IOT Based Smart Watch for Heart Beat Monitoring

The project aims in designing a smart watch which is capable of monitoring heartbeat using arduino nano and IOT.

This project makes use of an onboard computer, which is commonly termed as micro controller. It acts as heart of the project. This onboard computer can efficiently communicate with the output and input modules which are being used. The controller is provided with some internal memory to hold the code. This memory is used to dump some set of assembly instructions into the controller. And the functioning of the controller is dependent on these assembly instructions.

The action of these instructions is already loaded into the Microcontroller using Embedded C programming. The controlling device of the whole system is a Microcontroller. Max30100 heartrate sensor, ESP8266 Wi-Fi module are interfaced to the Microcontroller. This smart watch works with battery power. Whenever the user wears the device, it will continuously be monitoring the heart rate and upload them into the thingspeak cloud along with date and time through esp8266 wi-fi module. The action of these instructions is already loaded into the Microcontroller using Embedded C programming.

Features:

- Design a Smart wearable device for heartbeat monitoring
- IOT based Live heartrate monitoring long with date and time using thing speak cloud.

The major building blocks of this project

- Battery power.
- ARDUINO NANO.
- ESP8266 WI-FI Module.
- MAX30100 SENSOR.

Software's used in the project:

1. Arduino IDE.
2. Express SCH for Circuit Design.

Block Diagram:

Block diagram