

Tabelas de Sinais

ADD, SUB, MUL, DIV, AND, OR, NOT

| | Estado 1 | Estado 2 | Estado 3 | Estado 4 | Estado 5 |
|------------------|----------|----------|----------|----------|----------|
| read_reg | 0 | 1 | 0 | 0 | 0 |
| write_reg | 0 | 0 | 0 | 1 | 0 |
| read_data | 0 | 0 | 0 | 0 | 0 |
| write_data | 0 | 0 | 0 | 0 | 0 |
| immediat | 0 | 0 | 0 | 0 | 0 |
| function | 000000 | 000000 | 000000 | 000000 | 000000 |
| control_function | 0 | 0 | 0 | 0 | 0 |
| control_alu_data | 0 | 0 | 0 | 0 | 0 |
| branch | 00 | 00 | 00 | 00 | 00 |
| return | 0 | 0 | 0 | 0 | 0 |
| pop | 0 | 0 | 0 | 0 | 0 |
| push | 0 | 0 | 0 | 0 | 0 |
| write_pc | 0 | 0 | 0 | 0 | 1 |

CMP

| | Estado 1 | Estado 2 | Estado 3 | Estado 4 | Estado 5 |
|------------|----------|----------|----------|----------|----------|
| read_reg | 0 | 1 | 0 | 0 | 0 |
| write_reg | 0 | 0 | 0 | 0 | 0 |
| read_data | 0 | 0 | 0 | 0 | 0 |
| write_data | 0 | 0 | 0 | 0 | 0 |
| immediat | 0 | 0 | 0 | 0 | 0 |
| function | 000000 | 000000 | 000000 | 000000 | 000000 |

| | | | | | |
|------------------|----|----|----|----|----|
| control_function | 0 | 0 | 0 | 0 | 0 |
| control_alu_data | 0 | 0 | 0 | 0 | 0 |
| branch | 00 | 00 | 00 | 00 | 00 |
| return | 0 | 0 | 0 | 0 | 0 |
| pop | 0 | 0 | 0 | 0 | 0 |
| push | 0 | 0 | 0 | 0 | 0 |
| write_pc | 0 | 0 | 0 | 0 | 1 |
| | | | | | |

ADDI, SUBI, ANDI, ORI

| | Estado 1 | Estado 2 | Estado 3 | Estado 4 | Estado 5 |
|------------------|----------|----------|----------|----------|----------|
| read_reg | 0 | 1 | 0 | 0 | 0 |
| write_reg | 0 | 0 | 0 | 1 | 0 |
| read_data | 0 | 0 | 0 | 0 | 0 |
| write_data | 0 | 0 | 0 | 0 | 0 |
| immediat | 0 | 0 | 1 | 0 | 0 |
| function | 000000 | 000000 | 000000 | 000000 | 000000 |
| control_function | 0 | 0 | 0 | 0 | 0 |
| control_alu_data | 0 | 0 | 0 | 0 | 0 |
| branch | 00 | 00 | 00 | 00 | 00 |
| return | 0 | 0 | 0 | 0 | 0 |
| pop | 0 | 0 | 0 | 0 | 0 |
| push | 0 | 0 | 0 | 0 | 0 |
| write_pc | 0 | 0 | 0 | 0 | 1 |
| | | | | | |

LW

| | Estado 1 | Estado 2 | Estado 3 | Estado 4 | Estado 5 |
|----------|----------|----------|----------|----------|----------|
| read_reg | 0 | 1 | 0 | 0 | 0 |

| | | | | | |
|------------------|--------|--------|--------|--------|--------|
| write_reg | 0 | 0 | 0 | 0 | 1 |
| read_data | 0 | 0 | 0 | 1 | 0 |
| write_data | 0 | 0 | 0 | 0 | 0 |
| immediat | 0 | 0 | 1 | 0 | 0 |
| function | 000000 | 000000 | 100000 | 000000 | 000000 |
| control_function | 0 | 0 | 1 | 0 | 0 |
| control_alu_data | 0 | 0 | 0 | 1 | 0 |
| branch | 00 | 00 | 00 | 00 | 00 |
| return | 0 | 0 | 0 | 0 | 0 |
| pop | 0 | 0 | 0 | 0 | 0 |
| push | 0 | 0 | 0 | 0 | 0 |
| write_pc | 0 | 0 | 0 | 0 | 1 |
| | | | | | |

LW

| | Estado 1 | Estado 2 | Estado 3 | Estado 4 | Estado 5 |
|------------------|----------|----------|----------|----------|----------|
| read_reg | 0 | 1 | 0 | 0 | 0 |
| write_reg | 0 | 0 | 0 | 0 | 1 |
| read_data | 0 | 0 | 0 | 1 | 0 |
| write_data | 0 | 0 | 0 | 0 | 0 |
| immediat | 0 | 0 | 1 | 0 | 0 |
| function | 000000 | 000000 | 100000 | 000000 | 000000 |
| control_function | 0 | 0 | 1 | 0 | 0 |
| control_alu_data | 0 | 0 | 0 | 1 | 0 |
| branch | 00 | 00 | 00 | 00 | 00 |
| return | 0 | 0 | 0 | 0 | 0 |
| pop | 0 | 0 | 0 | 0 | 0 |
| push | 0 | 0 | 0 | 0 | 0 |
| write_pc | 0 | 0 | 0 | 0 | 1 |
| | | | | | |

CALL

| | Estado 1 | Estado 2 | Estado 3 | Estado 4 | Estado 5 |
|------------------|----------|----------|----------|----------|----------|
| read_reg | 0 | 0 | 0 | 0 | 0 |
| write_reg | 0 | 0 | 0 | 0 | 0 |
| read_data | 0 | 0 | 0 | 0 | 0 |
| write_data | 0 | 0 | 0 | 0 | 0 |
| immediat | 0 | 0 | 0 | 0 | 0 |
| function | 000000 | 000000 | 000000 | 000000 | 000000 |
| control_function | 0 | 0 | 0 | 0 | 0 |
| control_alu_data | 0 | 0 | 0 | 0 | 0 |
| branch | 00 | 00 | 00 | 00 | 00 |
| return | 0 | 0 | 0 | 0 | 0 |
| pop | 0 | 0 | 0 | 0 | 0 |
| push | 0 | 0 | 1 | 0 | 0 |
| write_pc | 0 | 0 | 0 | 0 | 1 |
| | | | | | |

RET

| | Estado 1 | Estado 2 | Estado 3 | Estado 4 | Estado 5 |
|------------------|----------|----------|----------|----------|----------|
| read_reg | 0 | 0 | 0 | 0 | 0 |
| write_reg | 0 | 0 | 0 | 0 | 0 |
| read_data | 0 | 0 | 0 | 0 | 0 |
| write_data | 0 | 0 | 0 | 0 | 0 |
| immediat | 0 | 0 | 0 | 0 | 0 |
| function | 000000 | 000000 | 000000 | 000000 | 000000 |
| control_function | 0 | 0 | 0 | 0 | 0 |
| control_alu_data | 0 | 0 | 0 | 0 | 0 |
| branch | 00 | 00 | 00 | 00 | 00 |

| | | | | | |
|----------|---|---|---|---|---|
| return | 0 | 0 | 0 | 0 | 0 |
| pop | 0 | 0 | 1 | 0 | 0 |
| push | 0 | 0 | 0 | 0 | 0 |
| write_pc | 0 | 0 | 0 | 0 | 1 |
| | | | | | |

JR (PENDENTE)

| | Estado 1 | Estado 2 | Estado 3 | Estado 4 | Estado 5 |
|------------------|----------|----------|----------|----------|----------|
| read_reg | 0 | 0 | 0 | 0 | 0 |
| write_reg | 0 | 0 | 0 | 0 | 0 |
| read_data | 0 | 0 | 0 | 0 | 0 |
| write_data | 0 | 0 | 0 | 0 | 0 |
| immediat | 0 | 0 | 0 | 0 | 0 |
| function | 000000 | 000000 | 000000 | 000000 | 000000 |
| control_function | 0 | 0 | 0 | 0 | 0 |
| control_alu_data | 0 | 0 | 0 | 0 | 0 |
| branch | 00 | 00 | 00 | 00 | 00 |
| return | 0 | 0 | 0 | 0 | 0 |
| pop | 0 | 0 | 0 | 0 | 0 |
| push | 0 | 0 | 1 | 0 | 0 |
| write_pc | 0 | 0 | 0 | 0 | 1 |
| | | | | | |

JPC (PENDENTE)

| | Estado 1 | Estado 2 | Estado 3 | Estado 4 | Estado 5 |
|------------|----------|----------|----------|----------|----------|
| read_reg | 0 | 0 | 0 | 0 | 0 |
| write_reg | 0 | 0 | 0 | 0 | 0 |
| read_data | 0 | 0 | 0 | 0 | 0 |
| write_data | 0 | 0 | 0 | 0 | 0 |

| | | | | | |
|------------------|--------|--------|--------|--------|--------|
| immediat | 0 | 0 | 0 | 0 | 0 |
| function | 000000 | 000000 | 000000 | 000000 | 000000 |
| control_function | 0 | 0 | 0 | 0 | 0 |
| control_alu_data | 0 | 0 | 0 | 0 | 0 |
| branch | 00 | 00 | 00 | 00 | 00 |
| return | 0 | 0 | 0 | 0 | 0 |
| pop | 0 | 0 | 0 | 0 | 0 |
| push | 0 | 0 | 1 | 0 | 0 |
| write_pc | 0 | 0 | 0 | 0 | 1 |
| | | | | | |

HALT (PENDENTE)

| | Estado 1 | Estado 2 | Estado 3 | Estado 4 | Estado 5 |
|------------------|----------|----------|----------|----------|----------|
| read_reg | 0 | 0 | 0 | 0 | 0 |
| write_reg | 0 | 0 | 0 | 0 | 0 |
| read_data | 0 | 0 | 0 | 0 | 0 |
| write_data | 0 | 0 | 0 | 0 | 0 |
| immediat | 0 | 0 | 0 | 0 | 0 |
| function | 000000 | 000000 | 000000 | 000000 | 000000 |
| control_function | 0 | 0 | 0 | 0 | 0 |
| control_alu_data | 0 | 0 | 0 | 0 | 0 |
| branch | 00 | 00 | 00 | 00 | 00 |
| return | 0 | 0 | 0 | 0 | 0 |
| pop | 0 | 0 | 0 | 0 | 0 |
| push | 0 | 0 | 1 | 0 | 0 |
| write_pc | 0 | 0 | 0 | 0 | 1 |
| | | | | | |

NOP (PENDENTE)

| | Estado 1 | Estado 2 | Estado 3 | Estado 4 | Estado 5 |
|--|----------|----------|----------|----------|----------|
|--|----------|----------|----------|----------|----------|

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|------------------|--------|--------|--------|--------|--------|
| | | | | | |
| read_reg | 0 | 0 | 0 | 0 | 0 |
| write_reg | 0 | 0 | 0 | 0 | 0 |
| read_data | 0 | 0 | 0 | 0 | 0 |
| write_data | 0 | 0 | 0 | 0 | 0 |
| immediat | 0 | 0 | 0 | 0 | 0 |
| function | 000000 | 000000 | 000000 | 000000 | 000000 |
| control_function | 0 | 0 | 0 | 0 | 0 |
| control_alu_data | 0 | 0 | 0 | 0 | 0 |
| branch | 00 | 00 | 00 | 00 | 00 |
| return | 0 | 0 | 0 | 0 | 0 |
| pop | 0 | 0 | 0 | 0 | 0 |
| push | 0 | 0 | 1 | 0 | 0 |
| write_pc | 0 | 0 | 0 | 0 | 1 |