

GSM GPS BASED SMART BLIND STICK

AIM:

Design and Development of GSM GPS based smart blind stick.

PURPOSE:

Normal blind sticks help blind people while walking. But they are not smart enough to guide all the way. Smart blind sticks can help in so many ways like location tracking and obstacle finding with voice feedback. Here we propose system like GSM GPS based smart blind stick.

DESCRIPTION:

This project includes GSM (Sim800C) module, which is connected to Arduino through UART. GPS module connected to Arduino through UART interface. IR sensors connected to Arduino digital pins. Ultrasonic Sensor connected to Arduino digital pins. Voice playback module connected to Arduino digital pins.

WORKING:

In this project IR sensors placed at bottom of blind stick to detect small objects. Ultrasonic sensor placed at middle of blind stick to detect obstacles. There is emergency button placed at top of blind stick to intimate about emergency. In emergency condition SMS will come to registered mobile number. Voice will play when any sensor gets activated. All this information will display on 16X2 LCD. SMS contains Google maps location. Using GPS location we can track easily.

TECHNICAL SPECIFICATIONS:

HARDWARE:

Microcontroller	:	Arduino Uno
Crystal	:	16 MHz
LCD	:	16X2 LCD
GSM	:	SIM800C
GPS	:	NEO-6M
Button	:	2 pin leaded type
Small objects sensors	:	IR sensors
Obstacle Sensors	:	Ultrasonic (HCSR04)
Voice play back Module	:	APR33A3
Power Source	:	12v 2 amp Adaptor

SOFTWARE:

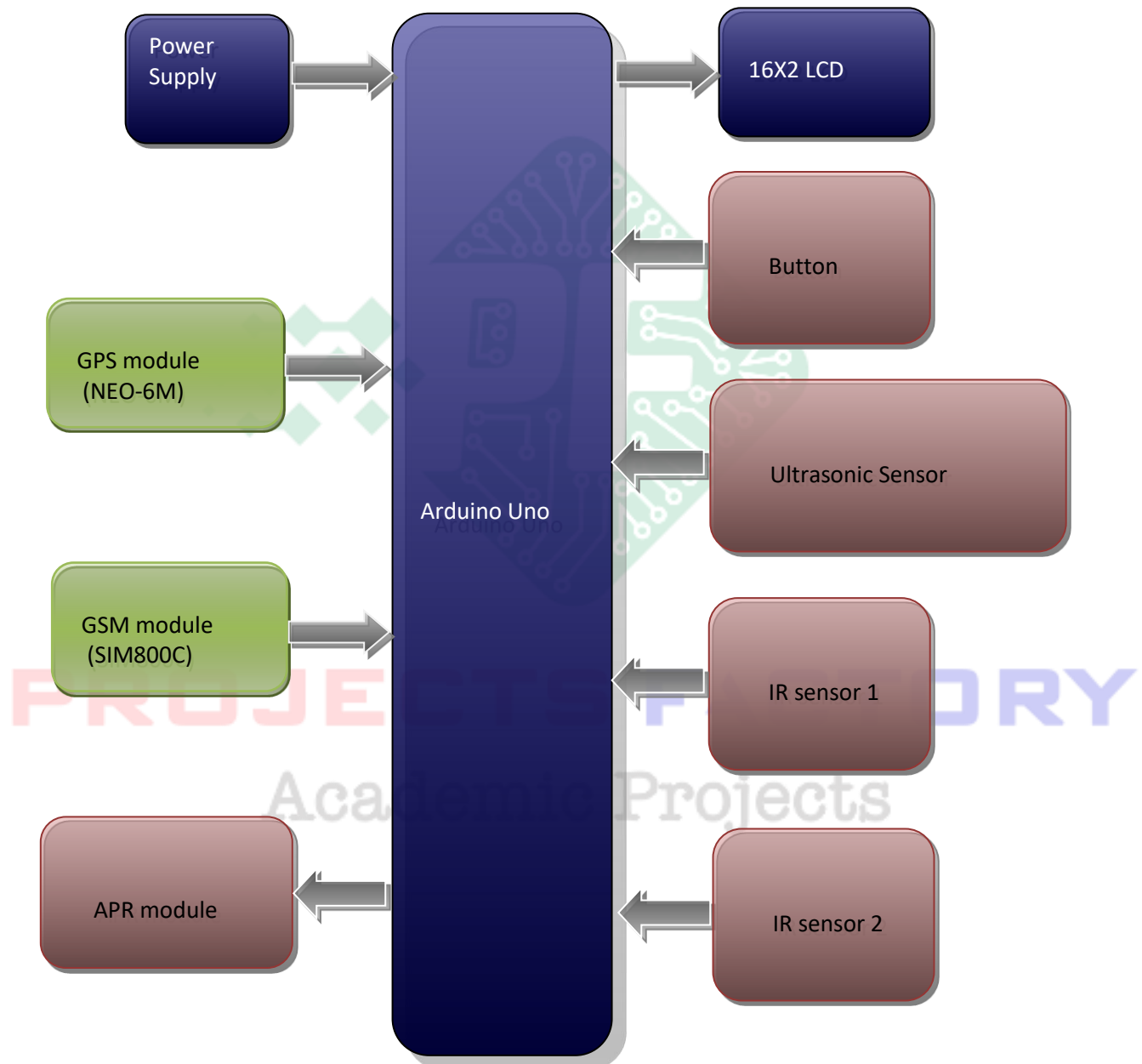
Arduino IDE

Proteus based circuit diagram

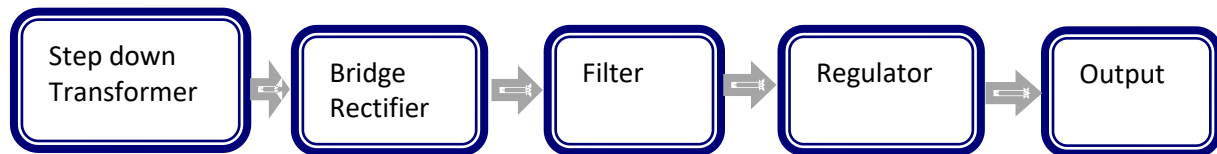
APPLICATIONS:

- Smart Blind sticks

BLOCK DIAGRAM:



POWER SUPPLY BLOCKDIAGRAM:



INTERFACES COVERED:

- We have covered GSM (SIM800C) module interfacing
- GPS (NEO-6M) module interfacing
- APR33A3 voice playback, Button, IR sensors and Ultrasonic interfacing

PROJECTS FACTORY
Academic Projects