ARM ASSIGNMENT-2

BALA AYYAPPA

The IT instructions are similar to if-else blocks in our conventional programming languages.
We have two types of IT instructions.
1. It is similar to if block. The instruction is executed only if the condition is
met.
2. It is like if-else. The instruction is executed if condition is met or else block
is executed.

This instruction can take upto 4 consequences like ITTEE,ITTTE,ITEEE etc.

The number of Ts & Es should be equal to no. of consequential instructions to be executed

        IT condition
          INS1   ---> If the condition is true ,then INS1 is executed.

        ITE condition
          INS1
          INS2   ---> If the condition is true ,then INS1 is executed, else INS2 executed.

The instructions that are related to the THEN should be consistent to the given"condition".

That are made consistent by keeping condition at the end of opcode and inverse condition at the end
of ELSE related instructions' opcode.

So,the given first code is giving errors.

The code is corrected simply by appending conditions to the opcode.

```
AREA    Largest, CODE, READONLY
        export __main
        ENTRY
__main  function
            MOV R3, #0x100
        MOV R8, #0x200
        CMP R8, R3 ; do R8 - R3 & updated N & V flags
        ITTTE LT ; or N != V
        MOVLT R3, #0x100
        MOVLT R8, #0x200
        MOVLT R7, #0x200
        MOVGE R6, #0x200
stop       B stop ; stop program
        endfunc
         end
```

Here LT and GE are inverse to each other.