EXP NO: 3a	Write a program to compare two numbers in 8051 using simulator.
DATE	

AIM:

1. To write 8051Assembly Language Program for compare two numbers using Keil simulator and execute it.

SOFTWARE REQUIRED:

S.No	Software Requirements	Quantity
1	Keilμvision5IDE	1

PROCEDURE

1. Create a new project, go to "Project" and close the current project"Close Project".
2. Next Go to the Project New μ Vision Project and Create New Project Select Device for Target.
3. Select the device AT89C51ED2 or AT89C51 or AT89C52
4. Add Startup file next go to "File" and click "New".
5. Write a program on the editor window and save it with .asm extension.
6. Add this source file to Group and click on"BuildTarget"orF7.
7. Go to debugging mode to see the result of simulation clicking Run or step run.

PROGRAM:

```
ORG  0x0000          ; Program start address

MOV  R0, #0x30       ; Load address of first number into R0
MOV  R1, #0x31       ; Load address of second number into R1

MOV  A, @R0          ; Load first number into accumulator
SUBB  A, @R1         ; Subtract second number from the accumulator
JC  LESS_THAN        ; If carry flag is set, first number is less than second
JZ  EQUAL            ; If zero flag is set, first number is equal to second

                     ; If none of the above conditions are met, first number is greater than second
MOV  A, #1           ; Set accumulator to 1 (indicating first number > second number)
SJMP  E              ; Jump to the end of the program

LESS_THAN:
MOV  A, #0           ; Set accumulator to 0 (indicating first number < second number)
SJMP  E               ; Jump to the end of the program

EQUAL:
MOV  A, #2           ; Set accumulator to 2 (indicating first number == second number)
E:
END
    ; At this point, accumulator (A) holds the result:
    ; 0 if first number < second number
    ; 1 if first number > second number
    ; 2 if first number == second number
```

OUTPUT:

RESULT: