**PYTHON PROGRAM 1:**

**Python Program for Extended Euclidean algorithms**

def egcd(a, b):

if a == 0:

return (b, 0, 1)

else:

gcd, x, y = egcd(b % a, a)

return (gcd, y - (b//a) \* x, x)

gcd, x, y = egcd(30, 50)

print(gcd, x, y)

**OUTPUT:**

