|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| *addi $1,$0,8* |  | IF | $0,8 | add | / | $1 |  |  |  |  |
| *ori $2,$0,12* |  |  | IF | $0,12 | or | / | $2 |  |  |  |
| *add $3,$1,$2* |  |  |  | IF | $1,$2 | add | / | $3 |  |  |
| *sub $4,$2,$1* |  |  |  |  | IF | $2,$1 | sub | / | $4 |  |
|  |  |  |  |  |  |  |  |  |  |  |
| *bne $1,$2,6* |  | IF | $1,$2 | sub | / | / |  |  |  |  |
| *add $3,$1,$2* |  |  | IF | $1,$2 | / | / | / |  |  |  |
| *sub $4,$2,$1* |  |  |  | IF | / | / | / |  |  |  |
| *sw $2 10($8)* |  |  |  |  | IF | $8,10 | add | MEM | / |  |
|  |  |  |  |  |  |  |  |  |  |  |
| *lw $4 10($8)* |  | IF | $8,10 | add | MEM | $4 |  |  |  |  |
| *beq $1,$4,6* |  |  | IF | STALL | $1,$4 | sub | / | / |  |  |
| *andi $7,$2,9* |  |  |  |  | IF | $2,9 | and | / | $7 |  |
|  |  |  |  |  |  |  |  |  |  |  |
| *srl $2,$1,4* |  | IF | $1,4 | srl | / | $2 |  |  |  |  |
| *sra $1,$2,4* |  |  | IF | $2,4 | sra | / | $1 |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |
| *Jal 1A* |  | IF | ID | EX | / | $31 |  |  |  |  |
| *J 1D* |  |  | IF | ID | / | / | / |  |  |  |
| *sll $3,$2,4* |  |  |  | IF | / | / | / | / |  |  |
| *xor $15,$2,$3* |  |  |  |  | IF | $2,$3 | xor | / | $15 |  |
|  |  |  |  |  |  |  |  |  |  |  |
| *Jr 17* |  | IF | $31 | EX | / | / |  |  |  |  |
| *sra $1,$2,4* |  |  | IF | $2,4 | / | / | / |  |  |  |
| *sra $1,$2,4* |  |  |  | IF | / | / | / | / |  |  |
| *J 1D* |  |  |  |  | IF | ID | EX | / | / |  |
|  |  |  |  |  |  |  |  |  |  |  |
| *J 1D* |  | IF | ID | EX | / | / |  |  |  |  |
| *sll $3,$2,4* |  |  | IF | $2,4 | / | / | / |  |  |  |
| *srl $2,$1,4* |  |  |  | IF | / | / | / | / |  |  |
| *sra $1,$2,4* |  |  |  |  | IF | $2,4 | sra | / | $1 |  |
|  |  |  |  |  |  |  |  |  |  |  |