0.1 GCD and Bezout's identity

- *Algorithm:* Euclidean (algo. **??**), ExtendedEuclidean (algo. **??**)
- *Input:* Two integers a and b
- *Complexity:* $\mathcal{O}(\log(\min(a, b)))$
- *Data structure compatibility:* N/A
- *Common applications:* Modular arithmetic, such as RSA encrytion

Problem. GCD and Bezout's identity

Given two integers a and b, find out the greatest common divisor d, and the Bezout's identity x and y such that $ax + by = d$.

Description

Detailed description of the problem; More detailed information on the input and complexity; more applications with details on how they relate to each other (if this is the case). Do not hardcode references, instead use the `\label` and `\reference` commands. Examples: citation [**ve477**], a group of figures (Fig. **??**), a sub-figure (Fig. **??**). To display a new line skip a line in the source code, do not use `\\`.

Algorithm 1: Euclidean

Input :
Output:

1 **return**