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Section: B2

Question.) Create an array containing 10 elements. The base address is 30H. Check whether all the array positions contain 12H or not. If all the positions contain 12H set R1 as 1 else set R1 as 0.

Ans.) ORG 30H ; set the origin address to 30H

ARRAY DB 12H, 12H, 12H, 12H, 12H, 12H, 12H, 12H, 12H, 12H ; define the array with 10 elements

MOV R1, #1 ; set R1 to 1 initially

; check if all elements are 12H

LOOP:

CMP BYTE PTR [ARRAY], #12H ; compare the current element with 12H

JNE NOT\_ALL\_12; if not equal, jump to NOT\_ALL\_12

INC ARRAY; move to the next element

DJNZ R0, LOOP; continue the loop 10 times

JMP ALL\_12 ; if all elements are 12H, jump to ALL\_12

; set R1 to 0 if not all elements are 12H

NOT\_ALL\_12:

MOV R1, #0

JMP END

; set R1 to 1 if all elements are 12H

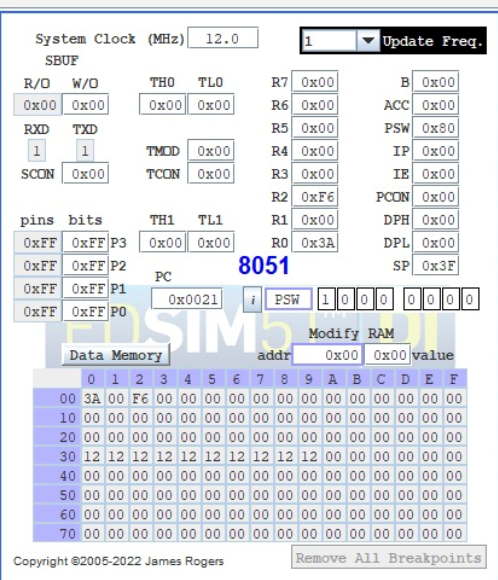
ALL\_12:

MOV R1, #1

END:

; End of program

Output:

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