

# Lab 1 Rapport

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## 1 Questions and answers

### What have you learned in the lab?

In this laboration we have learned how stacks works and how to use them in the assembly language, we have also learned how recursion works with activations, returning values, why we need to save our values to variables and clearing the stack manually, which we have never done in the programming courses(high level, java/python) we have taken so far.

### What was most difficult in the lab?

The without a doubt most difficult thing in the laboration was getting the foundation down with how the stack works and how to properly use it.

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

We ran into a problem where the outtext was off by 1 in the way that it started like "xello.wo.". At this point we used SyncSim to try different possible solutions.

## 2 Diagram

```
+-----+
|addr. of char. to copy| -12($fp) <=sp points here
+-----+
|addr. of char. destin.| -8($fp)
+-----+
|  nmbr of char.      | -4($fp)
+-----+
| old frame pointer   |  0($fp) <= $fp points here
+-----+
| our return addr     |  4($fp)
+-----+
|
| caller's stack      |
|
```