

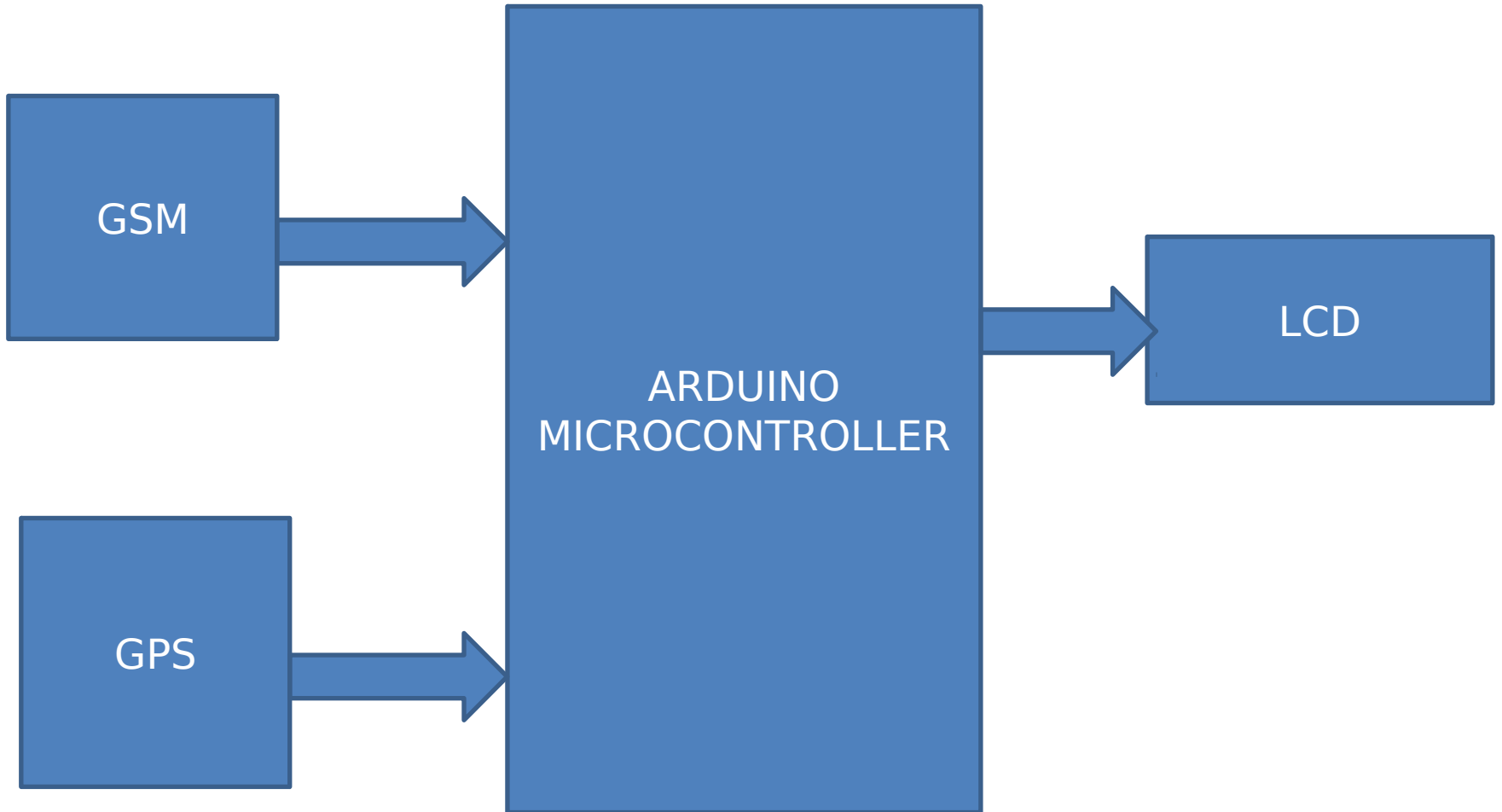
GPS TRACKER FOR ALZHEIMER'S PATIENTS

ABSTRACT

- A huge number of peoples are suffering from Alzheimer disease or mental and developmental retardation were reported of missing cases every year.
- to enhance the quality of life for these particular individuals, a high quality people tracking system with low price is needed.
- The purpose of this project is to integrate the GPS and GSM technology for real time people tracking using Google Maps.

- GPS provide information about the location of people and sends the coordinates to GSM modem
- After receiving the location , the data is sent to GSM modem through SMS.
- modem located in the tracking part serves as the transmitter and display part serves as the receiver, the latitude and longitude is displayed on lcd.

BLOCK DIAGRAM

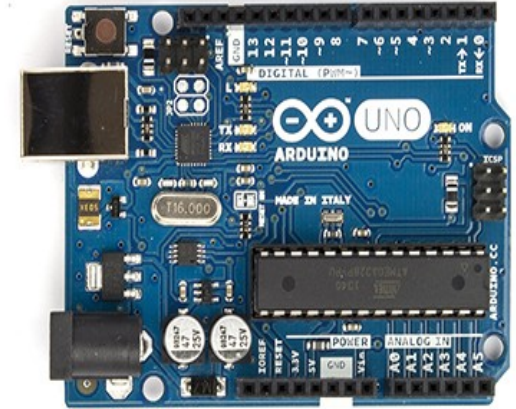


BLOCK DESCRIPTION

ARDUINO UNO

Features

- ATmega328P microcontrol
- Input voltage - 7-12V
- 14 Digital I/O Pins (6 PWM outputs),
- 6 Analog Inputs
- 32k Flash Memory
- 16Mhz Clock Speed



• **GPS Module**

GPS System

27 satellites

Orbit the Earth twice a day

Equipped with an Atomic clock

GPS Receiver

3D Trilateration

GPS receiver locates 4 satellite above it

It calculates distance to GPS satellites by timing a

signal's journey from satellite to receiver

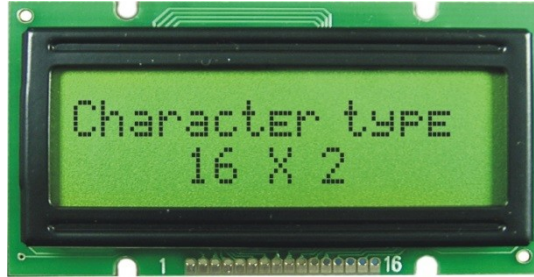


- **GPS Module**



- The output protocol is NMEA (National Marine Electronics Association) at data speeds of 9600 baud rate.
- The module works on 5Vdc which is provided from a regulator on board.

LIQUID CRYSTAL DISPLAY



- These modules are preferred over seven segments.
- LCDs consume much less power than LED

GSM



- GSM stands for global system for mobile communication.
- It is widely used mobile communication system in the world.
- GSM is digital cellular technology used for transmitting mobile voice and data services operates at the 850MHz, 900MHz, 1800MHz frequency bands.

CONCLUSION

GPS modem for real time tracking of people in 2D map had been prototyped; GSM modem has been implemented for receiving the information from GPS receiver and sending the message to caretaker in latitude and longitude. Tracking module is used to track the user location while the displaying module is used to plot the user location. This system is very useful for Alzheimer's Patients for monitoring their activities also tracking their position & prevents them from hazardous area.

REFERENCES

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