Lab04 Final Report

B1029009簡鈺晴

* Problem description

一張含有 文字, 螢幕擷取畫面, 圖表, 行 的圖片

自動產生的描述

一張含有 文字, 螢幕擷取畫面, 字型 的圖片

自動產生的描述

* Code and explanations

Default: basic and bonus just different in time setting

(Left is basic, Right is bonus)

一張含有 文字, 螢幕擷取畫面, 字型, 設計 的圖片

自動產生的描述 一張含有 文字, 螢幕擷取畫面, 字型, 數字 的圖片

自動產生的描述

Button Detect:(Left is basic, Right is bonus)

一張含有 文字, 螢幕擷取畫面, 字型, 數字 的圖片

自動產生的描述一張含有 文字, 螢幕擷取畫面, 字型 的圖片

自動產生的描述

We just that timer count to 50, then what for the key\_release to be 1. The state will start again until the button push again. At the basic of lab, we have add mode change to separate the button mode. The difference between them is the button number.

Main: (Left is basic, Right is bonus)

一張含有 文字, 螢幕擷取畫面, 字型, 數字 的圖片

自動產生的描述 一張含有 文字, 字型, 螢幕擷取畫面 的圖片

自動產生的描述

We use mode record the current state. And we just control the mode. And the difference in basic and bonus is we let the LED state change. One is at main function, another is at Timer\_ISR which can that the LED light shift right/left or blink one second.

Timer\_ISR:

一張含有 文字, 螢幕擷取畫面, 字型, 數字 的圖片

自動產生的描述一張含有 文字, 字型, 白色, 設計 的圖片

自動產生的描述

We use time\_count to count 4 cycle equal to one second. So when button didn’t pressed, the mode won’t be change. Also, we have think of some special status happened, like when P2 is at 128 when the LED is shift right.

* Difficulties you’ve encountered and your solutions

For this lab we encounter two problems. First, when we try to run basic code on C8051, then the light start randomly blink in P2, so we ask to some assistance find that the board maybe have problem, so when we change the new board the code can run correctly. And then we use bonus code and this time light can’t blink or move, at last we find the time config setting is at CONFIG PAGE(F), but it is done at LEGACY PAGE(0), so compiler cannot know how our code run, so when we change the page, all of the functions can work.

* Discussions or what you have learned

這次的實驗我學習到如何在C的環境中撰寫Assembler code成C code、設定各種腳位以及執行ISR指令，和許多debug的方法，希望下次的實驗可以不用再換板子了!!! 其實C8051板子才是最主要的問題。