**Semnale de control MIPS32**

Semnale de Branch opționale: ? ϵ {gez, ne, gtz}, se va înlocui ? cu o valoare din paranteză, dacă e cazul

Tipuri de operații care se pun în paranteză la ALUOp si ALUCtrl:

(+), (-), (&), (|), (^), (<<*l*), (<<*lv*), (>>*l*), (>>*a*), (<)

Semnificații: & - AND, | - OR, ^ *- XOR, l* *- logic, a - aritmetic, v - cu variabilă*

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| **Instrucțiune** | **Opcode**  *Instr[31-26]* | **RegDst** | **ExtOp** | **ALUSrc** | **Branch** | **Br\_?**  (opțional) | **Jump** | **JmpR** (opțional) | **MemWrite** | **MemtoReg** | **Reg Write** | **ALUOp[1:0]** | **function**  *Instr[5-0]* | **ALUCtrl[2:0]** |
| sll | 000000 | 1 | 0 | 0 | 0 |  | 0 |  | 0 | 0 | 1 | 10 | 000000 | 011(<<l) |
| slt | 000000 | 1 | 0 | 0 | 0 |  | 0 |  | 0 | 0 | 1 | 10 | 101010 | 101(<) |
| add | 000000 | 1 | 0 | 0 | 0 |  | 0 |  | 0 | 0 | 1 | 10 | 100000 | 000(+) |
| and | 000000 | 1 | 0 | 0 | 0 |  | 0 |  | 0 | 0 | 1 | 10 | 100100 | 010(&) |
| sub | 000000 | 1 | 0 | 0 | 0 |  | 0 |  | 0 | 0 | 1 | 10 | 100010 | 001(-) |
| srl | 000000 | 1 | 0 | 0 | 0 |  | 0 |  | 0 | 0 | 1 | 10 | 000010 | 100(>>l) |
| or | 000000 | 1 | 0 | 0 | 0 |  | 0 |  | 0 | 0 | 1 | 10 | 100101 | 111(|) |
| xor | 000000 | 1 | 0 | 0 | 0 |  | 0 |  | 0 | 0 | 1 | 10 | 100110 | 101(^) |
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| Slti | 001010 | 0 | 1 | 0 | 0 |  | 0 |  | 0 | 0 | 1 | 10 | xxxxxx | 110(l) |
| lw | 100011 | 0 | 1 | 1 | 0 |  | 0 |  | 0 | 1 | 1 | 00 | xxxxxx | 000(+) |
| sw | 101011 | 0 | 1 | 1 | 0 |  | 0 |  | 1 | 0 | 0 | 00 | xxxxxx | 000(+) |
| addi | 001000 | 0 | 1 | 1 | 0 |  | 0 |  | 0 | 0 | 1 | 00 | xxxxxx | 000(+) |
| beq | 000100 | 0 | 1 | 0 | 1 |  | 0 |  | 0 | 0 | 0 | 01 | xxxxxx | 001(-) |
| j | 000010 | 0 | 0 | 0 | 0 |  | 1 |  | 0 | 0 | 0 | 00 | xxxxxx | 000(+) |

URL: <https://drive.google.com/file/d/1SI7x2Gp_2m3SEkwnXuGt4ns4voYzpGBH/view?usp=sharing>