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### Context aware smart medicine wallet

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This study describes the design and the prototype development of a system that allows storage of medicine, and to examine and react to an individual medicine wallet user's changing context.

To obtain the maximum benefit from prescribed medication, it is important to take these exactly as prescribed by the doctor. In fact, this improves the chance of a better health outcome. However, some individuals do not take one or more of their prescriptions according to their doctor's instructions. If a user has to take one or more drug types such as tablets, capsules, syrups, creams etc. the user needs to remember the specific drug, the time of the day, and the dosage, which is inconvenient. Context Aware Smart Medicine Wallet is a medicine keeping wallet which addresses the above mentioned problem. The medicine wallet is designed to be expandable so that the wallet can be adjusted based on the number of medicines a user takes and is accessible, usable and portable. If a user forgets to carry the medicine wallet to office, it automatically identifies it and notifies the user to carry it and also helps to locate the wallet. Medicine wallet establishes communication with the smart phone via Bluetooth technology. In order to maintain the medical storage environment, temperature sensors have been used and the materials to be used in insulating the medicine as recommended for the commercial product have been proposed. As a result the heat generated from the circuits would not affect the medicine. Furthermore this paper discusses the results of a survey on reasons for not taking medicine at the correct time, different types of medicine taken by patients and the reminder techniques the patients had used over a period of time. The paper discusses the critical decisions taken when designing the wallet, alternative designs, the implemented prototype and the mobile application developed.