

## ABSTRACT

This thesis is a development of a Personal Medicine Organizer intended as a storage, scheduler and organizer of medicine. It utilized a constructive method of research.

The Personal Medicine Organizer consists of hardware and a software sections. The hardware part is made up of the tack switches that are used to input data such as time, date and slot numbers and also for the on-off, reset and dc buttons. The output devices on the other hand are made up of the LCD for visual display, buzzer for the alarm and a plastic medicine organizer for the actual medicine storage. The entire device is controlled by a PIC Microcontroller programmed using Assembly Language. The software part consists of several applications such as timer for proper scheduling of medicines, counter for proper tracking of the quantity of medicines and memory for the storage and status of each of the six slots in the medicine organizer. The device can be operated by using either an A27, 12V battery which was chosen because of its size and by an external AC-DC adaptor. The actual operation of the device can be simulated using the Proteus from the Proton Integrated Development Environment Software.

Actual tests shows that the device is functional with all components working as intended. The device's accuracy, in terms of date, time and alarm settings, was also established as operated in sync with a standard clock during test. A robust testing method ascertained the reliability of the device when same results were obtained during repeated trials. A user's manual and proper labeling of critical parts helps make the device user-friendly, plus the fact that it can be powered up by either an ac or dc source.