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Prolog 2

1 Fibonacci numbers

The Fibonacci sequence starts with 0 and 1, and each subsequent number is the sum of the previous two numbers. Hence, the first ten elements in the sequence are 0, 1, 1, 2, 3, 5, 8, 13, 21, and 34. More formally, the Fibonacci sequence is defined as follows:

$$fib_n = \begin{cases} 0 & , n = 1 \\ 1 & , n = 2 \\ fib_{n-1} + fib_{n-2} & , otherwise \end{cases}$$

Implement a `fib/2` predicate that represents the relation between n and the n-th Fibonacci number. Compute Fibonacci numbers 25 and 30. Why is the implementation so inefficient? How can it be made more efficient?