Problem 1: **(20 Points)**

Harry wants to check the relative primality of 2 numbers. For this purpose, he checks the GCD (Greatest Common Divisor) of the numbers. If GCD comes out 1 then numbers are relative prime to each other. Harry requirements are as follows:

1. Procedure **DEC_IN** should load two registers (BX and DX) with two numbers. Numbers should be a 2 - digit decimal ranging from (01 - 99). **(6)**

2. Procedure **GCD_AB** apply the logic for GCD of two numbers. GCD of two numbers is performed by dividing the greater number (in BX) by the smaller number (in DX) till the remainder is zero. If it is zero, the divisor is the GCD if not the remainder and the divisor of the previous division are the new set of two numbers. The process is repeated by dividing greater of the two numbers by the smaller number till the remainder is zero and CCD is found. **(8)**

3. Also check if numbers are equal then GCD would be BX, if BX<DX then exchange the contents of 2 registers. **(3)**

4. Procedure **DEC_OUT** should display the GCD on screen in decimal. **(3)**

Sample 1:

```
Enter 1st Number: 20
Enter 2nd Number: 09
GCD is: 1
Numbers are relative prime
```

Sample 2:

```
Enter 1st Number: 09
Enter 2nd Number: 03
GCD is: 03
Numbers are not relative prime
```