

Equivalent C code:

```
#Include<stdio.h>
```

```
Int main(){  
    Int a,b,c,d;  
    c=a+b;  
    if(c<0){  
        d = a*b;  
    }  
    else {  
        d = a/b;  
    }  
    return 0;  
}
```

Output for If-Else Multiplication case:

11

200 011F4051F5 201 211F6011F6 202 100CC091F4 203 0B1F500000 204 211F7011F4 205
0C1F50A000 206 211F700000 500 0000000004 501 FFFFFFFF0 502 0 503 0

Output is Highlighted Below.

Output is multiplication of two numbers in 500 and 501. Which is only possible when the sum of numbers in 500 and 501 is less than zero.

MBR = 11F4051F5 IBR = 51F5 MAR = 200

IR1 = 1

MAR1 = 1F4

AC = 8 MQ = 0 MBR = 8

IR2 = 5

MAR2 = 1F5

AC2 = FFFFFFFF8 MQ2 = 0 MBR2 = FFFFFFFF0

MBR = 211F6011F6 IBR = 11F6 MAR = 201

IR1 = 21

MAR1 = 1F6

memory[502] = FFFFFFFF8

AC = FFFFFFFF8 MQ = 0 MBR = FFFFFFFF8

IR2 = 1

MAR2 = 1F6

AC2 = FFFFFFFF8 MQ2 = 0 MBR2 = FFFFFFFF8

MBR = 100CC091F4 IBR = 91F4 MAR = 202

IR1 = 10

MAR1 = CC

AC = FFFFFFFF8 MQ = 0 MBR = 100CC091F4

IR2 = 9
MAR2 = 1F4
AC2 = FFFFFFFF8 MQ2 = 8 MBR2 = 8
MBR = B1F50000 IBR = 0 MAR = 203
IR1 = B
MAR1 = 1F5
AC = FFFFFFFF MQ = FFFFFFFF80 MBR = 10

Output for If-Else Division case:

11
200 011F4051F5 201 211F6011F6 202 100CC091F4 203 0B1F50A000 204 211F7011F4
205 0C1F50A000 206 211F700000 500 000000000F 501 0000000003 502 0000000000
503 0000000000

Output is Highlighted Below. The Result is stored in memory location 503.
Output is Division of two numbers in 500 and 501. Division happens when the condition for the multiplication fails.

MBR = 11F4051F5 IBR = 51F5 MAR = 200
IR1 = 1
MAR1 = 1F4
AC = F MQ = 0 MBR = F
IR2 = 5
MAR2 = 1F5
AC2 = 12 MQ2 = 0 MBR2 = 3
MBR = 211F6011F6 IBR = 11F6 MAR = 201
IR1 = 21
MAR1 = 1F6
memory[502] = 12
AC = 12 MQ = 0 MBR = 12
IR2 = 1
MAR2 = 1F6
AC2 = 12 MQ2 = 0 MBR2 = 12
MBR = 100CC091F4 IBR = 91F4 MAR = 202
IR1 = 10
MAR1 = CC
AC = 12 MQ = 0 MBR = 100CC091F4
AC2 = 12 MQ2 = 0 MBR2 = 100CC091F4
MBR = 211F7011F4 IBR = 11F4 MAR = 204

AC = 12 MQ = 0 MBR = 211F7011F4

IR2 = 1

MAR2 = 1F4

AC2 = F MQ2 = 0 MBR2 = F

MBR = C1F50A000 IBR = A000 MAR = 205

IR1 = C

MAR1 = 1F5

AC = 0 MQ = 5 MBR = 3

IR2 = A

MAR2 = 0

AC2 = 5 MQ2 = 5 MBR2 = 3

MBR = 211F700000 IBR = 0 MAR = 206

IR1 = 21

MAR1 = 1F7

memory[503] = 5

AC = 5 MQ = 5 MBR = 5