|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  |  | OP  rA, rB | rrmov/cmovXX  rA, rB | irmov  V, rB | rmmov  rA, D(rB) | mrmov  D(rB), rA | jXX  Dest | call  Dest | push  rA | ret | pop  rA | iadd  V, rB | leave |
| Fetch | icode:ifun | M1[PC] | M1[PC] | M1[PC] | M1[PC] | M1[PC] | M1[PC] | M1[PC] | M1[PC] | M1[PC] | M1[PC] | M1[PC] | M1[PC] |
|  | rA:rB | M­1[PC+1] | M­1[PC+1] | M­1[PC+1] | M­1[PC+1] | M­1[PC+1] |  |  | M­1[PC+1] |  | M­1[PC+1] | M1[PC+1] |  |
|  | valC |  |  | M8[PC+2] | M8[PC+2] | M8[PC+2] | M8[PC+2] | M8[PC+2] |  |  |  | M8[PC+2] |  |
|  | valP | PC+2 | PC+2 | PC+10 | PC+10 | PC+10 | PC+9 | PC+9 | PC+2 | PC+1 | PC+2 | PC+10 | PC+1 |
| Decode | valA | R[rA] | R[rA] |  | R[rA] | R[rA] |  |  | R[rA] | R[%rsp] | R[%rsp] |  | R[%rbp] |
|  | valB | R[rB] |  |  | R[rB] | R[rB] |  | R[%rsp] | R[%rsp] | R[%rsp] | R[%rsp] | R[rB] | R[%rbp] |
| Execute | valE | valB OP valA |  | 0+valC | valB+valC | valB+valC |  | valB+(‒8) | valB+(‒8) | valB+8 | valB+8 | valB+valC | valB+8 |
|  | cnd |  | Cond(CC, ifun) |  |  |  | Cond(CC, ifun) |  |  |  |  |  |  |
| Memory | M8[valE] |  |  |  | valA |  |  | valP | valA |  |  |  |  |
|  | valM |  |  |  |  | M8[valE] |  |  |  | M8[valA] | M8[valA] |  | M8[valA] |
| Writeback | R[%rsp] |  |  |  |  |  |  | valE | valE | valE | valE |  | valE |
|  | R[rA] |  |  |  |  | valM |  |  |  |  | valM |  |  |
|  | R[rB] | ValE | valE if cnd | valE |  |  |  |  |  |  |  | valE | R[%rbp] = valM |
| PC Updt. | PC | valP | valP | valP | valP | valP | cnd?valC:valP | valC | valP | valM | valP | valP | valP |