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| **CS 224, SP2015**  **Homework #4**  **S05: Stacks / Interrupts** | Name | Section | Score  / 38 |
| Questions: | Answers: | | |
| 1. (3 points) Define subroutine cohesion. What properties of cohesion should be found in your subroutines? |  | | |
| 2. (3 points) Define subroutine coupling. What properties of coupling should be found in your subroutines? |  | | |
| 3. (6 points) What is wrong (if anything) with the following blinky program?  **DELAY .equ 100**  **mainloop:**  **xor.b #0x01,&P1OUT ; toggle P1.0**  **push.w #DELAY ; pass delay**  **call #delay ; call delay**  **jmp mainloop**  **delay:**  **push.w r15 ; callee-save**  **mov.w #0,r15 ; init counter**  **delay02:**  **dec.w r15 ; delay over?**  **jne delay02 ; n**  **dec.w 2(SP) ; y, outer done?**  **jne delay02 ; n**  **pop.w r15 ; y, restore r15**  **ret ; return** |  | | |
| 4. (6 points) What would be the difference in code size and the cycles used to toggle the LED on and off then (assume it is off), if the delay subroutine below was placed in-line?  **DELAY .equ 10**  **mainloop:**  **xor.b #0x01,&P1OUT ; toggle P1.0**  **mov.w #DELAY,r15 ; pass delay**  **call #delay ; call delay**  **jmp mainloop**  **delay:**  **dec.w r15 ; delay over?**  **jne delay ; n**  **ret ; y, return** |  | | |