Exercise 5 - Testing on a Target

Recompile the solution from exercise 3 and test it on target following the same line of thinking as in exercise 4. Compare your findings with those in that of exercise 4.

Implementation

The source code from exercise 4 is compiled to an executable file and programmed to the target without any changes.

Results and Discussion

Are the parameters that you found to present problems on the host the same that yield problems on the target?

Why do you experience what you do?

Trying to run the program on the RPi returned less failures, than when runned on the Virtual Machine (VM). However this was far from what was expected, since the virtual mashine has a way more powerfull CPU. On the picture below, we see that the RPi only has 1 failure for every 10 on the VM.

```
stud@stud-virtual-machine: /
                                                             stud@stud-vir...rcise3/bin/host
File Edit Tabs Help
                                                    File Edit Tabs Help
     Stopped(SIGTSTP)
                               ./prog
                                                   stud@stud-virtual-machine:~/ISU/i3isu_e2018 hal90
root@raspberrypi0-wifi:/HAL# ./prog
                                                   00/Lecture2 exercises/Exercise3/bin/host$ ./prog
How many threads do you want?
                                                   How many threads do you want?
How many microseconds do you want between tests?
                                                   How many microseconds do you want between tests?
                                                   10000
PASSED
                                                   PASSED
PASSED
                                                   PASSED
PASSED
                                                   Failed test at thread: 0
                                                   PASSED
PASSED
PASSED
                                                   Failed test at thread: 1
PASSED
                                                   PASSED
PASSED
                                                   Failed test at thread: Failed test at thread: 10
PASSED
PASSED
                                                   Failed test at thread: Failed test at thread: 10
PASSED
PASSED
                                                   Failed test at thread: Failed test at thread: 10
PASSED
PASSED
                                                   PASSED
                                                   PASSED
PASSED
PASSED
                                                   Failed test at thread: 1
       test at thread: 1
Failed
                                                   PASSED
PASSED
                                                   Failed test at thread: 0
PASSED
                                                   PASSED
```

We're not sure why this is the is the case, but a guess could be, that the VM has other processes running in the background, while the RPi only has to run the code. We testet this hypothesis by loading the CPU of the VM, while running the program. This resulted in a lot more mistakes, than when leaving the VM.

Filer

Host_test1.png	61,6 KB	2018-09-18	Brian Nymann

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