SaC lab*

1 Getting started

Make sure you have the SaC compiler available. Download and install the latest distribution from

http://www.sac-home.org ↻ Download[1]

Make sure that after installation the compiler `sac2c` is being found in your path. It should have been placed into `/usr/local/bin`. To verify, you can simply call `sac2c -h` which should produce a lot of output detailing the individual compiler options.
Next, download the matching pre-compiled standard library from

https://github.com/SacBase/Stdlib/releases.

Once it has been installed, you should be all set to get started.

2 Basic Exercises

Either download the tutorial from

http://www.sac-home.org ↻ Docs

or look at the online version there. Attempt the following excercises from the tutorial:

1. Write a hello world program, compile and run it.

2. Exercise 1 from Section 2.1.1 Make sure you compile with `-check tc` as this introduces a higher level of runtime checks.

3. Exercise 4 from Section 2.1.2

4. Exercise 5 from Section 2.2.1

5. Exercise 9 from Section 2.2.2

6. Exercise 15 from Section 2.2.2

3 Pi

Implement the approximation of π discussed in the lecture. Compile it using `-t mt_pth` as additional option. Run the executable with a commandline argument `-mt n` where n is a number between 1 and 10.

4 Mandelbrot

Download the package `SDL` from https://github.com/SacBase/SDL and compile it using the build instructions in `README.md` of the package.
Then download the `Tutorial` package (https://github.com/SacBase/Tutorial) from github. Now attempt Exercises 30 and 31 from Section 6.2 of the tutorial. The template files mentioned in the tutorial can be found in the `Tutorial` package in the directory `L8_case-study_mandelbrot`.

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*If you encounter any problems please do either utilise our mailing list sac-user (↻ Community/Mailing Lists) or drop me an email at S.Scholz@hw.ac.uk.

[1]On MacOS you may have to go through Preferences ↻ Security & Privacy in order to open the package.