



The And instruction performs a logical bit by bit “and” between a register and a fullword in memory. Operand 1, the target, is a register and Operand 2, the source, specifies a fullword in memory. The fullword in memory is anded internally with the fullword in the register and the result is placed in the register. The fullword in memory is not changed. The table below shows the results of “anding” two bits together.

Bit 1	Bit 2	Result
0	0	0
0	1	0
1	0	0
1	1	1

This instruction sets the condition code as follows:

- 0 if all target bits are set to 0. Test this condition with **BZ** or **BNZ**.
- 1 if any target bit is set to 1. Test this condition with **BM** or **BNM**.

Examples

Some Unrelated Ands

```
R4 = X'FFFFFFFF'    ALL 1'S
R5 = X'00000000'    ALL 0'S
R6 = X'0000148C'    0000000000000000000000001010010001100
```

```
FIELD1 DC X'0000148C'
FIELD2 DC X'00000000'
FIELD3 DC X'FFFFFFFF'
FIELD4 DC X'12345678'
```

```
N    R4, FIELD1    R4 = X'0000148C'  Condition Code = 1
N    R4, FIELD2    R4 = X'00000000'  Condition Code = 0
N    R4, FIELD3    R4 = X'FFFFFFFF'  Condition Code = 1
N    R4, FIELD4    R4 = X'12345678'  Condition Code = 1
N    R5, FIELD1    R5 = X'00000000'  Condition Code = 0
N    R5, FIELD2    R5 = X'00000000'  Condition Code = 0
N    R5, FIELD3    R5 = X'00000000'  Condition Code = 0
N    R5, FIELD4    R5 = X'00000000'  Condition Code = 0
N    R6, FIELD1    R6 = X'0000148C'  Condition Code = 1
N    R6, FIELD2    R6 = X'00000000'  Condition Code = 0
```

```
N    R6, FIELD3    R6 = X'0000148C' Condition Code = 1
N    R6, FIELD4    R6 = X'00001408' Condition Code = 1
```