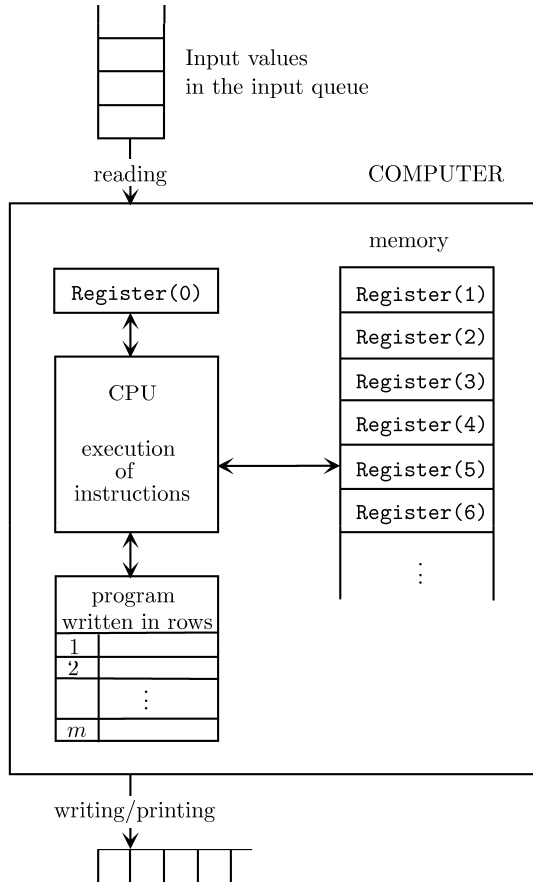


# Register Machine



List of instructions:

- ⦿ Read into Register(**n**)
- ⦿ Register(**n**)  $\leftarrow$  a fixed number
- ⦿ Register(**n**)  $\leftarrow$  Register(**i**) + Register(**j**)
- ⦿ Register(**n**)  $\leftarrow$  Register(**i**) - Register(**j**)
- ⦿ Register(**n**)  $\leftarrow$  Register(**i**) \* Register(**j**)
- ⦿ Register(**n**)  $\leftarrow$  Register(**i**) / Register(**j**)
- ⦿ Register(**n**)  $\leftarrow$   $\sqrt{\text{Register}(\mathbf{i})}$
- ⦿ Go to line **j**
- ⦿ If Register(**n**) = 0, then go to line **j**
- ⦿ If Register(**n**)  $\leq$  Register(**m**), then go to line **j**
- ⦿ Output  $\leftarrow$  Register(**n**)
- ⦿ Output  $\leftarrow$  "Some text"
- ⦿ End
- ⦿ Register( Register(**n**) )  $\leftarrow$  Register(**i**)
- ⦿ Register(**n**)  $\leftarrow$  Register( Register(**i**) )
- ⦿ Register(**n**)  $\leftarrow$  Register(**i**)

Remark: Strictly speaking, the last two instructions are not defined in the lecture notes. However, since they are very convenient, we will also allow the usage of these instructions in the exercises and the exam.