##### Write an assembly language program to perform the subtraction of two 16- bit numbers.

Mov r0,#0dch //lower nibble of No.1 mov r1,#0feh //higher nibble ofNo.1

Mov r2,#34h //lower nibble of No.2 mov r3,#12h //higher nibble of No.2 clr c //

Mov a,r0 subb a,r2 mov 22h,a mov a,r1 subb a,r3 mov 21h,a mov 00h,c end

##### Result:

##### C. Write an assembly language program to perform the multiplication of two 16-bit

##### Numbers.

Mov r0,#34h

Mov r1,#12h

Mov r2,#78h mov r3,#56h mov a,r0 mov b,r2 mul ab

mov 33h,a

mov r4,b mov a,r0 mov b,r3 mul ab

add a,r4 mov r5,a mov a,b

addc a,#00h mov r6,a mov a,r1 mov b,r2 mul ab

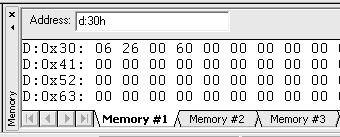
add a,r5 mov 32h,a mova,b

addc a,r6 mov 00h,c mov r7,a mov a,r3 mov b,r1 mul ab

add a,r7 mov 31h,a mov a,b

addc a,20h mov 30h,a end

##### Result:



##### Write an assembly language program to find the square of a given numberN.

Let N = 05

mova,#05 // a=N=05

mov b,a

mul ab

mov 30h,a// result is stored in 30h and 31h

mov 31h,b

end

##### Result:

Input: Output:

##### Write an assembly language program to find the cube of agiven number.

|  |  |  |
| --- | --- | --- |
| mov | r0,#0fh | // r0 = given number to find the cube of it. |
| mov | a,r0 |  |
| mov | b,r0 |  |
| mul | ab |  |
| mov | r1,b |  |
| mov | b,r0 |  |
| mul | ab |  |
| mov | 32h,a |  |
| mov | r2,b |  |
| mov | a,r1 |  |
| mov | b,r0 |  |
| mul | ab |  |
| add | a,r2 |  |
| mov | 31h,a |  |
| mov | a,b |  |
| addc | a,#00h |  |
| mov | 30h,a | //result is stored in 30h, 31h, 32h |
| end |  |  |