ABSTRACT

Recently, demand of performance embedded micrprocesor for bettter such as fast instruction, multitasking, and fast response interrupt. For that, to need an operating system has performance real time, multitasking, and has a responce quick to toward input's difference, and that operating system can be implemented in embedded microcontroller MCS-51.

In this final project, microcontroller MCS-51 as controlling for embedded system to RTOS application. In embedded system, scheduler has similar meaning with commercial operating system in desktop application like windows, linux etc. So, in this final project i stake scheduler to manage tasks (I/O controlling, serial communication etc). Embedded system is stake use microcontroller AT89S252 from Atmel Coorperation with completly several peripheral I/O control, serial communication, and some indicators like LED (Light Emitting Diode) and push button. For this, embedded C languageas language programming and SDCC (Small device C Compiler) as compiler.

Implementation's result for this final project ia a stake of software about hybrid scheduler. With the hybrid scheduler, make a control from each task for a control application. Beside that, the other result of implementation make of minimum system for hardware. Afterwards, the test of result is measuring of performance from a software from a routine the tasks. Finally, the final of this project wish the hybrid scheduler make a desigen application's control become effectif and effisien.