

Using SimpleScalar Simulator at UW

The simulator is located on the four instructional machines (`tahiti`, `sumatra`, `ceylon`, `fiji`)

. Everything relevant is in the top level directory `/cse/courses/cse471/00au`

This directory contains the following subdirectories

- `bin/` : This contains the binaries for the simulator. The one that you need to use is called `sim-outorder`. This is the detailed microarchitecture simulator which . It models in detail an out-of-order microprocessor which branch prediction, caches and external memory.
- `tests/` : It contains pre-compiled executables (for the SS machine) provided with the distribution. These contain simple programs to test the simulator.
- `spec95-little/` : The SS executables in this directory contain the executable from the spec95 benchmark suite. (The “little” stands for the fact that we are using little endian machines.)
- `config/` : This directory contains the default configuration file. The simulator can be configured by using command-line options or by specifying a configuration file using the command-line option `-config <configfilename>`
- `input/` : contains sample inputs for the various SS executables. For example for the file `perl.ss` in `spec95-little` it contains a perl script `charcount` and a input file for perl script `all_gre_words`.

So to run the above program, following command need to be issued in the top-level directory

```
bin/sim-outorder spec95-little/perl.ss inputs/charcount inputs/all_gre_words
```

(this takes roughly 15min to execute. So try running some file in `tests/` or `bin/sim-outorder spec95-little/perl.ss -v` first to get a feel for the kind of output.

Note: The simulator outputs the statistics to `stderr` instead of `stdout` . So simply piping it to `less` or redirecting the output will not work . Use
command `|& less`