

# Sort operator

Sort all valid elements according to a list of attribute values.

## Parameter

- **attributes**: The list of attribute names to use for sorting
- **ascending**: Optional boolean values that flags, if the given list of attributes should be sorted in ascending or descending order. Default value is descending.

*Note: Because of the non-decreasing order of time in a data stream sorting is only possible inside a relation with equal start and end timestamp. Output is only created **after** an element is read with a higher start time stamp than the highest end timestamp!*

So in the following example, output is created after reading the last "a"-value.

a [0,10] --> no output

c [0,10] --> no output

b [0,10] --> no output

a [10,20] --> Output of three tuples a [0,10], b [0,10], c [0,10]

## Example

### PQL

#### Sort Operator

```
relation = ELEMENTWINDOW({SLIDE = 5, SIZE=5}, input)

/// Sort the stream by the attribute value id.
output = SORT({
    attributes = ['id']
}, relation)

/// Sort the stream by the attribute id in ascending order.
output = SORT({
    attributes = ['id'],
    ascending = ['true']
}, relation)
```