

**COMP2043.GRP Interim Group Report Mobile system for monitoring vital signs**

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**Contents**

**1 Introduction1**

1.1 Current situation2

1.2 Background2

1.3 Motivation2

1.4 Aims and Objectives2

1.5 Team Members and Roles2

**2. Background Information and Research4**

2.1 Literature Review5

2.2 Technology Research5

2.2.1 Involving Equipment5

2.2.2 Existing Monitoring System5

**3. Requirement4**

3.1 Requirement Elicitation5

3.2 Requirement Specification5

3.3 Requirement Validation5

3.4 Functional Requirement5

3.5 Non-Functional Requirement5

**4. Initial Design4**

4.1 Platform5

4.2 Time Plan5

4.3 UML Diagrams5

4.4 System Design5

4.5 Prototypes5

**5. Implementation4**

5.1 Supporting Devices5

5.2 Supporting Algorithm5

5.3 Ideas5

**6. Problem Encountered4**

6.1 Technical5

6.1.1 Measurement Algorithm5

6.2 Interpersonal5

6.2.1 Stakeholders5

6.2.2 Team5

**7. Summary4**

7.1 Project Management5

7.1 Future Plan5

**Appendices4**

A. Meetings Records5

B. Reference5

1. **Introduction**
   1. **Current situation**
   2. **Background**

Vital signs are used in medicine to determine the severity and urgency of a patient’s physical condition. The four major components are respiration, body temperature, pulse, and blood temperature. Vital signs are of great significance to the predication of serious disease such as cardiovascular and diabetes mellitus. To curb the growing incidence of diseases, technology to monitor vital signs is becoming increasingly significant. According to the statistics from WTO, cardiovascular disease (CVDs) is the most fatal of death worldwide, the rate of death is always at the top among all disease. **[1]**. Diabetes mellitus (DM) is considered as a global epidemic, which makes a great influence on global population. Due to an approximately estimation, 6%-8% of world’s population is suffer from DM. Compared to the number of 336 million affected people in 2011, it predicts that in 2030, the increase will be 50.8% and nearly 552 million people will involve in DM **[2]**.

Therefore, it is vital important for researchers to develop new technology to monitor the signs. Numerous investigations have been devoted to vital signs. It is proved that by the combination of machine learning with monitored data, it can improve the prediction accuracy of cardiovascular.**[3]** However, it is not adequate to meet the requirements of every user. For the pregnancy, mood symptoms are especially important. Prenatal depression can cause serious complications which are harmful for both pregnancies and fetus.**[4]**

There are some companies have developed mobile system that for monitoring vital signs. However, the function of these systems is too limited. The Xiaomi system could only monitor hear rate and the user cannot view tracks by period. The Huawei system therefore has an unstable data reception and can only monitor few of physical parameters. A common flaw in existing system is the inability in integrating data. This property is also essential for complete detection system.

* 1. Motivation
  2. Aims and Objectives
  3. Team Member and Management

1. Background Information and Research
   1. Literature Review
   2. Technology Research
      1. Involving Equipment
      2. Existing System