## **ABSTRACT**

Recently, demand of performance embedded microprocesor 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.