AMIT Project

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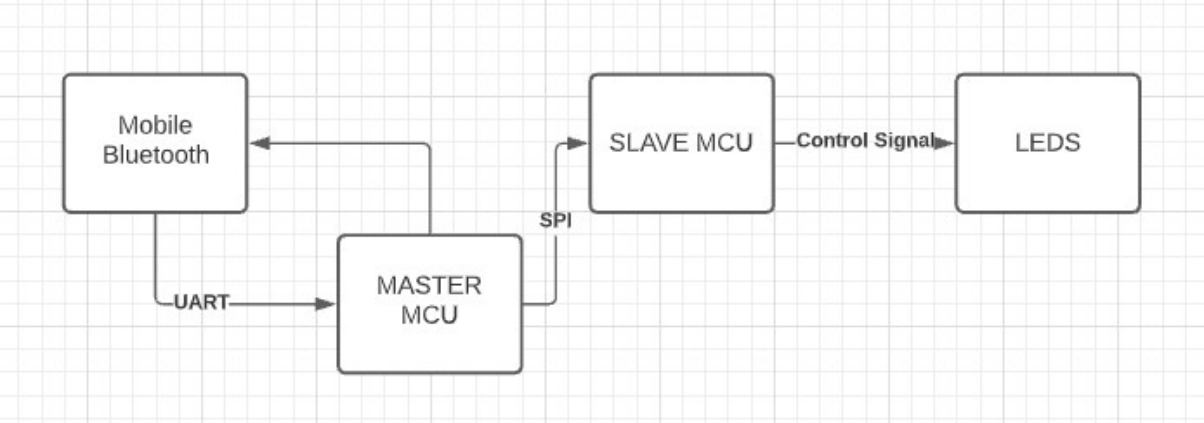
Flowchart:



Introduction:

The system consists of Master and Slave MCUs which communicate with each other using SPI communication protocol. The mobile sent commands to Master MCU with Bluetooth HC-05 by using UART Then sent order to Slave MCU to give control signal to control.

Two LEDS work when get commands from Mobile

COMMANDS

Char	Function
r	Turn ON RED LED
g	Turn OFF RED LED
x	Turn ON GREEN LED
y	Turn OFF GREEN LED

CODE:

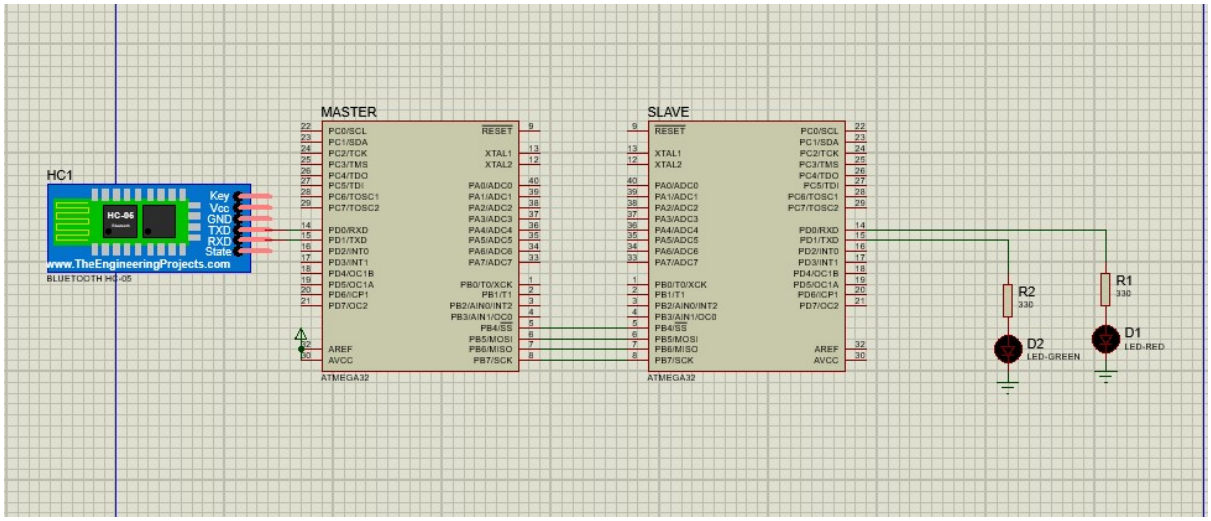
MASTER MCU:

```
#include <avr/io.h>
#include "UART_lib.h"
#include "SPI_lib.h"

int main(void)
{
        DDRB |= (1<<4) | (1<<5) | (1<<7);
        DDRB &= ~(1<<6);
        UART();
        SPI_inti_master();

   while (1)
   {
                SPI_Send(UART_READ());
   }
}
```

SLAVE MCU

```
#include <avr/io.h>
#include "SPI_lib.h"

int main(void)
{
   DDRD |= (1<<0)|(1<<1);
          SPI_inti_slave();
   while (1)
   {
                  char signal = SPI_Resive();
                  switch (signal){
                        case 'r':
                              PORTD |=1;
                              break;
                        case 'g':
                              PORTD &=~(1<<0);
                              break;
                        case 'x':
                              PORTD |=(1<<1);
                              break;
                        case 'y':
                              PORTD &=~(1<<1);
                              break;
                  }
   }
}
```

Proteus Simulations:



Simulation video:

https://drive.google.com/drive/folders/1dkxL18hxE8Bet_lSNMCvgUqqG7nVvk10?usp=sharing

GitHub LINK:

https://github.com/mernatohfa/AmitProject