PDA Based Blood Pressure Monitoring System

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Health is the most important factor to a successful life. People are advised to have a body check to monitor their fitness. However, most people think that it is quite time-consuming, especially in one of the busiest cities like Hong Kong; they prefer to spend just a very short time to carry out such a test. In this case, personal health monitoring system which is based on a PDA (Personal Data Assistant) is an excellent solution.

PDA, a handheld device which is small-sized, easy to carry and use, can provide a very user-friendly environment for the users to monitor their blood pressure.

In this Final Year Project, We implemented a module containing a sensor connected into PDA, and a program serving functions of carrying out a blood pressure measurement, showing the statistic, trend and summary of records of the users can accomplish the goal of blood pressure monitoring. The device is lightweight, portable similar to the existing product on the market, but has advantages on data analysis and connectivity with the personal computers. The device can also keep a lot of data; the users can carry the device and consult doctor without any difficulty.
Project Description

- Cuff Pressure
- Heart Beat signal

- Cuff Pressure (DC)

- Band-pass Filter

- Heart Beat Signal (AC)

Blood Pressure Measurement

Systolic Blood Pressure: 127 mmHg
Diastolic Blood Pressure: 89 mmHg
Date: 4/18/02
Time: 9:47:09 PM
Notes: working under pressure

Measurement Results
A Weekly / Season blood pressure average table.

The Report window shows a list of blood pressure records based on time. The user can choose the viewing period. Each analysis is based on the records on the list.

Two categories (Normal / Sports) are provided for the user to store records in different states in order to give more specific analysis.

Analysis 1:
Compare the user records with a standard average blood pressure specified on AGE group.

Analysis 2:
Compare the user’s record in chosen period with previous period to see improvement.