

## Benchmarking Instructions

### Introduction

We had previously done some research and come up with a possible benchmark test to be used when looking at which processor configuration works the best. A [competition](#) was held in 2018. It was sponsored by Google and Microsemi (among others) and challenged groups to design a RISC-V Processor for other Microsemi FPGA boards. We figured this was similar enough. They ran a benchmark test called Dhrystone that has been around for a few decades. Microsemi linked the code on Github, which can be found [here](#). We have also included a local copy of that code in our Final USB in a folder labeled [dhrystone](#).

### Instructions

Running this code should be as simple as porting it into SoftConsole and making it the main project. We haven't tried this yet, because Coronavirus limited our ability to use the actual hardware, but you should have a workaround set up. The Microsemi site says that the code was compiled with the `"-O3 -fno-inline"` option. I would suggest using this as well, but I'm not sure how to actually do that. Some research will need to be done in how to work this.