Euclidean Gcd Method:

GCD(a,b):

gcd(a,b) = 5

gcd(12,5) = gcd(12 % 5, 5) = gcd(2,5) = gcd(5,2) = gcd(5 % 2, 2) = gcd(1,2) = gcd(2 % 1, 1) = gcd(0,1) = 1

if (a%b == 0) return b; // (a%b == 0)

gcd = b;

return gcd;

gcd(10,5) = 5

gcd(12,5) = 1

gcd(15,5) = 5

gcd(10,15) = 5

$TC = O(\log(a,b))$

$S.C = O(1)$

Properties:

gcd(1,0) = gcd(0,1) = 1

gcd(1,2) = 1

gcd(1,2) = 1

gcd(1,2) = 1

gcd(1,3) = 1

gcd(1,3) = 1

gcd(1,4) = 1

gcd(1,4) = 1

gcd(1,5) = 1

gcd(1,5) = 1

gcd(1,6) = 1

gcd(1,6) = 1

gcd(1,7) = 1

gcd(1,7) = 1