

Consecutive Integer Checking Algorithm for computing GCD(m,n)

//English Like Algorithm

Step 1: Assign the value of $\min\{m,n\}$ to t

Step 2: Divide m by t . If the remainder of this division is 0,
go to Step 3; otherwise , go to Step 4.

Step 3: Divide n by t . If the remainder of this division is 0,
return the value of t as the answer and stop; otherwise
proceed to Step 4.

Step 4: Decrease the value of t by 1. Go to Step 2.

//Pseudo Code

GCD(m,n):

$t \leftarrow \text{MIN}(m, n)$

$i \leftarrow 0$

for $i \leftarrow t$ *to* 1 *do*

if $n \bmod i = 0$ *And* $m \bmod i = 0$

 STOP

return i

MIN(i , j):

$result \leftarrow 0$

if $i < j$:

$result \leftarrow i$

else if $j < i$:

$result \leftarrow j$

return $result$

Computation of GCD in Java:

<https://github.com/AvinandanBose/JavaClassicalDataStructure/blob/main/ConsIntCheckAlgo.java>