

Lab 0 - Warm-up

For this lab, you will become familiarized with the sim-safe simulator. Please implement the following in sim-safe.c and turn in the results below via email. First, follow the simplescalar guide for this class and unpack the simplescalar simulation environment in your home directory on my machines (the link for the simulator is given in the guide). Also, unpack the binaries. Run sim-safe on the following benchmarks for 100 million instructions (set this with -max:inst):

- crafty
- gcc
- vortex
- gap

The input parameters to the applications are:

- crafty00.peak.ev6 < crafty.in > /dev/null
- gcc00.peak.ev6 expr.i -o expr.s > /dev/null
- vortex00.peak.ev6 lendian2.raw > /dev/null
- gap00.peak.ev6 -l ./all -q -m 128M < ref.in > /dev/null

So, for example, to simulate the crafty application, you need to execute:

```
$> sim-safe -max:inst 100000000 crafty00.peak.ev6 < crafty.in > /dev/null
```

Once you have gotten the simulator working, modify the simulator to track branch statistics. Specifically, create counters that track the following stats that track the dynamic execution counts of:

- The percent of instructions that are branches.
- The percent of branches that are conditional branches.