

```
1  def myEEA(a,b):
2      """Solves gcd(a,b) = ax+by using the
3      Extended Euclidean Algorithm
4
5      Input:
6          a (int) : first number
7          b (int) : second number
8
9      Returns:
10         gcd (int) : gcd(a,b)
11         x (int): x such that gcd(a,b) = ax+by
12         y (int): y such that gcd(a,b) = ax+by
13     """
14     r,last_r = b,a
15     x,last_x = 0,1
16     y,last_y = 1,0
17     while r != 0:
18         q = last_r // r
19         last_r, r = r, last_r%r
20         last_x, x = x, (last_x - q*x)
21         last_y, y = y, (last_y - q*y)
22     gcd = last_r
23     x = last_x
24     y = last_y
25     return gcd, x, y
26
```