Zigbee based remote information monitoring devices for smart homes

Home automation deals with the specific automation requirements of homes and the application of automation techniques for the comfort of its residents. This can include controlling the lights, climate control, and control of doors and windows systems. There are currently several products on the market that allow home owners to control these devices. This is normally controlled by a handheld remote that communicates with the devices using a wired network. These types of devices require a unique and dedicated device to communicate with the automated products. This application purely depends on the use of ZIG-BEE Technology, which is available all over the world.

Existing System:

In previous system, which is available in market they provide handheld remote that communicates with the devices using a wired network. But that device cannot be operated in long distance. In this system determining economic benefits of home automation technologies is difficult.

The Proposed System:

The system we are going to design is fully wireless control. In ZIG-BEE Module there is two Parts one is Transmitter section and other is Receiver section. The ZIG-BEE Receiver is connected with the Microcontroller. ZIG-BEE Receiver waits for the Instruction comes from ZIG-BEE Transmitter which is given by user. When the user sends a corresponding Instruction to control the device, the ZIG-BEE Receiver receives the user’s Instruction and transfer that signal to Microcontroller. Microcontroller reads it’s and does the particular operation like ON/Off the Electrical Appliances which is connected to it.
Block Diagram:

Transmitter Section:

Receiver section:
Hardware Requirements:

1) Microcontroller Unit.
2) ZIG-BEE Transceiver.
3) Devices.
4) Max232
5) Driver Circuit

Software Requirements:

1) Keil C compiler.
2) Embedded C.
Advantage:

- It is more flexible to access devices.
- Zig Bee Module is more secure.
- From the remote place we can access this system.