

Laboratory Report 1a

Gustav Larsson (guslap-5)

Carl Frisenstam (carfri-5)

- What have you learned in the lab?

We learned how to write subroutines in Assembly, how Stack and Frame pointers work and how to implement those when creating a stack to suit our needs.

- What was most difficult in the lab?

Fully understanding how the Stack and Frame pointers work.

- Did you use SyncSim while writing/debugging code? When/how?

Yes we used SyncSim when writing the code. We compiled the WIP-code(Work in progress) and tested it with SyncSim, to check if code did what it was supposed to do, or not. We also used it in the prep-stage of the lab in order to grasp how Framepointers work.

```
+-----+
| outdata | -8($fp) <= $sp points here
+-----+
|  n      | -4($fp)
+-----+
| old fp   | 0($fp) <= $fp points here
+-----+
|  ra      | 4($fp)
+-----+
| caller's stack |
```

n= number of chars left to copy

fp= Framepointer

sp=Stackpointer

ra=Return Address