## Very easy induction proof

Suppose  $f : \mathbb{N} \to \{0,1\}$  is defined by:

- f(0) = 0
- f(n) = f(n-1) if n > 0

We wish to prove f(n) = 0 for all  $n \in \mathbb{N}$ .

Let P(n) be the statement "f(n) = 0"

So we want to prove that P(n) is true for all  $n = 0, 1, 2, \ldots$