1. Test program and output

2. What I like / don’t like about gem5 instruction hacking

My experience is that although I start with pattern matching, but in the meantime I also got to learn how certain features are implemented. For example, I got to know instructions are decoded in gem5, how to use the manual, how macro-ops are defined using micro-ops, etc.

Like:

1) I like how gem5 organizes its source files. For example, all x87 instructions (whose opcodes lies in range of 0xD8 to 0xDF) are defined in the same file, which is very clearly organized.

2) It uses separate files to store mappings from macro-ops to micro-ops, which is quite clear. Each kind of arithmetic operation is listed in a separate file, so it’s not very difficult to locate the file you want to modify.

Dislike:

1) I’m curious why gem5 didn’t implement these missing instructions in the first place, since modern compilers doesn’t prevent us from compiling to these instructions explicitly.

3. Patch file