

Jal : I-type instruction (opcode = 000011)

This instruction performs a normal jump but we need to save the return address (pc + 4) during the jump .

The return address ( $pc + 4$ ) is saved in the register  $\$ra$  (31).

We added a signal called **link** to perform this instruction.

We added two muxes (controlled by the signal link) :

- First mux to put  $(pc + 4)$  in the the result signal.
- second mux to make \$ra the destination register (write result in \$ra ).
- jump signal should be on (jump = 1).



