**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[2:0]** | **function**  *Instr[5-0]* | **ALUCtrl[3:0]** |
| ADD | 000000 | 1 | X | 0 | 0 |  | 0 |  | 0 | 0 | 1 | 000(R) | 100000 | 000 1 |
| SUB | 000000 | 1 | X | 0 | 0 |  | 0 |  | 0 | 0 | 1 | 000(R) | 100001 | 0 100 |
| SLL | 000000 | 1 | 0 | 1 | 0 |  | 0 |  | 0 | 0 | 1 | 000(R) | 100010 | 0 110 |
| SRL | 000000 | 1 | 0 | 1 | 0 |  | 0 |  | 0 | 0 | 1 | 000(R) | 100011 | 00 11 |
| AND | 000000 | 1 | X | 0 | 0 |  | 0 |  | 0 | 0 | 1 | 000(R) | 100100 | 00 10 |
| OR | 000000 | 1 | X | 0 | 0 |  | 0 |  | 0 | 0 | 1 | 000(R) | 100101 | 0 111 |
| XOR | 000000 | 1 | X | 0 | 0 |  | 0 |  | 0 | 0 | 1 | 000(R) | 100110 | 0 101 |
| JR | 100111 | 0 | X | X | 0 |  | 0 | 1 | 0 | 0 | 0 | X | x | X |
| ADDI | 000001 | 0 | 1 | 1 | 0 |  | 0 |  | 0 | 0 | 1 | 001(+) | x | x |
| LW | 000010 | 0 | 1 | 1 | 0 |  | 0 |  | 0 | 1 | 1 | 001(+) | x | X |
| SW | 000011 | 0 | 1 | 1 | 0 |  | 0 |  | 1 | 0 | 0 | 001(+) | x | X |
| BEQ | 000100 | X | 1 | 0 | 1 |  | 0 |  | 0 | 0 | 0 | 100(-) | x | X |
| ANDI | 000101 | 0 | 1 | 1 | 0 |  | 0 |  | 0 | 0 | 0 | 010(&) | x | X |
| SLTI | 000110 | 0 | 1 | 1 | 0 |  | 0 |  | 0 | 0 | 1 | 111(slti) | x | 1111 |
| J | 000111 | X | 1 | x | 0 |  | 1 |  | 0 | 0 | 0 | X | X | X |
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URL: <https://drive.google.com/file/d/1SI7x2Gp_2m3SEkwnXuGt4ns4voYzpGBH/view?usp=sharing>