Experiment - 1.1

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1. Aim/Overview of the practical:

Code and analyse to compute the greatest common divisor (GCD) of two numbers.

2. Task to be done/ which logistics used:

Greatest Common Divisor (GCD):

The GCD of two or more integers is the largest integer that divides each of the integers such that their remainder is zero. Or we say that GCD (Greatest Common Divisor) or HCF (Highest Common Factor) of two numbers is the largest number that divides both of them.

3. Steps for experiment/practical/Code

Pseudo Code of the Algorithm:

Step 1: Let a, b be the two numbers
Step 2: a mod b = R
Step 3: Let a = b and b = R
Step 4: Repeat Steps 2 and 3 until a mod b is greater than 0
Step 5: GCD = b
Step 6: Finish

Program Code:

```
#include<bits/stdc++.h>
using namespace std;

intGCD(inta,int b)
{
        if(a==0)
                return b;
        if(b==0)
                return a;
        return GCD(b,a%b);
}

intmain()
{
        inta,b,x;
        cout<<"Enter the Value of a: ";
        cin>>a;
        cout<<"Enter the Value of b: ";
        cin>>b;
        x=GCD(a,b);
        cout<<"GCD of "<<a<<" and "<<b<<" is: "<<x;
        return 0;
}
```

4. Result/Output/Writing Summary: