|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| # | Test | F[2:0] | A | B | Y | Zero |
| 1 | ADD 0+0 | 2 | 00000000 | 00000000 | 00000000 | 1 |
| 2 | ADD 0+(-1) | 2 | 00000000 | FFFFFFFF | FFFFFFFF | 0 |
| 3 | ADD 1+(-1) | 2 | 00000001 | FFFFFFFF | 00000000 | 1 |
| 4 | ADD 0xFF+1 | 2 | 000000FF | 00000001 | 00000100 | 0 |
| 5 | SUB 0-0 | 6 | 00000000 | 00000000 | 00000000 | 1 |
| 6 | SUB 0-(-1) | 6 | 00000000 | FFFFFFFF | 00000001 | 0 |
| 7 | SUB 1-1 | 6 | 00000001 | 00000001 | 00000000 | 1 |
| 8 | SUB 0x100-1 | 6 | 00000100 | 00000001 | 000000FF | 0 |
| 9 | SLT 0,0 | 7 | 00000000 | 00000000 | 00000000 | 1 |
| 10 | SLT 0,1 | 7 | 00000000 | 00000001 | 00000001 | 0 |
| 11 | SLT 0,-1 | 7 | 00000000 | FFFFFFFF | 00000000 | 1 |
| 12 | SLT 1,0 | 7 | 00000001 | 00000000 | 00000000 | 1 |
| 13 | SLT -1,0 | 7 | FFFFFFFF | 00000000 | 00000001 | 0 |
| 14 | AND 0xFFFFFFFF, 0xFFFFFFFF | 0 | FFFFFFFF | FFFFFFFF | FFFFFFFF | 0 |
| 15 | AND 0xFFFFFFFF, 0x12345678 | 0 | FFFFFFFF | 12345678 | 12345678 | 0 |
| 16 | AND 0x12345678, ~0x02040608 | 4 | 12345678 | FDFBF9F7 | 10305070 | 0 |
| 17 | AND 0xAAAAAAAA, ~0xFFFF0000 | 4 | AAAAAAAA | 0000FFFF | 0000AAAA | 0 |
| 18 | OR 0xFFFFFFFF, 0xFFFFFFFF | 1 | FFFFFFFF | FFFFFFFF | FFFFFFFF | 0 |
| 19 | OR 0x12345678, 0x87654321 | 1 | 12345678 | 87654321 | 97755779 | 0 |
| 20 | OR 0x00000000, 0xFFFFFFFF | 1 | 00000000 | FFFFFFFF | FFFFFFFF | 0 |
| 21 | OR 0x00000000, 0x00000000 | 1 | 00000000 | 00000000 | 00000000 | 1 |
| 22 | OR 0x00000000, ~0x00000000 | 5 | 00000000 | FFFFFFFF | FFFFFFFF | 0 |
| 23 | NA 0x00000000, 0x00000000 | 3 | 00000000 | 00000000 | 00000000 | 1 |
| 24 | SLT 1, -1 | 7 | 00000001 | FFFFFFFF | 00000000 | 1 |
| 25 | SUB -1-(-1) | 6 | FFFFFFFF | FFFFFFFF | 00000000 | 1 |

Demore

CE3 – Test Cases

NOTE: Cases 23-25 are personally added tests to attempt to test limitations of ALU