Bluetooth based Smart Home using AVR

Goal, Challenges and Results

Goal

- Our goal is to use a Bluetooth module to receive multiple data and control some LEDS provided.
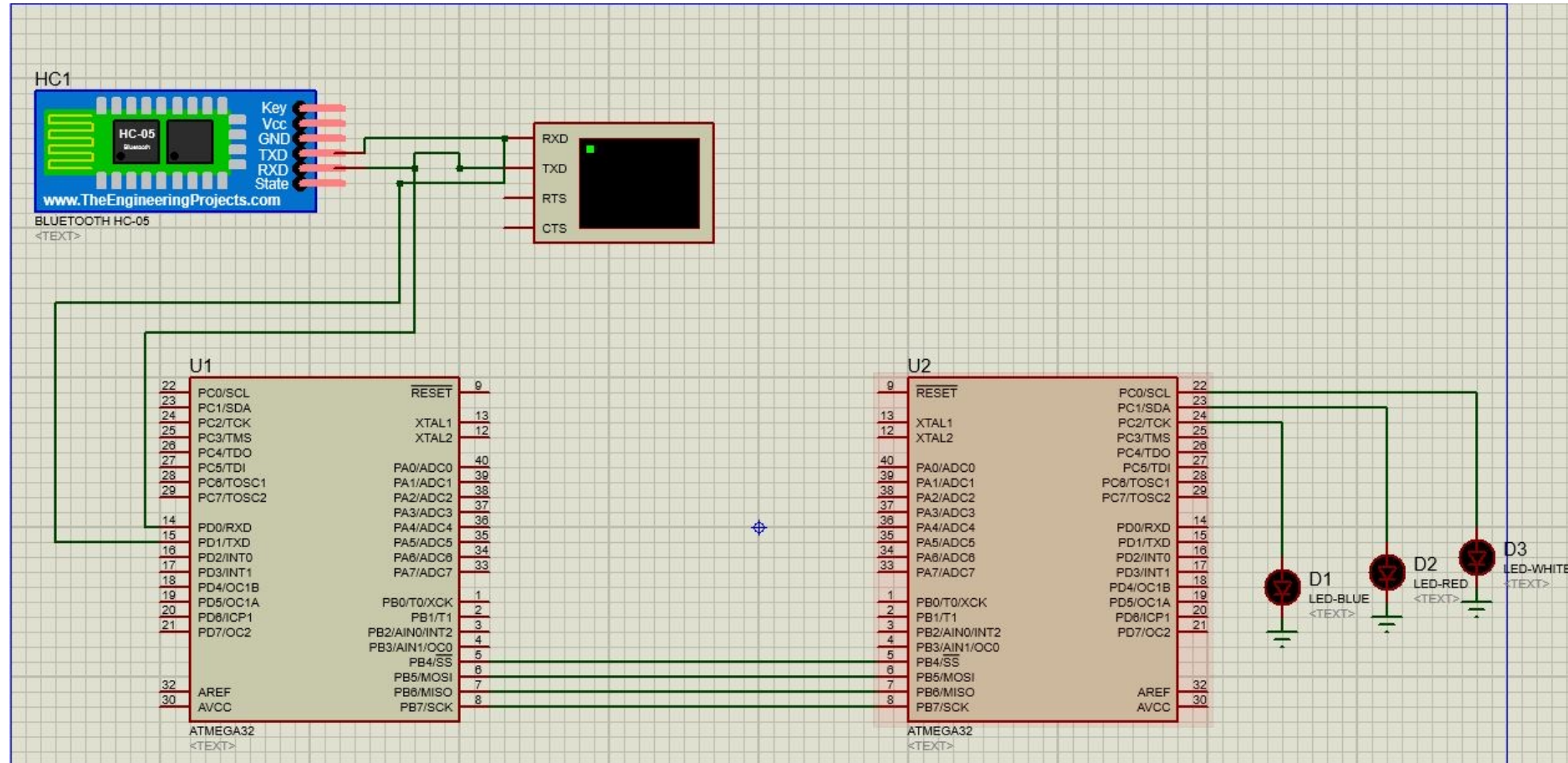
Challenges

- Our challenges where to connect the Bluetooth module and implement it into the circuit in Proteus.

Diagram

Mobile App → Bluetooth → MCU 1 → MCU 2 → ON/OFF Devices

Proteus Circuit Diagram

Project SCHEME

- A Bluetooth signal is sent to the Bluetooth module while is sent to Microcontroller 1 using UART protocol.

- Microcontroller 1 is communicating with microcontroller 2 using SPI protocol sending the data received from Bluetooth module.

- Microcontroller 2 is in charge of controlling LED's ON/OFF based on Bluetooth signals sent from user.