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```
#include "msp430.h"
                                         ; #define controlled include file
        ORG
                OFFFEh
        DC16
                init
                                         ; set reset vector to 'init' label
             CODE
       RSEG
                                        ; place program in 'CODE' segment
init: NOP
main: NOP
                                         ; main program
;Lab Instruction 3 :
     ; Initialize registers R4 and R6 with 0 using immediate mode.
                              ; innitialized value 0 is placed in R4
          mov.w # 0 , R4
          mov.w # 0 , R6
                                         ; innitialized value 0 is placed in R6
 ;Lab Instruction 4 :
     ; Initialize registers R5 and R7 with 1 using immediate mode.
          mov.w # 1 , R5 ; innitialized value 1 is placed in R5 mov.w # 1 , R7 ; innitialized value 1 is placed in R5
;Lab Instruction 5 :
; Copy the contents of register R4 to R8 using register mode.
        mov.w R4 , R8
                                        ; Copy the contents of register R4 to R8
;Lab Instruction 6 :
;Copy the contents of register R5 to the word in RAM starting at 0x0200 using
indexed mode addressing.
       mov.w R5, 0200h(R4)
;Lab Instruction 7 :
; Copy the word in RAM starting at 0x0200 to R9 using indexed mode addressing.
       mov.w 0200h(R6), R9
;Lab Instruction 8:
; Copy the contents of R6 as a word to RAM locations starting at 0x0202 to
0x020E using indexed mode addressing.
        add.w #0002h, R6
        mov.w R6 , 0202h(R6)
        add.w #0002h, R6
       mov.w R6 , 0202h(R6)
        add.w #0002h, R6
       mov.w R6 , 0202h(R6)
        add.w #0002h, R6
       mov.w R6 , 0202h(R6)
        add.w #0002h, R6
       mov.w R6 , 0202h(R6)
        add.w #0002h, R6
       mov.w R6 , 0202h(R6)
```

```
add.w #0002h, R6
        mov.w R6 , 0202h(R6)
;Lab Instruction 9 :
; Copy the contents of IO port inputs P1IN and P2IN to registers R10 and R11
respectively using absolute mode
     mov.b &P1IN , R10
     mov.b &P2IN , R11
;Lab Instruction 10 :
; Copy the word in RAM starting at 0x0204 to register R12 using indirect
register mode addressing.
     mov.w # 0204h, R11
     mov.w @ R11 , R12
;Lab Instruction 11:
; Copy the words in RAM starting at 0x0206 to 0x020E to register R13 using
indirect autoincrement register mode.
    mov.w #0206h , R15
    mov.w @R15+, R13
     ; S
                                        ; jump to current location '$'
        JMP main
                                        ; (endless loop)
        END
                                    & Da
```