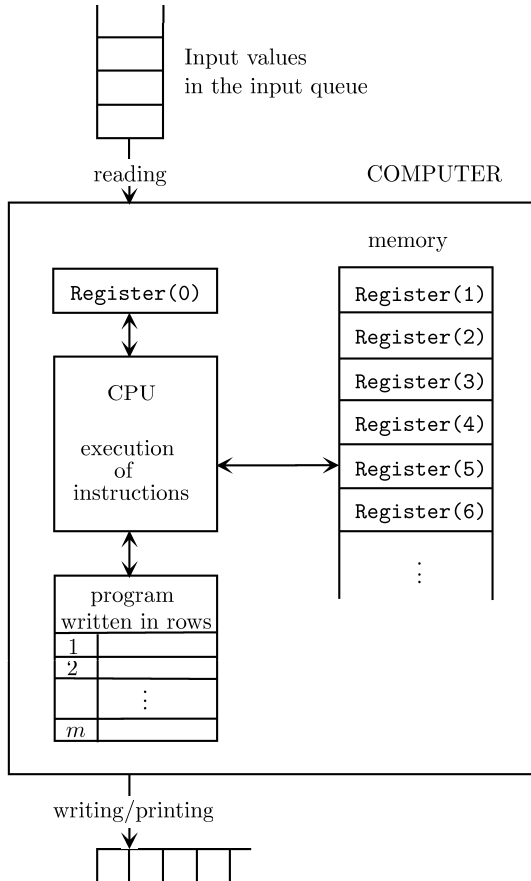


# Register Machine



List of instructions:

- Read into Register(**n**)
- Register(**n**)  $\leftarrow$  a fixed number
- Register( Register(**i**) )  $\leftarrow$  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**)  $\leftarrow$  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(**n**)  $\leftarrow$  Register(**j**)

Remark: Strictly speaking, the last instruction is not defined in the lecture notes. Therefore, it is not allowed to use it. However, since it is easy to simulate, and it is very convenient, we will allow the usage of this instruction in the exam.