1 -> 1 2 -> 10 4 -> 100 8 -> 1000 16 -> 10000 32 -> 100000 64 -> 1000000

A power of two, represented in binary, has exactly *one* bit set, all others are zero. Subtracting one will invert all bits right of and including the rightmost one: **110101100 - 1 => 110101011** (in the case of zero, all bits get inverted)