

Karatsuba in Simple Risc

1. Add a macro in your emulator, to read a file specified by the first command line argument. This file contains two lines. Your macro needs to read the contents of the two lines, and put them in appropriate memory locations.

<line 1>

<line 2>

Each line contains a 32 byte integer in the hex format (unsigned).

Example:

0x AB CD 12 34 AB CD 12 34 AB CD 12 34 AB CD 12 34 AB CD 12 34 AB CD 12
34 AB CD 12 34

0x AB CD 12 34 AB CD 12 34 AB CD 12 34 AB CD 12 34 AB CD 12 34 AB CD 12
34 AB CD 12 34

2. Use the Karatsuba algorithm (or equivalent algorithm) to multiply the numbers, and print the result as a 64 byte number (hex). Use a new print macro that will print out the 64 byte number in one line.
3. Write your code in SimpleRisc assembly. The assembly file should also invoke your custom macros. Name the file "code.s" (only one file allowed).
4. Also submit the source code of your emulator (modified with bug fixes, and the new macros).
5. Here, are the commands, we will run
 1. make
 2. ./run.sh <path of the assembly file> <path of the test file>
6. Deadline: 15th October, 11:59 PM
7. Create a .tar.gz archive for all your files (no directories in the archive).
 1. Name the file <entry number>.tar.gz
 2. entry number starts with the year of entry (not user id)
8. Submit the assignment to Sakai (details provided later)