```
int Euclid_GCD (int x ,int y)
{
    int tmp = 0 ;

    while ( x > 0 )
    {
        if ( x < y )
        {
            tmp = x ;
            x = y ;
            y = tmp ;
        }

        x = x-y ;
    }

    return y ;
}
```

الحل بواسطة النداء الذاتي :

```
int Euclid_GCD_Recursion (int x, int y)
{
    if ( y == 0 )
        return x ;

    else
        return Euclid_GCD_Recursion(y,x%y);
}
```

خوارزمية اقليدس الممتدة

أولا القوانين هي :

```
* Extended Euclid's Algorithms
* it's use the Flowing Rules :
    s0 = 1 , s1 = 0 , si = si-2 - (si-1 * qi-1)
    t0 = 0 , t1 = 1 , ti = ti-2 - (ti-1 * qi-1)

    r0 = first number
    r1 = second number
    r1 = r-2 % r-1 (the first last number MOD the second last Number)


* The GCD (a,b) = s.a + t.b
```

والحل هو :

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