The Compare Register instruction is used to compare a binary fullword in a register, designated by Operand 1, with another fullword in a register, designated by Operand 2. The operands are compared as 32-bit signed binary integers. The instruction sets the condition code to indicate how Operand 1 compares to Operand 2:

<table>
<thead>
<tr>
<th>Condition Code</th>
<th>Meaning</th>
<th>Test With</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>Operand 1 = Operand 2</td>
<td>BE, BZ</td>
</tr>
<tr>
<td>1</td>
<td>Operand 1 &lt; Operand 2</td>
<td>BL, BM</td>
</tr>
<tr>
<td>2</td>
<td>Operand 1 &gt; Operand 2</td>
<td>BH, BP</td>
</tr>
</tbody>
</table>

The following example sets the condition code by comparing registers 9 and 6.

The contents of the fullword in register 9, x’FFFFFFFF’ = -1, is compared to the contents of register 6 which contains x’000001AF’ = 431. Since the contents of the Operand 1 register is less than the contents of the Operand 2 register, the condition code is set to “Low”. The condition code in the diagram above is specified using 2 binary digits. After comparison, the condition code is set to a binary 01 which is 1 in decimal - a “Low” condition.
Some Unrelated Compare Registers

R4 = X'FFFFFFFD5'  -43 IN 2’S COMPLEMENT
R5 = X'00000028'  +40 IN 2’S COMPLEMENT
R6 = X'00000004'   +4 IN 2’S COMPLEMENT

CR  R4,R5  CONDITION CODE = LOW
CR  R5,R4  CONDITION CODE = HIGH
CR  R4,R4  CONDITION CODE = EQUAL
CR  R6,R5  CONDITION CODE = LOW
CR  R5,R5  CONDITION CODE = EQUAL