**VOICE BASED HEARTBEAT MONITORING FOR ELDER PEOPLE**

**AIM:**

The main aim of this project is to monitor the Heart beat and produces voice based alerts when necessary.

**PURPOSE:**

Due to the lack of doctors we are implement this project. By using this system we can be able to monitor the Heart beat of individual and produces voice based alerts when necessary.

**MONITORING SECTION:**

**Microcontroller**

**AT89S52**

**POWER SUPPLY**

**LCD DISPLAY**

**(16 X 2 LINES)**

**VOICE IC**

**(APR9600)**

**SPEAKER**

**PULSE SENSOR**

**DESCRIPTION:**

Large numbers of preventable deaths occur in hospitals each year, due to adverse events such as cardiac arrest and unplanned admission into Intensive Care Units (ICUs) from other hospital wards. The majority of these patients exhibit physiological deterioration in their vital signs prior to onset of the adverse event, which can be detected by this project. One of the ideal ways of using technology is to sense serious health problems so that efficient medical services can be provided to the patient in correct time.

The heart beat monitoring system is a portable and best replacement of old medical equipment which is less efficient. This project consists of microcontroller, pulse sensor and voice IC by using the pulse sensor we need to monitor the heart beat of the patients. These values are displayed on LCD screen and if the conditions exceeded than threshold values, we alert by voice announce through voice IC with a speaker indicating the emergency condition of the patient. Then according to the condition treatment will goes on.

This project uses regulated 5V, 500MA power supply, 7805 three terminal voltage regulator is used for voltage regulation. Bridge type full wave rectifier is used to rectify the ac output of secondary of 230/12V step down transformer.

**HARDWARE COMPONENTS:**

1. Microcontroller (**AT89S52**)
2. LCD Display (16x2)
3. Pulse rate sensor
4. Voice IC
5. Speaker

**SOFTWARE:**

1. Kiel U vision
2. Embedded ‘C’
3. ISP

**ADVANTAGES:**

1. It is a portable device.
2. High efficient.
3. It is a system used to provide a voice based alert when irregular heart beat is recorded.

**APPLICATIONS:**

1. Medical applications

**RESULT:**

By this project we can monitor the Heart beat and produces voice based alerts when necessary.