Euler's Totient - Implementation

Code

```
public class EulerTotient
{
    static int gcd (int x, int y)
    {
        if(x == 0)
        {
            return y;
        }
        else
        {
            return gcd(y % x, x);
        }
    }
    static int phi(int n)
    {
        int result = 1;
        for (int i = 2; i < n; i++)
        {
            if(gcd(i, n) == 1)
            {
                result++;
            }
        }
        return result;
    }
    public static void main(String [] args)
    {
        int n;
        for(n = 1; n < 12; n++)
        {
            System.out.println("Phi(" + n +") = " + phi(n));
        }
    }
}
```

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Output

```
C:\Users\USER\OneDrive\Desktop\practicals\CSS\EulerTotient>java EulerTotient
Phi(1) = 1
Phi(2) = 1
Phi(3) = 2
Phi(4) = 2
Phi(5) = 4
Phi(6) = 2
Phi(7) = 6
Phi(8) = 4
Phi(9) = 6
Phi(10) = 4
Phi(11) = 10
```

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