|  |  |  |
| --- | --- | --- |
| **ADD** | Add $2, $3, $4 | Opcode = 0 Rs = 3 Rt = 4 Rd = 2 Func = 000010  000000 00011 00100 00010 00000 000010 |
| **ADDI** | Addi $2, $3, 12  Addi $10, $10, 1 | Opcode = 8 Rs = 3 Rt = 2 imm = 12  001000 00011 00010 0000000000001100  314a001 |
| **ADDIU** | Addiu $8, $8, 1 | 25080001 |
| **ADDU** | Addu $2, $0, $4 | 00000000000001000001000000100001 |
| **AND** |  |  |
| **ANDI** |  |  |
| **BEQ** | Beq $3, $4, 4 | Opcode = 4 Rs = 3 Rt = 4imm = 4  000100 00011 00100 0000000000000100 |
| **BGEZ** | Bgez $0, -28  Bgez $0 -24 | 0401fff9  00000100000000011111111111111100 |
| **BGEZAL** |  |  |
| **BGTZ** |  |  |
| **BLEZ** |  |  |
| **BLTZ** |  |  |
| **BLTZAL** |  |  |
| **BNE** | Bne $2, $0, 12 | 00010100010000000000000000000011 |
| **DIV** |  |  |
| **DIVU** |  |  |
| **J** | J 128 | Opcode address(26 bit)  000010 0…0100000 |
| **JAL** |  |  |
| **JALR** | Jalr $3 | Opcode =0 Rs = 3 Rt = 0 Rd = 31 Func = 001001  000000 00011 00000 11111 00000 001001 |
| **JR** | Jr $31 | 03e00008  00000011111000000000000000001000 |
| **LB** |  |  |
| **LBU** | Lbu $10, 0($8) | 910a0000 |
| **LH** |  |  |
| **LHU** |  |  |
| **LUI** | Lui $9, -1 | 3c09ffff |
| **LW** | Lw $10, 8($9) | 8d2a0008 |
| **LWL** |  |  |
| **LWR** |  |  |
| **MFHI** |  |  |
| **MFLO** |  |  |
| **MTHI** |  |  |
| **MTLO** |  |  |
| **MULT** |  |  |
| **MULTU** |  |  |
| **NOR** |  |  |
| **OR** |  |  |
| **ORI** |  |  |
| **RFE** | Will not be tested | 0x20000000 |
| **SB** |  |  |
| **SH** |  |  |
| **SLL** |  |  |
| **SLLV** |  |  |
| **SLT** |  |  |
| **SLTI** |  |  |
| **SLTIU** |  |  |
| **SLTU** |  |  |
| **SRA** |  |  |
| **SRAV** |  |  |
| **SRL** |  |  |
| **SRLV** |  |  |
| **SUB** |  |  |
| **SUBU** |  |  |
| **SW** | Sw $2, 128($3) | Opcode Rs= 3 Rt=00010 imm  101011 00011 00010 0000000010000000 |
| **SWL** |  |  |
| **SWR** |  |  |
| **XOR** |  |  |
| **XORI** |  |  |
| **SYSCALL** |  |  |
| **BREAK** |  |  |
| **UNIMP** |  |  |
| **ILLEGL** |  |  |

Red means –d was used

Highlighted means tested with -a