**C CODE TO FIND GCD OF TWO NUMBERS**

#include <stdio.h>

int gcd (int a, int b)

{

if (a>b)

return gcd(a-b,b);

elseif (a<b)

return gcd(a,b-a);

else

return a; [\\if](file:///\\if) both a and b are equal

}

int main()

{

int a = 10;

int b = 40;

printf ( “GCD of the given two numbers: ”, gcd(a,b));

return0;

}

**CODE FOR CORTEX-M4**

AREA mycode, CODE, READONLY

EXPORT \_\_main

ENTRY

\_\_main FUNCTION

MOV R0, #0x30 ; test values

MOV R1, #0x45 ; test values

GCD

while CMP R0,R1 ;THE TWO REGISTER VALUES ARE COMPARED

BEQ endw ;If both are equal, gcd is equal to the number and the program stops

BGT cond1 ;if first number is greater than second

B cond2

cond1 SUB R0,R1

B GCD

cond2 SUB R1,R0

B GCD

B while

endw

stop B stop ; stop program

ENDFUNC

END ; GCD of two numbers stored in R0, R1 is finally stored in both the registers R0 and R1