GEBZE TECHNICAL UNIVERSITY
COMPUTER ENGINEERING
CSE 107 LAB 7

LAB CONTENT: Concept of recursion in C language and introduction to the Arduino programming.

1. Write a Recursive Function that takes two integers and calculates greatest common divisor.

Program Output:

```
Enter two positive integers: 366, 60
G.C.D of 366 and 60 is 6.
```

2. Write a C function calculates recursively and prints first *k* items of Fibonacci Series.

Program Output:

```
Input number of terms for the Series (< 20) : 10
The Series are :
1  1  2  3  5  8  13  21  34  55
```

3. Write a C function to count the digits of a given number using recursion.

Program Output:

```
Input  a number : 50
The number of digits in the number is :  2
```

4. Write an Arduino program that switches the light of a led with 1 second delay. The led is connected to the 13. Pin of the board.

TASK:

1. Write a C function that takes an array as input and returns the maximum element in the given array.

```
Input: 5,3,17,21,8,11,25,6,15

Output: 25
```

2. Write a C function that takes an array as input and returns True if there is at least one duplicated element in the given array, otherwise returns False.

```
Input: 1 2 3 4 5 5 6 7 8 9 10

Output: True


Input: 1 2 3 4 5 6 7 8 9 10

Output: False
```