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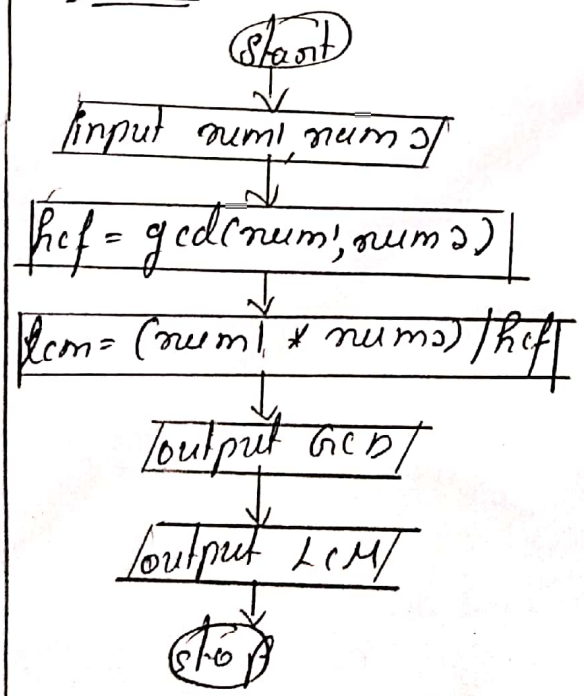
Implement GCD & LCM using recursion

Algorithm

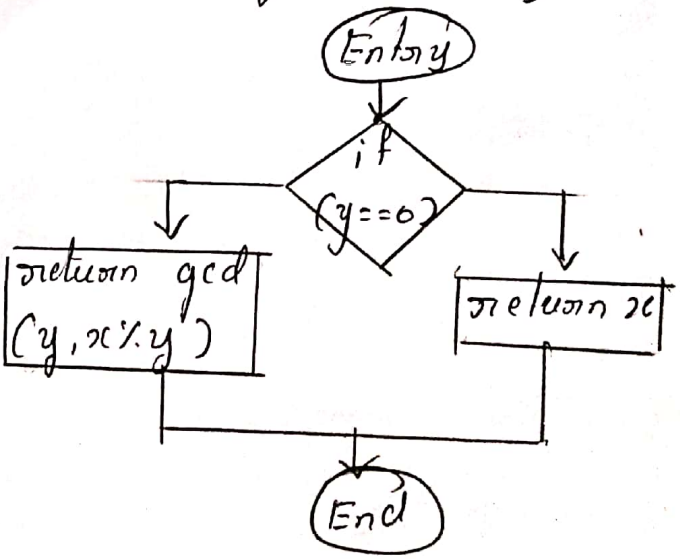
step1: start
step2: input num1, num2
step3: hcf = gcd (num1, num2)
step4: lcm = (num1 * num2) / hcf
step5: output GCD
step6: output LCM
step7: stop

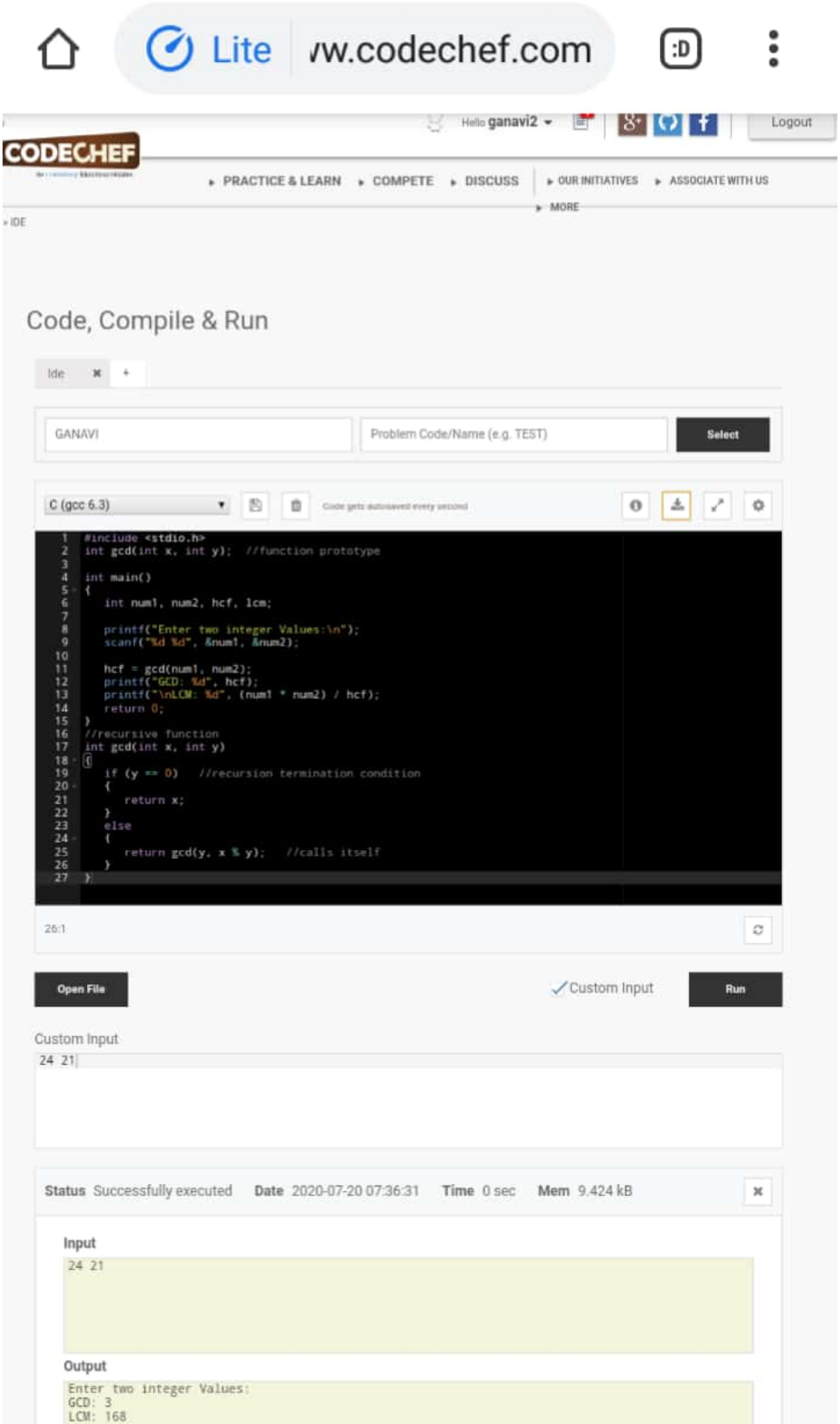
int gcd (int x, int y)
step1: Entry
step2: if (y == 0
return x
else
return gcd (y, x%y)
step3: End

Flowchart



int gcd (int x int y)

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Ide
GANAVI
Problem Code/Name (e.g. TEST)
Select
C (gcc 6.3)
Code gets autosaved every second
#include <stdio.h>
int gcd(int x, int y); //function prototype
int main()
{
int num1, num2, hcf, lcm;
printf("Enter two integer Values:\n");
scanf("%d %d", &num1, &num2);
hcf = gcd(num1, num2);
printf("GCD: %d", hcf);
printf("\nLCM: %d", (num1 * num2) / hcf);
return 0;
}
//recursive function
int gcd(int x, int y)
{
if (y == 0) //recursion termination condition
{
return x;
}
else
{
return gcd(y, x % y); //calls itself
}
}
26:1
Open File
Custom Input
Run
Custom Input
24 21
Status Successfully executed
Date 2020-07-20 07:36:31
Time 0 sec
Mem 9.424 kB
Input
24 21
Output
Enter two integer Values:
GCD: 3
LCM: 168