

AMBULANCE TRACKING WITH PATIENT HEALTH MONITORING USING GSM GPS

AIM:

Design and Development of Ambulance tracking with patient health monitoring using GSM GPS.

PURPOSE:

Ambulance plays major role in emergency conditions. Especially in accident cases and heart attack cases it is very important to reach hospital as early as possible. There is “GOLDEN HOUR” in every emergency case. Regular ambulances don’t have any smart features like monitoring of patient health and updating to hospital. Here we propose solution that has this kind of feature. So here we have solutions like design and development of ambulance tracking with patient health monitoring using GSM GPS.

DESCRIPTION:

This project includes GSM (Sim800C) module, which is connected to Arduino through UART. GPS (NEO-6M) module connected to Arduino UART. SPO2 sensor connected to Arduino I2C port. LM35 connected to Arduino analog pin.

WORKING:

This system installed in ambulance. This can allow us to track ambulance location. Here Arduino sends GPS location information and sensors data for every fixed time interval. Also it can read temperature of patient with the help of LM35. SPO2 sensor (MAX30100/11) reads heartbeat and blood oxygen of patients. Temperature and SPO2 values transmitted to registered mobile number (hospital mobile number). Based on these values doctors can take actions before patient reach hospital. Sensor values always displayed on LCD.

TECHNICAL SPECIFICATIONS

HARDWARE:

Microcontroller	:	Arduino Uno
Crystal	:	16 MHz
LCD	:	16X2 LCD
GSM	:	SIM800C
GPS	:	NEO-6M
SPO2 Sensor	:	MAX30100/11
Temperature Sensor	:	LM35
Power Source	:	12v 2 amp Adaptor

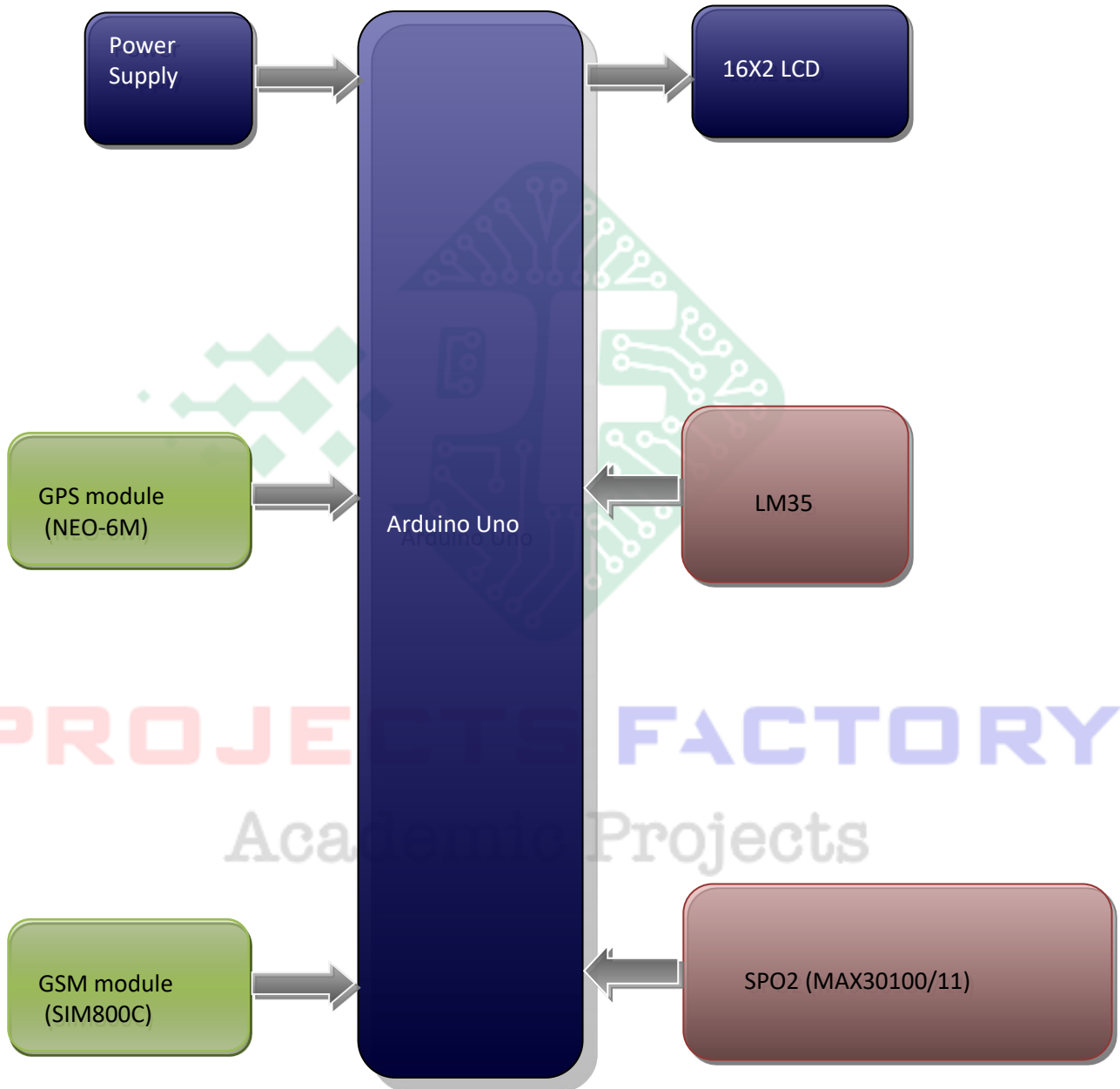
SOFTWARE:

Arduino IDE
Proteus based circuit diagram

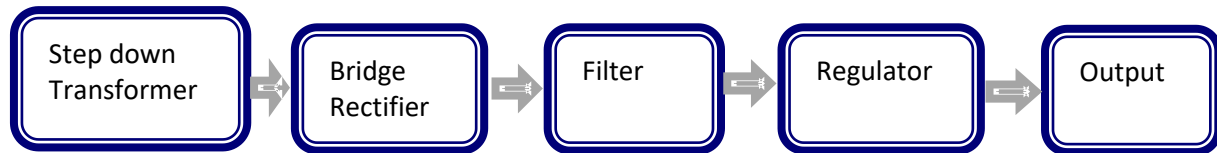
APPLICATIONS:

- Smart Ambulance
- Medical Applications

BLOCK DIAGRAM:



POWER SUPPLY BLOCKDIAGRAM:



INTERFACES COVERED:

- We have covered GSM (SIM800C) module interfacing
- GPS (NEO-6M) module interfacing
- Sensors like MAX30100/11 and LM35.

PROJECTS FACTORY
Academic Projects