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**Group No.** – 3

## Requirements :

### Data Flow Data Transformation using Azure Data Factory :

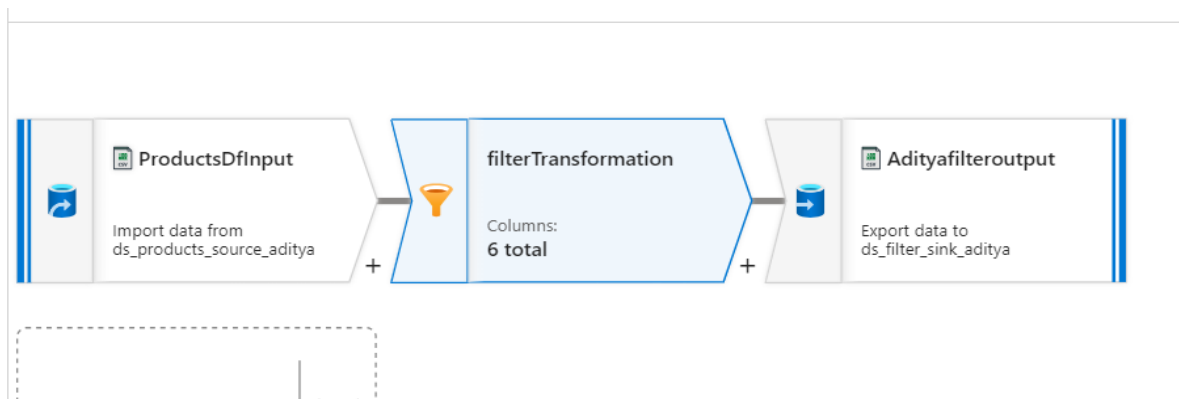
#### Columns in the products.csv file:

- **product\_id**: Unique ID for each product.
- **product\_name**: Name of the product.
- **category**: Category of the product (e.g., Smartphone, Laptop, etc.).
- **price**: Price of the product.
- **quantity**: Quantity available in stock.
- **store\_location**: Location of the store selling the product.

#### 1. Filter Transformation

- **Use Case**: Filter products based on certain conditions like category, price range, or quantity.
- Example:
  - Filter products where **price > 1000**.
  - Filter products from the "**Smartphone**" category.
  - Filter products that are available in stock (i.e., **quantity > 0**).

## Architecture :



## Filter Query :

Filter settings

Optimize

Inspect

Data preview

Output stream name \*

filterTransformation

Description

Filtering rows using expressions on columns 'price, category, quantity'

Incoming stream \*

ProductsDfInput

Filter on \*

toInteger(price) > 100&&  
category == 'Smartphone' &&  
toInteger(quantity) > 0

x✓

## Output :

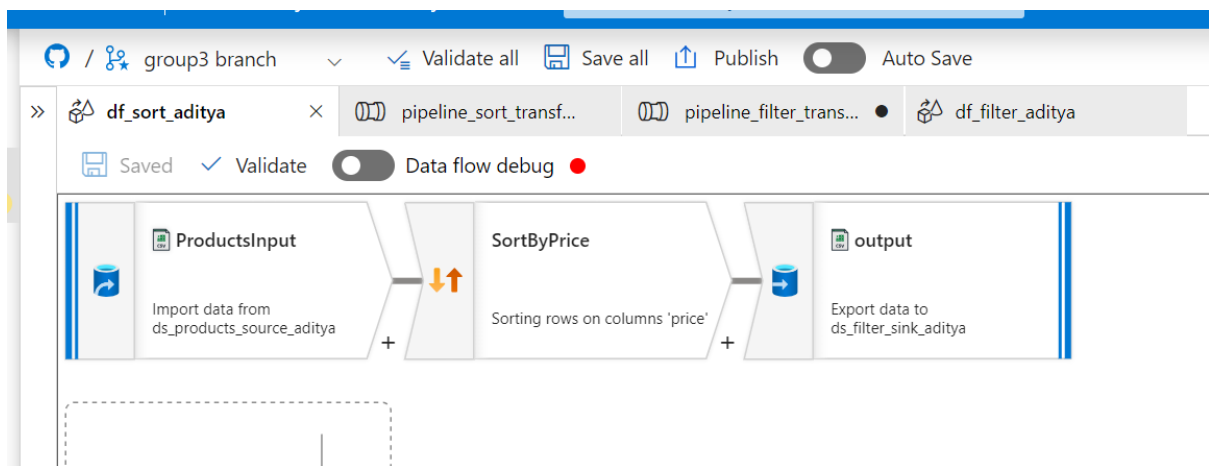
sa12decidl/Containers/requirements/Group3 / Aditya\_Kumar\_Output

product_id	product_name	category	price	quantity	store_location
1	Apple iPhone 14	Smartphone	999.99	100	New York
2	Samsung Galaxy S23	Smartphone	849.99	150	Los Angeles
9	Google Pixel 7	Smartphone	599.99	180	Chicago
11	Apple iPhone 13	Smartphone	799.99	130	Chicago
12	OnePlus 10 Pro	Smartphone	899.99	160	San Francisco
50	Samsung Galaxy Z Flip 4	Smartphone	999.99	100	Los Angeles
64	Apple iPhone 12	Smartphone	699.99	170	Chicago
76	Samsung Galaxy A52	Smartphone	499.99	200	San Francisco
79	Apple iPhone 11	Smartphone	699.99	160	Los Angeles
88	Google Pixel 6 Pro	Smartphone	899.99	140	Los Angeles
95	Apple iPhone 12 Pro Max	Smartphone	1099.99	50	Los Angeles
106	Samsung Galaxy Z Fold 4	Smartphone	1799.99	50	San Francisco

## 2. Sort Transformation

- **Use Case:** Sort the data based on a specific column, such as sorting products by price or quantity.
- **Example:**
  - Sort products by **price** in **descending order**.

### Architecture :



### Sort Query :

Sort settings	Optimize	Inspect	Data preview						
Output stream name *	<input type="text" value="SortByPrice"/>		<a href="#">Learn more</a>						
Description	<input type="text" value="Sorting rows on columns 'price'"/>		<a href="#">Reset</a>						
Incoming stream *	<input type="text" value="ProductsInput"/>								
Options *	<input type="checkbox"/> Case insensitive <input type="checkbox"/> Sort only within partition								
Sort conditions *	<table border="1"><thead><tr><th>ProductsInput's column</th><th>Order</th><th>Nulls first</th></tr></thead><tbody><tr><td><input type="text" value="toInteger(price)"/></td><td><input type="text" value="Descending"/></td><td><input type="checkbox"/></td></tr></tbody></table>			ProductsInput's column	Order	Nulls first	<input type="text" value="toInteger(price)"/>	<input type="text" value="Descending"/>	<input type="checkbox"/>
ProductsInput's column	Order	Nulls first							
<input type="text" value="toInteger(price)"/>	<input type="text" value="Descending"/>	<input type="checkbox"/>							

Output:

sa12decidl/Containers/requirements/Group3 / Aditya\_Kumar\_Output

product_id	product_name	category	price	quantity	store_location92
120	Sony Alpha 7 III Camera	Camera	2299.99	30	Chicago
6	Apple MacBook Pro	Laptop	1999.99	30	Los Angeles
41	Asus ROG Strix Laptop	Laptop	1999.99	20	Chicago
101	Dell XPS 17 Laptop	Laptop	1899.99	70	Chicago
23	Canon EOS R Camera	Camera	1799.99	70	Chicago
67	Sony Alpha 7C Camera	Camera	1799.99	50	Chicago
72	HP Elite Dragonfly Laptop	Laptop	1799.99	40	San Francisco
106	Samsung Galaxy Z Fold 4	Smartphone	1799.99	50	San Francisco
105	HP Elite Dragonfly Laptop	Laptop	1799.99	40	San Francisco