A better way of computing $F(n)$

The simple recursive way of computing $F(n)$ is exponential, but there is a very simple approach that runs in linear time!

Consider computing an array *FIB* that you fill in from left to right, so the ith entry of *FIB* is the Fibonacci number $F(i)$.

You return the nth entry of the array!