

# **Experiment 10**

**Greatest Common Divisor (GCD)**

**Find the Greatest Common Divisor (GCD) between 132 and 55 by using Euclid's Algorithm.**

$$132 = 55 * 2 + 22$$

$$55 = 22 * 2 + 11$$

$$22 = 11 * 2 + 0$$

**Stopping when getting zero 0 then GCD is 11:**

$$\text{GCD}(132, 55) = 11$$

```
clc;
clear all;
close all;

% The greatest common divisor (GCD)
a=input('Enter a ');
b=input('Enter b ');
r=mod(a,b);
while r~=0
    a=b;
    b=r;
    r=mod(a,b);
end
fprintf('The greatest common divisor (GCD) %5d \n',b)
```