POSITIVE OR NEGATIVE

AIM

To develop an assembly language program to check whether the given number is positive or negative.
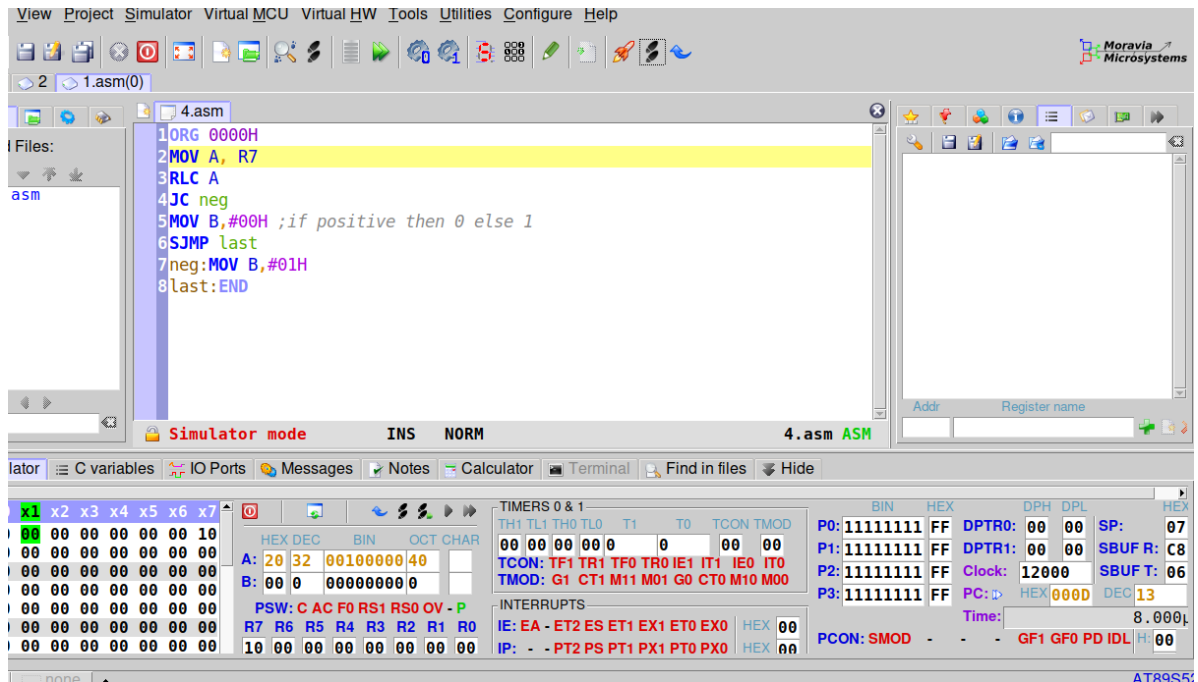
ALGORITHM

Algorithm 1 Check whether given number is positive or negative
1: Start
2: Read the input (n).
3: Let n i be the MSB of n.
4: if n i = 1 then
5:     print "The number is negative"
6: else
7:     else
8: end if
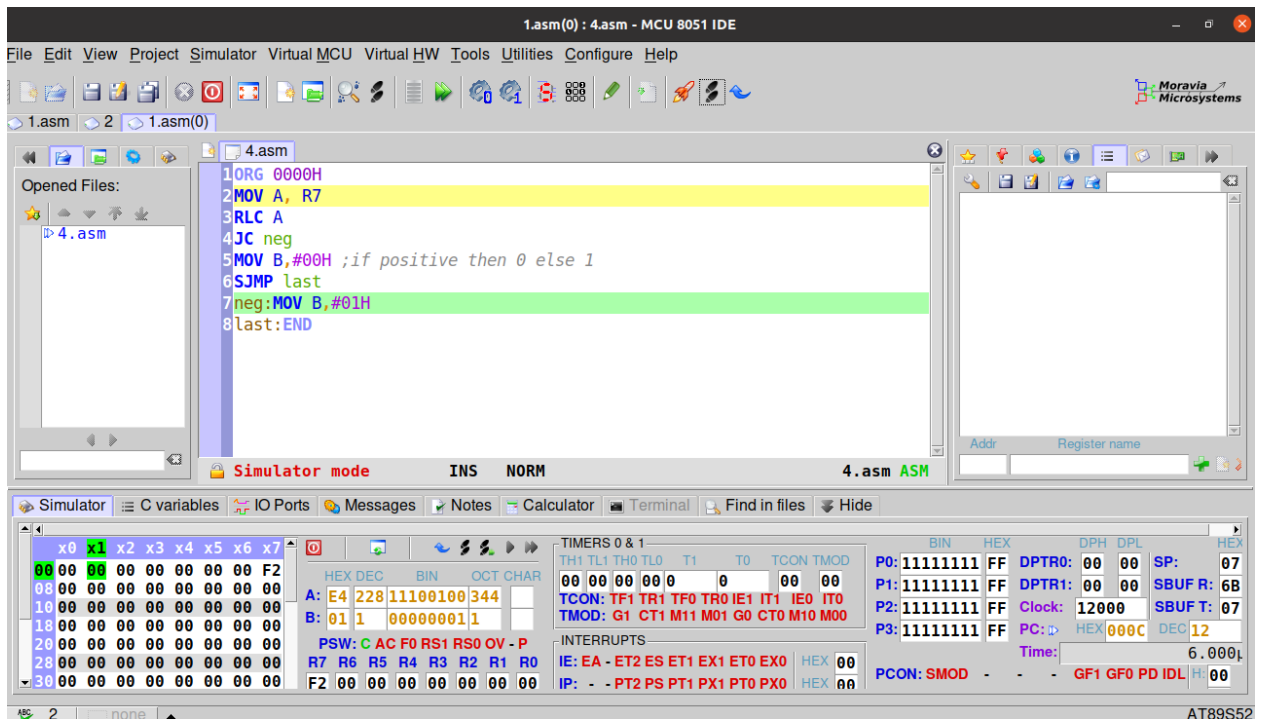9: Stop

SOURCE CODE

```
ORG 0000H
MOV A, R7
RLC A
JC neg
MOV B,#00H ;if positive then 0 else 1
SJMP last
neg:MOV B,#01H
last:END
```

OUTPUT:

```
1 ORG 0000H
2 MOV A, R7
3 RLC A
4 JC neg
5 MOV B,#00H ;if positive then 0 else 1
6 SJMP last
7 neg:MOV B,#01H
8 last:END
```

Output with R7 = 10H

```
1 ORG 0000H
2 MOV A, R7
3 RLC A
4 JC neg
5 MOV B,#00H ;if positive then 0 else 1
6 SJMP last
7 neg:MOV B,#01H
8 last:END
```

Output with R7 = F2H

RESULT:

Assembly language program to check whether a given number is positive or negative has been developed and verified using MCU-8051-IDE.

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