divided to main 4 function besides the initialization functions :

1. An input function to use UART protocol to get the Nema sentence from GPS module continuously with correct order and initializations.
2. A function to decode the Nema sentence and extract the latitude and longitude from the array storing characters formed by input function from GPS module
3. A function to calculate distance between current read coordinates and predefined destination point .
4. A function to use the calculated distance to use the indicating leds to light up a specific color depending on its value.

The code in the zipped file in this archive.

- **1.2.** Short video Google Drive link

The link of the captured video :
https://drive.google.com/file/d/1I9sNehtgj9VgpdnamzUWY8-kqdykvQdG/view?usp=sharing

- **1.3.** Github Repo Link

The GitHub repo link: https://github.com/atxahmed/GPS-Tracking-System

• **1.4.** Members' contribution table

NAME	Github Username	CONTRIBUTION
Ahmed Abd El-Samie Ahmed	Ahmed6044	1. Design implementation 2. Indicators Code(led,lcd,buzzer)
Omar Hatem Abdelgamel	Omarhatem2203	1. Design implementation 2. UART Algorithm Code
Abdelrahman Sherif Moastafa Eltayar	AbdelrahmanEltayar	1. Design implementation 2. Nema Decoding Code
Ahmed Ayman Farouk	4HMED-4YMN	1. Design implementation 2. Delay Functions Code
Mostafa Khaled Mohammad	Most991	1. Design implementation 2. Nema Decoding Code
Ahmed Amr Ahmed	atxahmed	1. Design implementation 2. Distance Calculation Code