Voice enabled device switching

The main aim of this project is to design and construct a voice enabled device switching system . User cancontrol the electrical devices like light; fan etc with the help of voice recognition system.

This project makes use of a Relay for switching the devices and voice recognition chip for recognition of the audio announcements and Microcontroller, which is programmed, with the help of embedded C instructions. This microcontroller is capable of communicating with all input and output modules. The voice recognition system which is the input module to the microcontroller takes the voice instruction given by the user as input and the controller judges whether the instruction is ON \OFF the device, and according to the users voice the switching mechanism controls the devices.

This project provides us with the learning's on the following aspects:

1. Characteristics of voice recognition system
2. Appliances interfacing with the controller.
3. Embedded C programming.
4. PCB Design concepts.

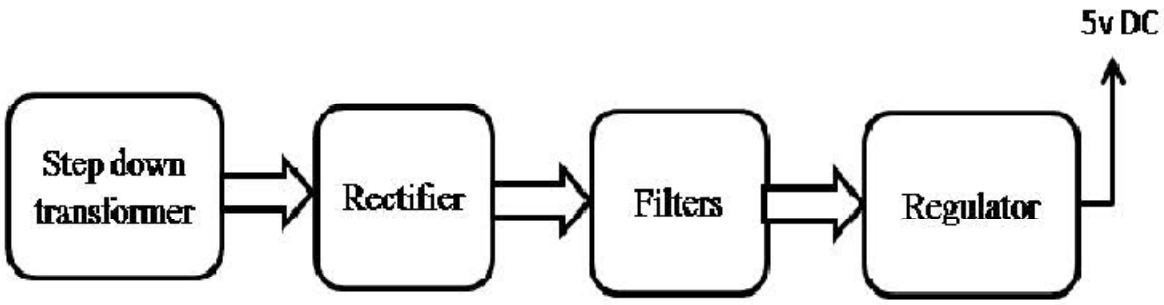
The major building blocks of this project are:

1. Regulated Power Supply.
2. Microcontroller.
3. Crystal oscillator.
4. Interfacing voice chip with microcontroller.
5. Electromagnetic Relay.

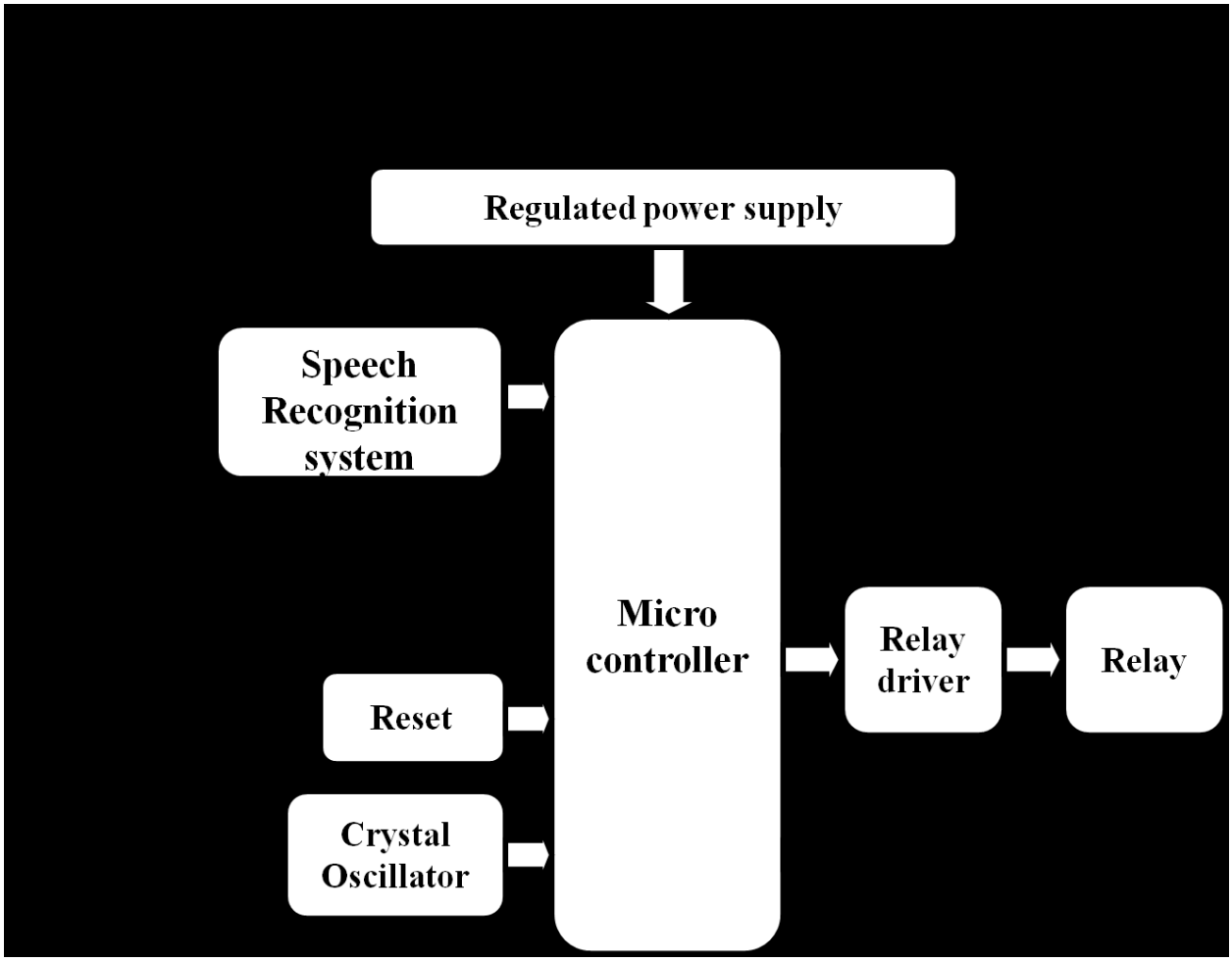
Software's used:

1. PIC-C compiler for Embedded C programming.
2. PIC kit2 programmer for dumping code into Microcontroller.

Regulated Power Supply:



Block Diagram:


Regulated power supply
Speech Recognition system
Micro controller
Relay driver
Relay
Reset
Crystal Oscillator