

## CS222: Assignment 6 - Modular arithmetic and Extended Euclid's algorithm

Sample Output :

Input the two numbers : 21 14

The GCD of 21 and 14 is 7.

$x = 1, y = -1$

$7 = 21*1 + 14*-1$

Time Complexity :

The time complexity of GCD ( A, B ) is  $O( \log(A*B) )$ .

The time complexity of extended\_coefficient ( N, M ) is  $O( \log(\max(N, M)) )$ .