

### 3.10.2 Enumerated type ranges

A range of enumeration elements can be specified automatically, via the following syntax:

**Table 3-3: Enumeration element ranges**

<code>name</code>	Associates the next consecutive number with <code>name</code> .
<code>name = C</code>	Associates the constant <code>C</code> with <code>name</code>
<code>name [N]</code>	Generates <code>N</code> names in the sequence: <code>name0</code> , <code>name1</code> , ..., <code>nameN-1</code> . Each generated name is associated the next consecutive number. Optionally, a constant can be assigned to the generated names to associate that constant to the first generated name; subsequent generated names are associated consecutive values. <code>N</code> must be an integral literal constant.
<code>name [N:M]</code>	Generates a sequence of names starting with <code>nameN</code> and incrementing or decrementing until reaching name <code>nameM</code> .
<code>name [N:M] = C</code>	Optionally, a constant can be assigned to the generated names to associate that constant to the first generated name; subsequent generated names are associated consecutive values. <code>N</code> and <code>M</code> must be integral literal constants.

For example:

```
typedef enum { add=10, sub[5], jmp[6:8] } E1;
```

This example defines the enumerated type `E1`, which assigns the number 10 to the enumerated label `add`. It also creates the enumerated labels `sub0`, `sub1`, `sub2`, `sub3`, and `sub4`, and assigns them the values 11..15, respectively. Finally, the example creates the enumerated labels `jmp6`, `jmp7`, and `jmp8`, and assigns them the values 16-18, respectively.

```
enum { reg[1] = 1, reg[2:4] = 10 } vr;
```

The example above declares enumerated variable `vr`, which creates the enumerated labels `reg0` and `reg1`, which are assigned the values 1 and 2, respectively. Next, it creates the enumerated labels `reg2`, `reg3`, and `reg4`, and assigns them the values 10, 11, and 12.