|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Assembly | Eq | Instruct | Opcode | Rm | Shamt | Address | Op | Rn | Rd/Rt | Hex | Binary | Expected |
| Add X2, X5, X4 | Rd = Rn + Rm | ADD | 10001011000 | 00101 | 000000 |  |  | 00100 | 00010 | 8B0400A2 | 1000101100000100 0000000010100010 |  |
| And X2, X3, X1 | Rd = Rn & Rm | AND | 10001010000 | 00011 | 000000 |  |  | 00001 | 00010 | 8A010062 | 1000101000000001 0000000001100010 |  |
| Sub X6, X2, X7 | Rd = Rn & Rm | SUB | 11001011000 | 00010 | 000000 |  |  | 00111 | 00110 | CB0200E6 | 1100101100000010 0000000011100110 |  |
| Ldur X5, [X2 #0] | Rt = R[Rn + DT] | LDUR | 11111000010 |  |  | 000000000 | 00 | 00010 | 00101 | F8400045 | 1111100001000000 0000000001000101 |  |
| Cbz X6 #8 | PC = PC + Ad | CBX | 10110100 |  |  | 0000000000 000001000 |  |  | 00110 | B4000106 | 1011010000000000 0000000100000110 |  |
| Stur X5, [X2 #16] | Rt = R[Rn + DT] | STUR | 11111000000 |  |  | 000010000 | 00 | 00101 | 00010 | F80100A2 | 1111100000000001 0000000010100010 |  |
| B #4 | PC = PC + Ad | B | 000101 |  |  | 000000000 000000000 00000100 |  |  |  | 14000004 | 0001010000000000 0000000000000100 |  |
| add X4, X5, X2 |  | ADD | 10001011000 | 00101 | 000000 |  |  | 00010 | 00100 | 8B050044 | 1000101100000101 0000000001000100 |  |