Learn RISC-V CPU Implementation and BSV

(BSV: a High-Level Hardware Design Language)

Rishiyur S. Nikhil

L3: Structure of BSV Programs

BSV language, compiler and libraries documents

From the book, Appendix A.6.5:

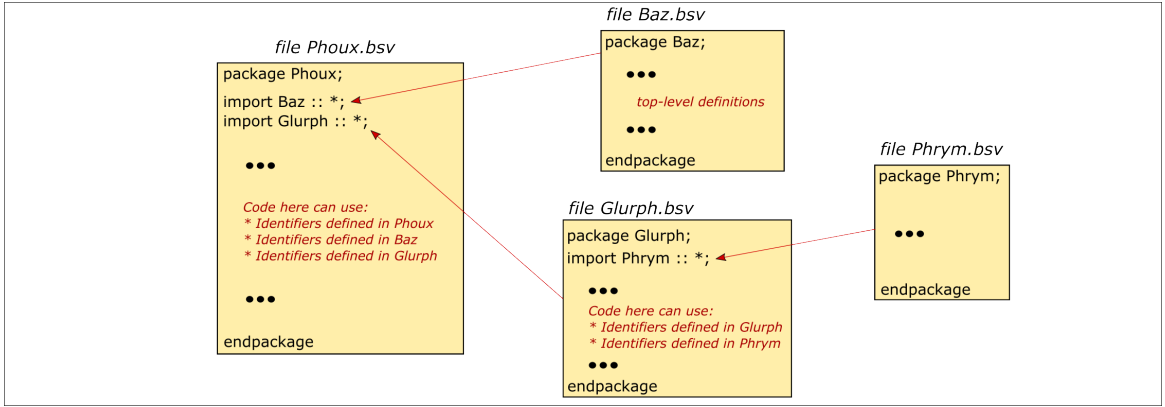
- The "**BSV** Language Reference Guide". This document describes the syntax and semantics of **BSV**.
  PDF: `https://github.com/B-Lang-org/bsc/releases/latest/download/BSV_lang_ref_guide.pdf`
- The "BSC Libraries Reference Guide". This document describes the extensive set of libraries and IP (Intellectual Property blocks) available to the **BSV** user.
  PDF: `https://github.com/B-Lang-org/bsc/releases/latest/download/bsc_libraries_ref_guide.pdf`
- The "BSC User Guide". This document describes how to use the *bsc* compiler, which compiles our hardware descriptions written in **BSV** into Verilog (which can then be simulated or synthesizes using standard Verilog tools).
  PDF: `https://github.com/B-Lang-org/bsc/releases/latest/download/bsc_user_guide.pdf`

We will be using the Language Reference Guide and Librares Reference Guide extensively, so you may wish to download a copy for your laptop.

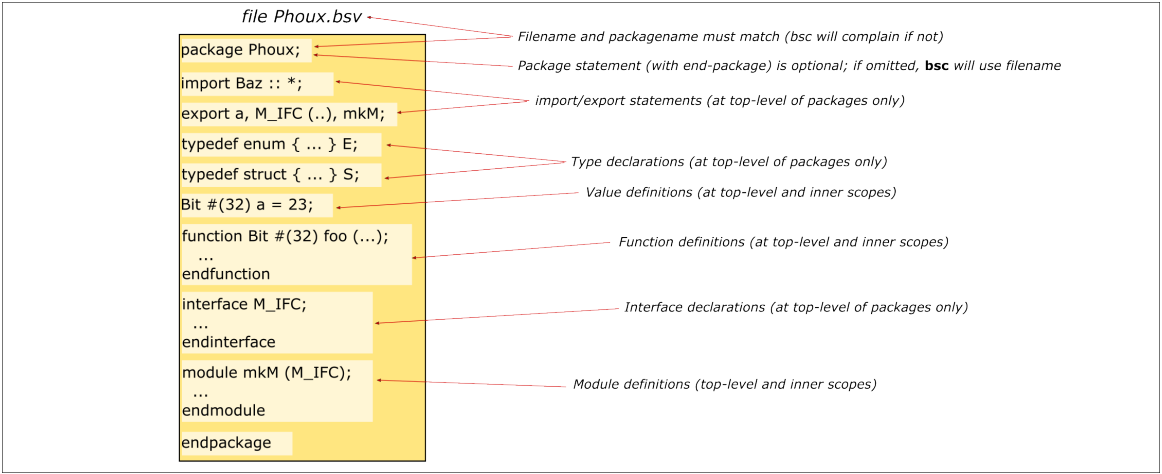
Exercise break

Please see directory: `Exercises/Ex_03_A_Hello_World/`
and its README.

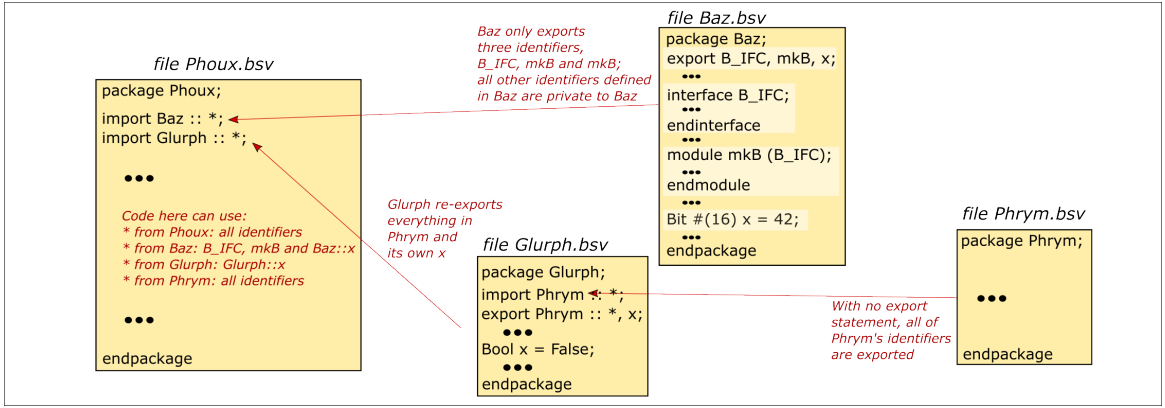
File-level view of a BSV program



What's in a BSV package/file?



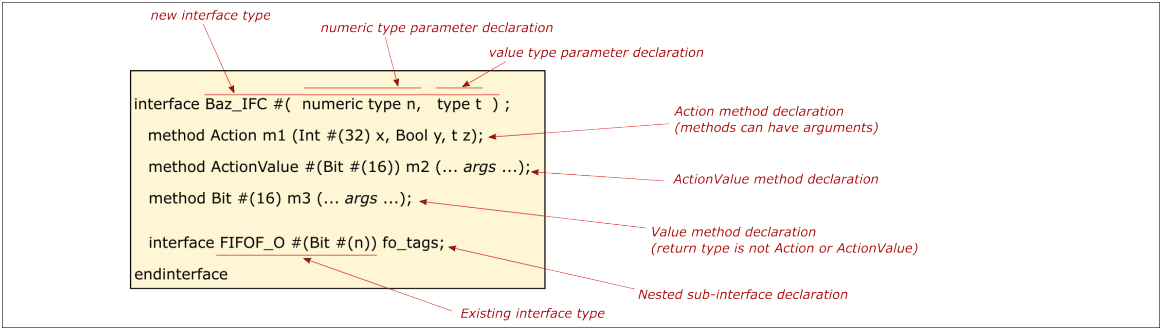
Namespace control with package imports and exports



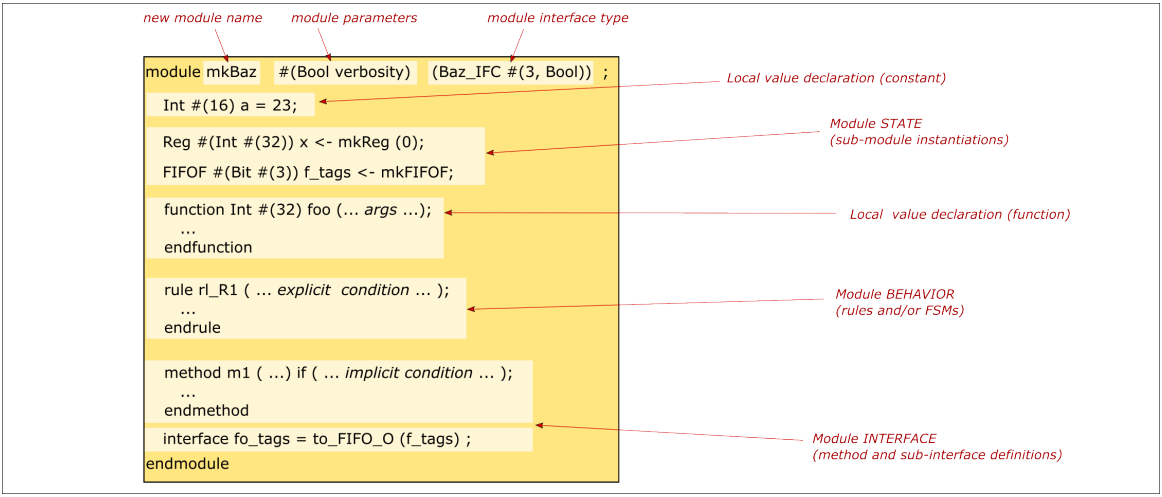
Exercise break

Please see directory: `Exercises/Ex_03_B_Top_and_DUT/`
and its README.

What's in an Interface Declaration?



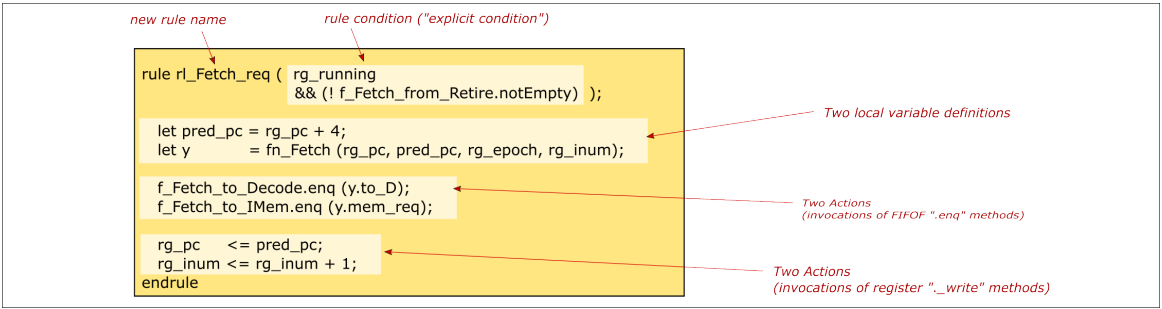
What's in a Module Declaration?



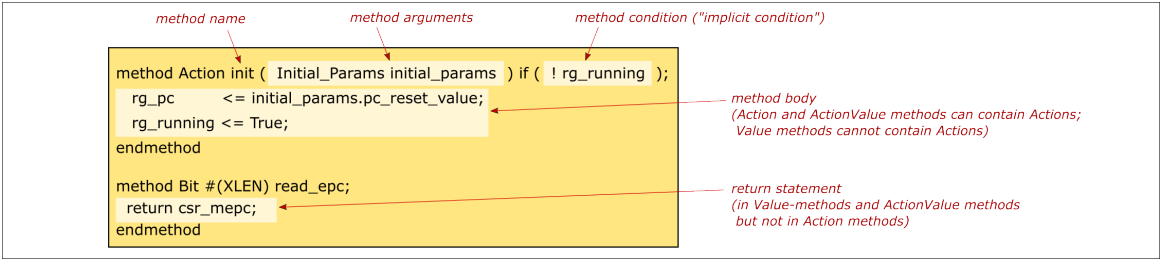
Exercise break

Please see directory: `Exercises/Ex_03_C_Module_and_Interface/`
and its README.

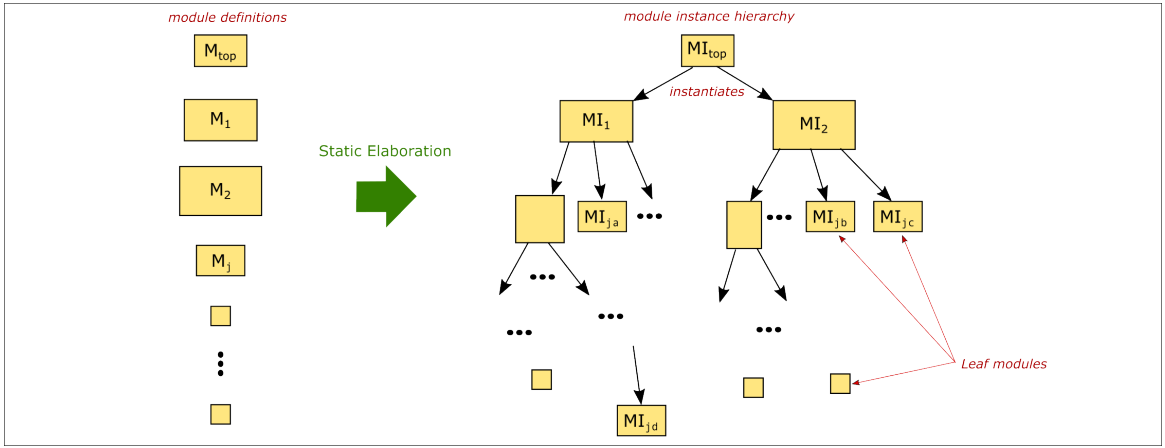
What's in a Rule?



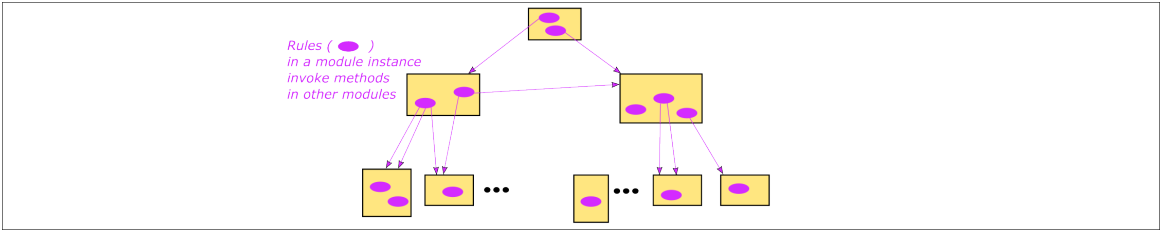
What's in an Interface Definition?



Static elaboration



Module interaction



End