# Basic Euclidean Algorithm for GCD

The algorithm is based on below facts:

1) If we subtract smaller number from larger (we reduce larger number), GCD doesn’t change. So if we keep subtracting repeatedly the larger of two, we end up with GCD.

2) Now instead of subtraction, if we divide smaller number, the algorithm stops when we find remainder 0.

**Time Complexity**: O(Log min(a, b))

Code is available on Coding Blocks IDE :

<https://ide.codingblocks.com/s/122793>