Example of Reduce Operator
SciCumulus/C²

This document is responsible to present an example, which we modeled a concrete workflow in SCC XML format to represent the behavior of Reduce operator. For this modeled workflow, it is possible to execute SCC, if the requirements were corrected installed and some parameters on XML file were changed, accordingly to your machine. Also, this example is composed of two activities. Figure 1 presents the structure of this workflow.
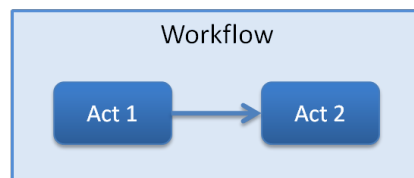

Figure 1. Default workflow structure for SCC example

1. Reduce

This example presents a workflow with two activities. The first activity is ruled by *Reduce* operator. Also, the second activity is ruled by *Map* operator. The *Reduce* operator is characterized by production of a single tuple in the output relation from each subset of tuples consumed in the input relation, that are grouped by a set of attributes in input relation. The Figure 2 shows the input and output relations using a *Reduce* operator.

Input Relation

ID	T1	T2
0	6000	3400
1	6000	2300
2	3000	9000
3	3000	3400
4	2000	2300
5	2000	9000

Reduce (T1 operand)

Output Relation

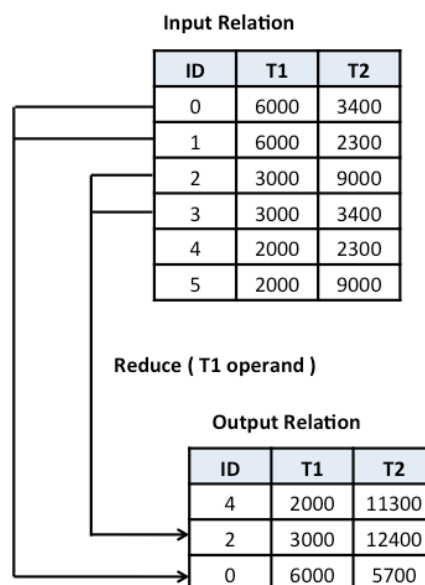| ID	T1	T2
4	2000	11300
2	3000	12400
0	6000	5700

Figure 2. The input and output relations using *Reduce* operator