

$\Gamma \leftarrow \vdash$

Lenguajes de Programación Tarea 3

Bravo García Marco Antonio
Herrera Brito Juan Jose

Problema I

Fibonacci

$\Gamma \vdash \text{fib: (number} \leftarrow \text{number)} \quad \Gamma \vdash n:\text{number}$

$\Gamma \vdash [\text{fib} \leftarrow \text{number}] \quad \Gamma \vdash \{\text{fib } n\}:\text{number} \quad [A]$

$\Gamma \vdash \{\text{rec \{fib: number$
 $\{\text{fun (n:number):number$
 $\{\text{if } (<= \text{ n } 1)$
 1
 $(+ (\text{fib } (- \text{ n } 1)) (\text{fib } (- \text{ n } 2))))\}}\} \{\text{fib } n\}$

$\Gamma \vdash n:\text{number} \quad \Gamma \vdash 1:\text{number}$	$\Gamma \vdash n:\text{number} \quad \Gamma \vdash 1:\text{number}$	$\Gamma \vdash n:\text{number} \quad \Gamma \vdash 2:\text{number}$
<hr/> $\Gamma \vdash (<= \text{ n } 1):\text{bool}$	<hr/> $\Gamma \vdash (\text{fib } (- \text{ n } 1))$	<hr/> $\Gamma \vdash (\text{fib } (- \text{ n } 2))$
<hr/> $\Gamma \vdash (<= \text{ n } 1):\text{bool}$	$\Gamma \vdash 1:\text{number}$	<hr/> $\Gamma \vdash (+ (\text{fib } (- \text{ n } 1)) (\text{fib } (- \text{ n } 2)))$
<hr/> $\Gamma, [\text{fib} \leftarrow \text{number}] \vdash (\text{if } (<= \text{ n } 1)$ 1 $(+ (\text{fib } (- \text{ n } 1)) (\text{fib } (- \text{ n } 2))))$		

$[A] = \Gamma, [\text{fib} \leftarrow \text{number}] \vdash (\text{fun (n:number):number : number} \rightarrow \text{number}$
 $\{\text{if } (<= \text{ n } 1)$
 1
 $(+ (\text{fib } (- \text{ n } 1)) (\text{fib } (- \text{ n } 2))))$

Empty List

$\Gamma \vdash \text{empty?:(list} \rightarrow \text{bool)} \quad \Gamma \vdash l:\text{list}$

$\Gamma \vdash (\text{empty? } l)$

Problema II

Problema III

Problema IV

Problema V

Problema VI