

Create Consolidated Data Tables merging a list of multiple data tables where we can also

* Dynamically Create new columns on the fly
* Apply filter based on some conditions
* Sort the data table by desc, asc
* Top N Rows
* Apply Excel formula on the fly
* Remove duplicates

**Input Parameters:**

1. InputDTList : (List<DataTables>)
2. AQLString (String)

**Output Parameters:**

1. ResultDT (DataTable)
2. ResultCSV(String)

**Awesome Query Language (AQL)**

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| Name | Syntax | Example | Description |
| Merge | DT1+DT2+DT3+DT4 | 1+2+3+4 | Using Mathematical Operators Like (+) Plus Easily Do Merge |
| Remove Duplicate Rows | Remove-Duplicates | Remove-Duplicates | It will remove all duplicate rows from the input data table |
| Select Specific Columns | Select [Column List] | Select Employee, Salary, Department | Select only specific columns from the data table |
| On the Fly Columns | Select [new Column Name] = [Formula] | Select Price, Qty, Total=Price\*Qty | Can apply any formula or expression using header names |
| Filter | Where [Column Name] (Operator) [Value/Expression] | Where Salary >50000 | By using *where* keyword can use all kind of filter conditions like <, >, >=, <=, StartsWith, EndsWith, IsEmpty, Contains, Not Contains |
| Top N | Top N | Top 10 | It will show top 10 rows from the Data Table |
| Auto Increment (Row Num) | [Column Name] =Row ([Column Name]) | Select SNo=Row(SNo) | On the fly Row Number will generate with auto increment by 1 |
| Excel Formulas | Select [New Column Name] =[Excel Formula] | Select EmployeeLength=Len(Employee) | Apply any excel formula with column headers |
| Order By | Order By [Column Name] [OrderType] | Order By Employee Desc | Arrange data table using column any order type (Descending / Ascending)  By Default its Ascending Order) |

**AQLString:**

Lets say there are 4 different datatables with same schema then we can apply a series of operations as mentioned below using this custom activity

1+2+3+4 | Remove-Duplicates | where Salary > 40000 | Order By Salary Desc | Select SNo=Row(SNo), FirstName, LastName, EmployeeName=FirstName&LastName, Salary, EmployeeType , YearlySalary =Salary\*12 | Top 5

Note: the above usecase is just an example to show that we can create any such series of operations on the fly with this custom activity

In general, the same series of operation will take around 14 hours if performed manually. With this custom activity it will take just take few seconds to form this query using AQL.