

MEMS APR BASED ANNOUNCEMENT SYSTEM FOR PATIENTS

AIM:

Design and Development of MEMS APR based announcement system for patients.

PURPOSE:

For physically challenged people there are no specific electronic devices to know their requirements using gestures. Physically challenged people easily perform gestures based on their needs. Especially in homes, hospitals and public places. The proposed system has voice announcement module that can perform recorded voices based on gestures. Here project title is MEMs and APR based announcement system for patients using Arduino.

DESCRIPTION:

Arduino connected with MEMS sensor (ADXL345/335) through i2c port. APR33A3 (voice module) module connected to Arduino digital pins. 16x2 LCD display connected to Arduino digital pins.

WORKING:

MEMS sensor (ADXL335/345 - Accelerometer) placed on the hand of physically challenged patient. Based on hand moments Arduino reads MEMS sensor values which are in the form of X-axis and Y-axis. Based on these values recorded voices will be play through APR module. The recorded voices are like “need water”, “need help”, “need medicine” and “need food”. Also the same information will be displaying on 16x2 LCD display.

TECHNICAL SPECIFICATIONS:

HARDWARE:

Microcontroller	:	Arduino Uno
Crystal	:	16 MHz
LCD	:	16X2 LCD
Voice Module	:	APR33A3
Accelerometer (MEMS)	:	ADXL 345/335
Power Source	:	12v 1 amp DC Adaptor

SOFTWARE:

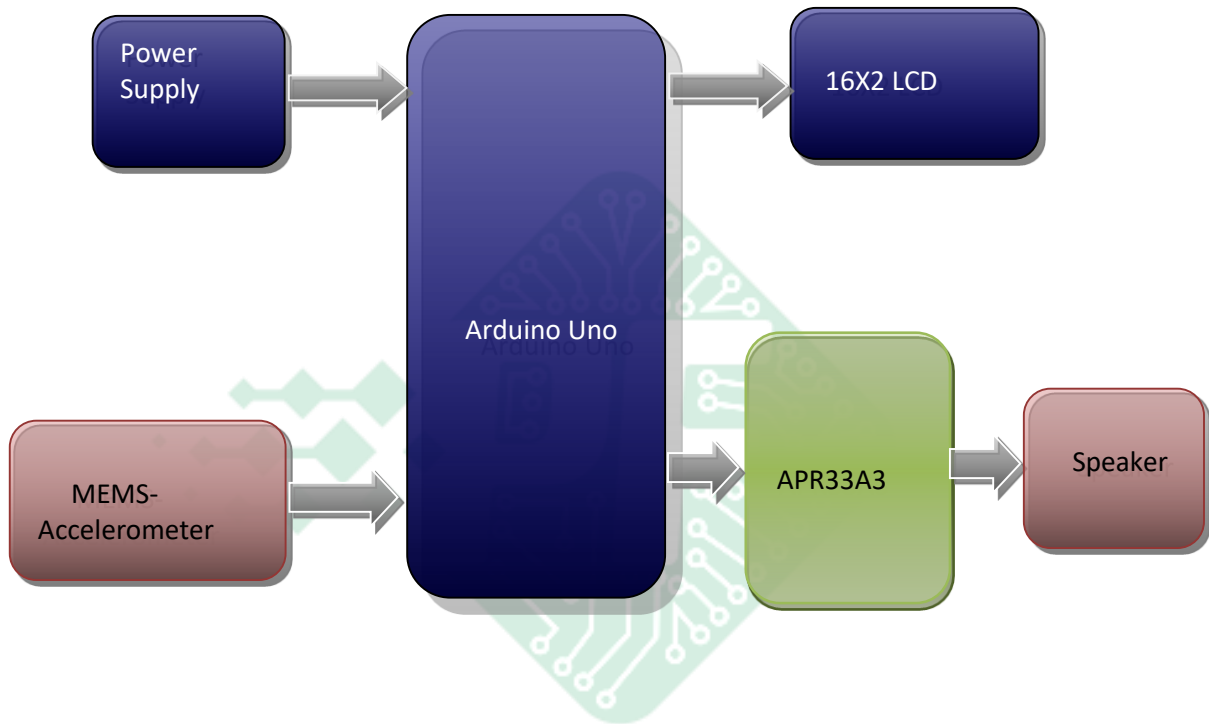
Arduino IDE
Proteus based circuit diagram

APPLICATIONS:

- Gesture based Applications
- Announcement Applications
- Physically disabled applications

PROJECTS FACTORY
Academic Projects

BLOCK DIAGRAM:



POWER SUPPLY BLOCKDIAGRAM:



INTERFACES COVERED:

- We have covered MEMS accelerometer (ADXL335/345)
- Voice Module (APR33A3) interface