**My Smart Home Project**

**Abstract**

The Smart Home project is a simple embedded system which performs certain functionalities based on the commands sent from the user’s phone via Bluetooth; such as turning lights on/off and Tv and open/close the door by control a servo motor.

**Project Describtion**

-This project is Smart Home based Bluetooth where we want to control home appliance wirelessly using Mobile App via Bluetooth.

-It is a master software that receiving the data from mobile application via bluetooth and re-transmit this received data to the slave device via SPI communication protocol to control the home appliance according to that received data.

Two micro-controllers; one Atmega32 micro-controller (MC1) acts as a Master This micro-controller has a Dio module, LCD Module, Bluetooth\_UART Module and SPI Module.This one will be used just interfacing with user; HMI (Human Machine Interface).

The other micro-controller Atmega32 micro-controller (MC2) acts as a Slave will be responsible for controlling (actuation part). This micro-controller has a Dio module, Timer Module, Servo Motor Module and SPI Module.This one will be used for just Controlling the motor that will act as the lock for the door and turn lights and TV on/off .

The scenario will be as following:

- LCD Shows Supported Operations;

’1’- Turn Light On ’2’- Turn Light Off

‘4’- Turn TV On ’5’- Turn TV Off

’7’- Open the Door ‘8’- Close the Door

- At first MC1 receive the option message from the Bluetooth App

And this message will be sent to the MC2 to do the action,

The LCD at the first micro controller will reflect any action / State what happens at the system.