AMRUTVAHINI COLLEGE OF ENGINEERING, SANGAMNER-422605
DEPARTMENT OF COMPUTER ENGINEERING

Seminar Synopsis

Title of Seminar: In -Home Health Monitoring Systems by Using Internet of Things(Devices).

Name of Student: Phapale Bharati Sarjerao

Class: TE Computer (B)

Roll No: 3224

Name of guide: Prof.S.R.Pandit

Domain: Internet of Things

Abstract:

Internet of Things has been one of the catalysts in revolutionizing conventional healthcare services. Nowadays growing society, traditional healthcare systems reach their capacity in providing sufficient and high-quality services .Many applications related to In-Home Health Monitoring have been introduced over the last 10 years, thanks to the advances in mobile and Internet of Things technologies and services. Current studies of in-home health monitoring systems presented many benefits including improved safety, quality of life and reduction in hospitalization and cost. This synopsis is consists of three folds: First, review of key factors that drove the adoption and growth of the IoT-based in-home remote monitoring; Second, present the latest advances of IoT based in-home remote monitoring system architecture and key building blocks; Third, discuss future outlook and our recommendations of the In-home remote monitoring applications going forward.

Introduction:

In-home health monitoring allows patient care to continue at home after a patient is discharged from the hospital. It allows healthcare providers to reach patients outside of the four walls of the hospital, perform proper monitoring of patient health conditions, continue to deliver quality care and identify at-risk populations. It also helps patients stay connected with their health providers, enable them to remain compliant with treatment plans and improve their health conditions. Internet of Things (IoT) based in-home health monitoring applications are one of the key mobile health (mHealth) applications that provide proactive and preventive digital health interventions. The relatively low cost of mHealth applications , due to the massive penetration of smartphones, is making it a promising investment direction across the globe.In-home health monitoring applications have evolved over the last few years, addressing many

healthcare conditions. They aimed to provide more efficient and effective healthcare services and contributed to a better quality of life and reduction in cost.

Literature Review:

Author	Year	Title	Place of publication	Main findings
Prajoona valsalan	2020	Iot based health monitoring system	Dhofar university, salalah, sultanate of oman	A portable physiological checking framework is displayed ,which can constantly screen the pateint's heartbeat, temp, &basic parameter of the room
1.Stanislav Rost 2.Hari balakrishnan	2006	Health monitoring system for wireless sensor	USA	An implementation for the TinyOS platform on the Micaz motes on a ss-node network, and find that Memento achieves a 80-90% reduction in bandwidth use compared to standard data collection methods.
1.Nurul Fahmi 2.M.udin Harun Al Rasyid	2016	Adaptive sleep scheduling for health monitoring system	1.Politeknik Elektronika Negeri Surabaya 2. Politeknik Elektronika Negeri Surabaya	Purpose of this method is to extend the life & minimize the energy consumption of the battery.
Simon James Fong	2014	Developing residential ECG Healthcare monitoring	Macau SAR	Mass-market health monitoring systems will only be prevalent when implemented together with home environmental monitoring & control systems

Objectives:

1.To study the IoT based applications.

2.Patient monitoring is to give warning early

3. To reduce health care costs.

Methodology:

The proposed methodology consists of 5 patient monitoring sensors those are temperature sensor , heartbeatsensor , pressure sensor ,glucose meter and humidity sensor.

1.Temperature sensor: The temperature sensors will send the readings to a microcontroller using Xbeewireless communication.

2.Heartbeat sensor: when the heartbeat detector starts working, the light emitting detector(LED) blinkssimultaneously for every heartbeat.

3.Pressure sensor: A pressure sensor converts the pressure to a small electrical signal that is transmitted anddisplayed.

4.Glucose meter: The sensor measures your interstitial glucose level ,which is the glucose found in the fluidbetween the cells.

5.Humidity sensor: Humidity sensors work by detecting changes that alter electrical currents or temperaturein the air.

References:

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I have gone through the content of the synopsis submitted by Phapale Bharati Sarjerao and found it ok.

Signature of the Student

Date:

Prof.S.R.Pandit
Signature of the Guide

Prof.R.S.Gaikwad
Seminar Coordinator

Prof.R.L.Paikrao
Head of the Department