|  |  |  |
| --- | --- | --- |
| **INSTRUCTION** | **INSTRUCTION TYPE** | **32 BIT CODE** |
| add r6, r2, r1 | R | |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | 0000000 | 00001 | 00010 | 000 | 00110 | 0110011 | |
| sub r7, r1, r2 | R | |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | 0100000 | 00010 | 00001 | 000 | 00111 | 0110011 | |
| and r8, r1, r3 | R | |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | 0000000 | 00011 | 00001 | 111 | 01000 | 0110011 | |
| or r9, r2, r5 | R | |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | 0000000 | 00101 | 00010 | 110 | 01001 | 0110011 | |
| xor r10, r1, r4 | R | |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | 0000000 | 00100 | 00001 | 100 | 01010 | 0110011 | |
| slt r11, r2, r4 | R | |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | 0000000 | 00100 | 00010 | 010 | 01011 | 0110011 | |
| addi r12, r4, 5 | I | |  |  |  |  |  | | --- | --- | --- | --- | --- | | 0000000 | 00100 | 01100 | 0000000000000101 | 0010011 | |
| sw r3, r1, 2 | S | |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | 0000000 | 00001 | 00011 | 010 | 00010 | 0100011 | |
| lw r13, r1, 2 | I | |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | 0000000 | 00001 | 01101 | 010 | 00010 | 0000011 | |
| beq r0, r0, 15 | B | |  |  |  |  |  | | --- | --- | --- | --- | --- | | 0001000 | 00000 | 00000 | 0000000000001111 | 1100011 | |
| bne r0, r1, 20 | B | |  |  |  |  |  | | --- | --- | --- | --- | --- | | 0001011 | 00000 | 00001 | 0000000000010101 | 1100011 | |
| sll r15, r1, r2(2) |  | |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | 0000000 | 00010 | 00010 | 001 | 00010 | 0010011 |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | 0000000 | 00010 | 01111 | 001 | 00010 | 0110011 | |
| srl r16, r14, r2(2) |  | |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | 0000000 | 00010 | 00010 | 001 | 00010 | 0010011 |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | 0000000 | 01110 | 10000 | 101 | 00010 | 0110011 | |