|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Instr | Format | Op | Example |  |
| ADD | 100 xx, yy     Rx Ry | 100 | ADD r3, r2 | r3 = r3 + r2 |
| LWD | 001 xx, yy     Rx Ry | 001 | LWD r0, [r1] | r0 = M[r1] |
| SWD | 011 xx, yy     Rx Ry | 011 | SWD r1, [r2] | M[r2] = r1 |
| INIT | 101 xx, yy     Rx Ry | 101 | INIT r0, 1 | r0 = 1 |
| ADDI | 111 xx, yy     Rx Ry | 111 | ADDI r0, 2 | r0 = r0 + 2 |
| SLE | 110 xx, yy     Rx Ry | 110 | SLE r1, r2 | If r1 < r2  r3 = 1  Else r3 = 0 |
| JIF | 010 xxxx     imm | 010 | JIF -7 | If r3 = 1 =>  PC = PC + imm  Else PC = PC + 1 |
| XOR | 0001 x, yy      Rx Ry | 0001 | XOR r1, r2 | r1 ^= r2 |
| SLER | 0000 xx, y      Rx Ry  (Ry cannot be r1)  (Rx must be r0) | 0000 | SLER r1, r0 | If r1 < r0  r3 = 1  Else r3 = 0 |
| SUBR0 | 00000 yy       Ry | 00000 | SUBR0 r2 | r0 = r0 - r2 |
| ADDN | 1111100 | 1111100 | ADDN | r3 = r3 - 1 |
| CNTR0 | 0001000 | 0001000 | CNTR0 | Count the number of bits with a value of ‘1’ in r0 |
| HLT | 0001111 | 0001111 | HLT | Stop the program |