

# Languages-beta: SIMPLE-5-Programs \*

The P<sub>L</sub>anCompS Project

SIMPLE-5-Programs.cbs | PLAIN | PRETTY

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*Language* "SIMPLE"

## 5 Programs

*Syntax*  $Pgm : \text{pgm} ::= \text{decls}$

*Semantics*  $\text{run}[\![ \text{Decls} : \text{pgm} ]\!] : \Rightarrow \text{values}$   
 $= \text{scope}(\text{collateral}(\text{declarations}[\![ \text{Decls} ]\!]), \text{sequential}(\text{initialisations}[\![ \text{Decls} ]\!], \text{apply}(\text{assigned}(\text{bound}(\text{"main"})), \text{tuple}(\ )))))$

*Syntax*  $\text{Decls} : \text{decls} ::= \text{decl decls}^?$

*Semantics*  $\text{declarations}[\![ \_ : \text{decls} ]\!] : (\Rightarrow \text{environments})^+$   
*Rule*  $\text{declarations}[\![ \text{Decl} ]\!] = \text{declare}[\![ \text{Decl} ]\!]$   
*Rule*  $\text{declarations}[\![ \text{Decl Decls} ]\!] = \text{declare}[\![ \text{Decl} ]\!], \text{declarations}[\![ \text{Decls} ]\!]$

*Semantics*  $\text{initialisations}[\![ \_ : \text{decls} ]\!] : (\Rightarrow \text{null-type})^+$   
*Rule*  $\text{initialisations}[\![ \text{Decl} ]\!] = \text{initialise}[\![ \text{Decl} ]\!]$   
*Rule*  $\text{initialisations}[\![ \text{Decl Decls} ]\!] = \text{initialise}[\![ \text{Decl} ]\!], \text{initialisations}[\![ \text{Decls} ]\!]$

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\*Suggestions for improvement: [plancomps@gmail.com](mailto:plancomps@gmail.com).  
Reports of issues: <https://github.com/plancomps/CBS-beta/issues>.