## 5.288 set_value_precede

**DESCRIPTION**

**Constraint**

```
set_value_precede(S, T, VARIABLES)
```

**Arguments**

- `S` : int
- `T` : int
- `VARIABLES` : collection(var−svar)

**Restrictions**

- `S ≠ T`
- `required(VARIABLES, var)`

**Purpose**

If there exists a set variable \( v_1 \) of `VARIABLES` such that \( S \) does not belong to \( v_1 \) and \( T \) does, then there also exists a set variable \( v_2 \) preceding \( v_1 \) such that \( S \) belongs to \( v_2 \) and \( T \) does not.

**Example**

```
(2, 1, (var = {0, 2}, var = {0, 1}, var = ∅, var = {1})
```

The `set_value_precede` constraint holds since the first occurrence of value 2 precedes the first occurrence of value 1.

**Algorithm**

A filtering algorithm for maintaining value precedence on a sequence of set variables is presented in [230]. Its complexity is linear to the number of variables of the collection `VARIABLES`.

**See also**

specialisation: `int_value_precede` (sequence of set variables replaced by sequence of domain variables).

**Keywords**

- **constraint arguments**: constraint involving set variables.
- **constraint type**: order constraint.
- **symmetry**: symmetry, indistinguishable values, value precedence.