ASSIGNMENT2

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If-Then (IT instruction):

It is used for implementing if-else condition in Cortex-M4.

Syntax:

IT{a{b}}} con

Where:

a,b Specifies the condition switch for the second ,third instruction in the IT block.

con Specifies the condition for the first instruction in the IT block.

If the condition switch is T .It represents that the same condition as con is applied on the instruction .Else if the condition switch is E. It represents that the inverse condition gets applied on the instruction.

The number of T's (nT) represents the no of instructions in the If block. The number of E's (nE) represents the no of instructions in the Else block. The next (nT+nE) instructions after the IT instruction represents the IT block.

Restrictions for It:

Each instruction inside the IT block must specify a condition code suffix that is either the same or logical inverse as for the other instructions in the block.

In the code1,
ITTTE LT; or N != V
MOV R3, #0x100
MOV R8, #0x200
MOV R7, #0x200
MOV R6, #0x200

We can see the 4(3T+1E) instructions after it instruction don't have any conditional suffix.It is breaking the above specified restriction.So,we are observing an error at this 4 instructions.

In code2, The first three instructions after Ittte instruction have LT representing the T.Next instruction has GE representing the E.It is satisfying the condition for 3T's and 1E.So there isn't any error.