AN IOT-AWARE ARCHITECTURE FOR SMART HEALTHCARE SYSTEMS

ABSTRACT:

The Internet of Things (IoT) is the most promising technology in recent years, which is used for network of physical objects or things embedded with software, electronics, sensors and network connectivity, which enables these objects to collect and exchange data. The IoT can be used in various fields like Home automation, Building automation, Industries and Hospitals. The proposed Remote Healthcare System (RHS) is used for automatic monitoring and tracking of patients by make use of RFID Tag and RFID Reader, and biomedical devices within hospital and home.The RHS is to collect in real time both patients' heart beat rate and temperature parameters and environmental conditions using microcontroller. Sensed datas are delivered to an Android Application device where an Monitoring Application (MA) makes them easily accessible to monitor and analyze received data. In case of emergency send push notification to respective doctor.

INTRODUCTION :

Improving the efficiency of healthcare infrastructures and biomedical systems is one of the most challenging goals of modern-day society. In fact, the need of delivering quality care to patients while reducing the healthcare costs and, at the same time, tackling the nursing staff shortage problem is a primary issue . As highlighted, in fact, current procedures for patient monitoring, care, management, and supervision are often manually executed by nursing staff. This represents, de facto, an efficiency bottleneck, which could be a cause of even tragic errors in practices.

The Internet of Things (IoT) makes smart objects the ultimate building blocks in the development of cyber physical smart pervasive frameworks. The IoT has a variety of application domains, including health care. The IoT revolution is redesigning modern health care with promising technological, economic, and social prospects and smart mobile technologies are leading this evolutionary trend

The main objective of this paper is to monitor the heart rate and temperature continuously through heart beat rate sensor and temperature sensor respectively and the respective datas are sent to android device via Bluetooth.