****1.Python Program for Extended Euclidean algorithms.****

def gcdExtended(a, b):

if a == 0 :

return b,0,1

gcd,x1,y1 = gcdExtended(b%a, a)

x = y1 - (b//a) \* x1

y = x1

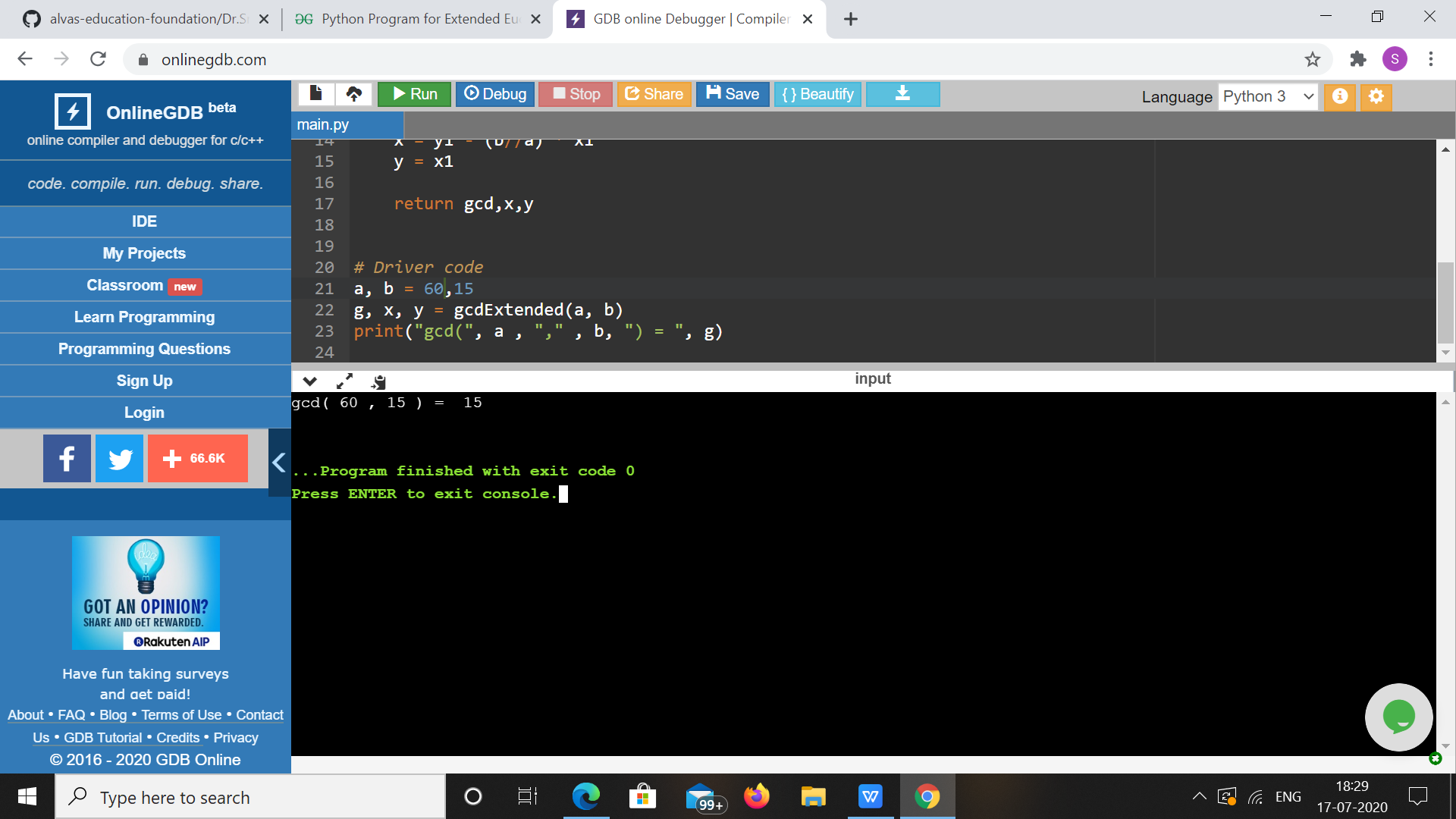
return gcd,x,y

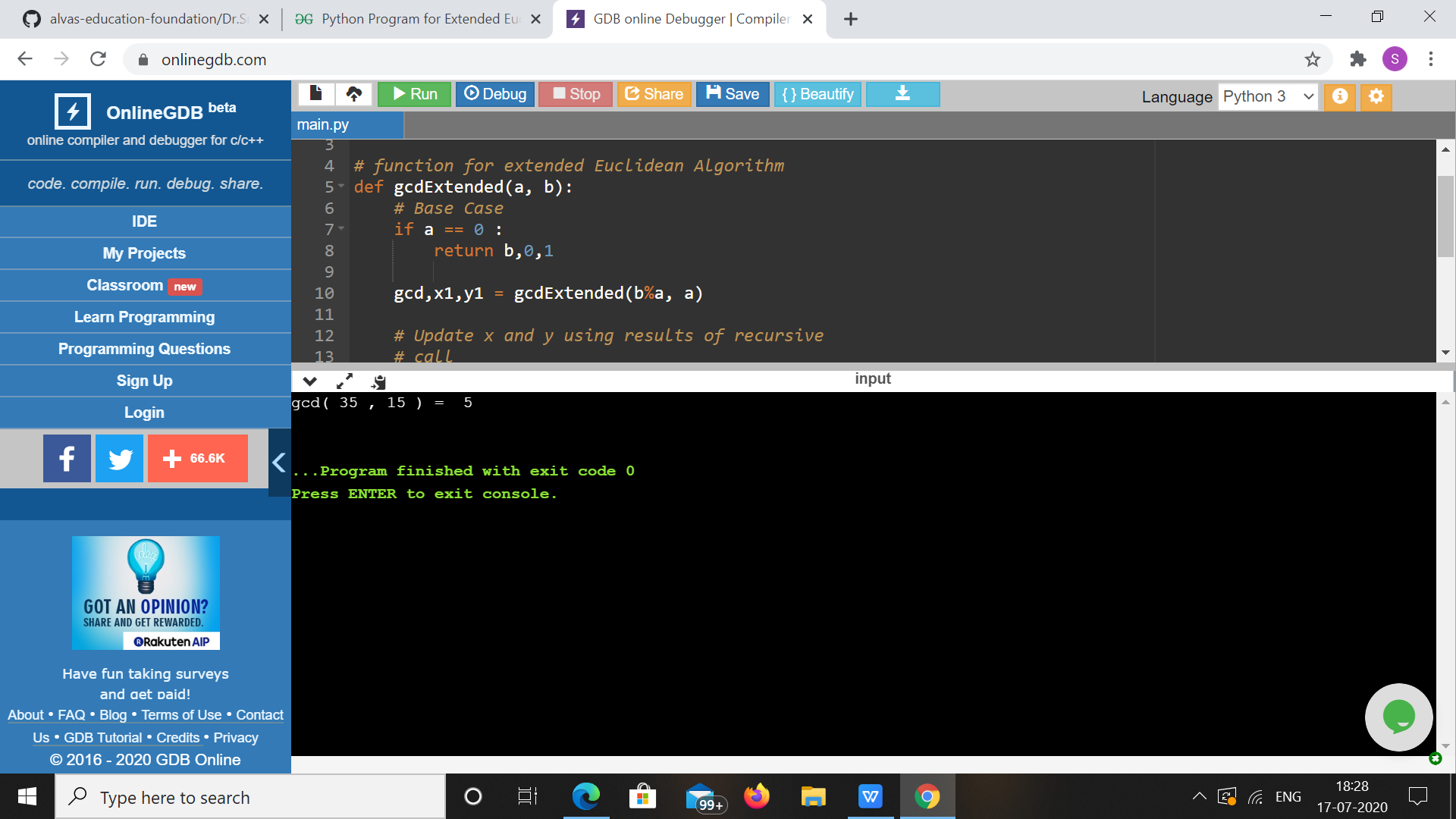
a, b = 60,15

g, x, y = gcdExtended(a, b)

print("gcd(", a , "," , b, ") = ", g)

**OUTPUT**

****

****