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Version Number:

Team Members :

Team No:

Module: Model Based System Engineering

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| **Ver.Rel. No.** | **Release Date** | **Prepared. By** | **Reviewed By** | **Approved By** | **Remarks/Revision Details** |
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**Document History**

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Smart Watch:

Description:

The Wearable gadgets is a form of embedded system that take real time inputs from mode of operations and from sensors .

Requirement:

1. High Level Requirement:

* To display the time .
* To track the different activities of the user like running, cycling, walking.
* To display different sensor readings.

1. Low Level Requirement:

* Vibration alert for notification.
* LED Blinking while reading sensor values.

Smart Watch:

Description:

The Wearable gadgets is a form of embedded system that take real time inputs from mode of operations and from sensors .

Component Description:

1. SENSOR:

* **Humidity & Temperature Sensor:**

Measure and report the moisture and air temperature of surrounding.

* **Accelerometer:**

Measure how movement changes over time means for tracking whether we are cycling, running.

* **Blood Pressure sensor:**

Used to measure blood pressure and heartbeat.

1. DISPLAY:

Display the input and output. There are 4 screen types used in Smart watch : OLED, E-link, Traditional LCD and sharp memory LCD.

1. Battery:

There are 2 types of battery , Lithium ion and lithium polymer

Smart watch need lithium polymer it need regular power charging.

1. Vibration Motor:

It is needed for notification alert or any sensor reading alert.

Block diagram:

COMPONENTS USED:

Display, Accelerometer, Humidity and Temp sensor, Button, Battery

Voltage regulator, Vibration motor, LED, Controller, Bluetooth module.

BATTERY

VIBRATION MOTOR

LED

RAM

FLASH STORAGE

MEMORY CHIP

VOLTAGE REGULATOR

PUSH BUTTON

BLUETOOTH

SENSOR

HUMIDITY

ACCELEROMETER

TEMPERATURE

BP MONITORING

STEP MEASUREMENT

LCD DISPLAY

CONTROLLER