

```

#include <stdio.h>

long long int extended_euclidean_algorithm
(
long long int a,
long long int b,
long long int *x,
long long int *y
) {
    if (b == 0) {
        *x = 1;
        *y = 0;
        return a;
    }

    long long int x1, y1;
    long long int gcd = extended_euclidean_algorithm(b, a % b, &x1, &y1);

    *x = y1;
    *y = x1 - (a / b) * y1;

    return gcd;
}

int main() {
    long long int a, b, x, y;

    printf("Enter two numbers: ");
    scanf("%lld %lld", &a, &b);

    long long int gcd = extended_euclidean_algorithm(a, b, &x, &y);

    printf("GCD of %lld and %lld is: %lld\n", a, b, gcd);
    printf("Coefficients x and y are: x = %lld, y = %lld\n", x, y);

    return 0;
}

```