

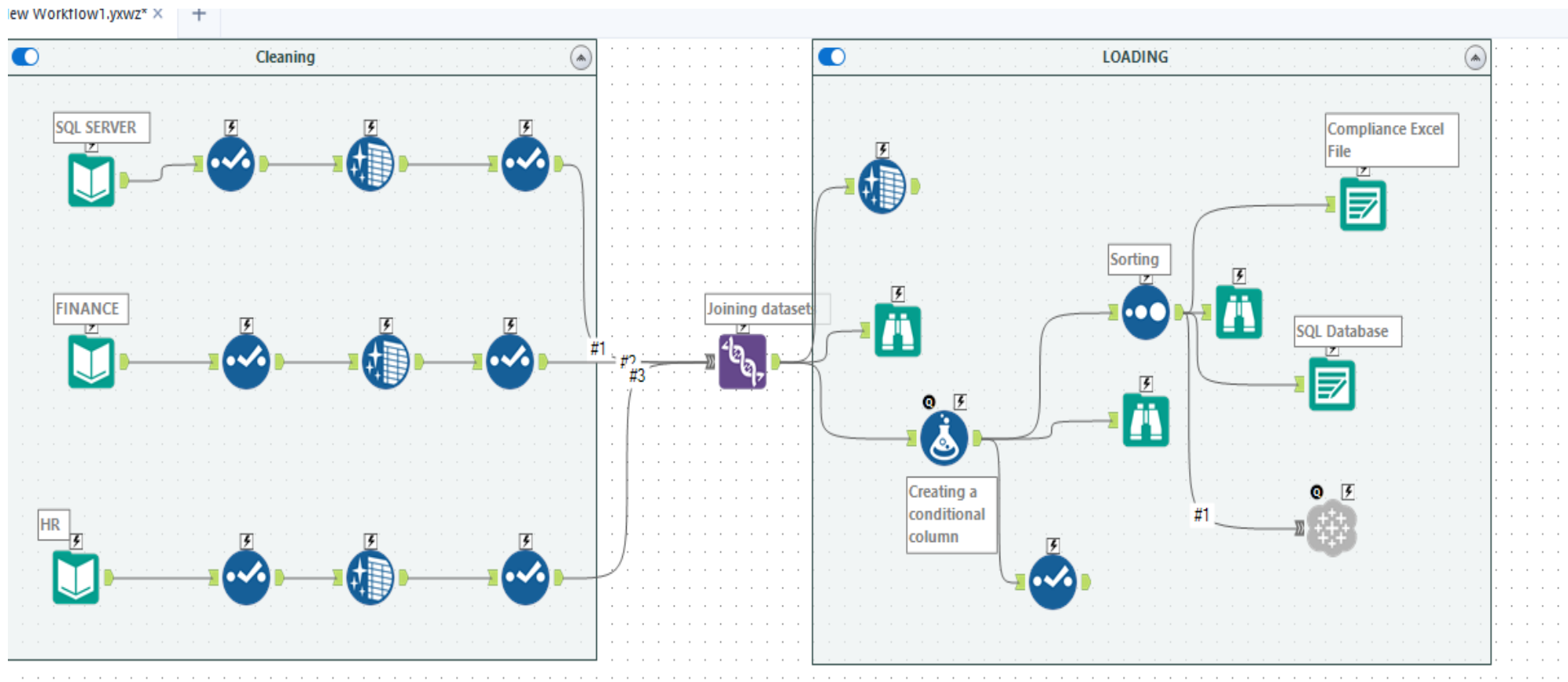
## Business Problem

Date: 1/12/2023

The GRC department goes through countless of hours tracking controls which are in place and ones which are not through a manual process in excel. Modern technological tools like ServiceNow, ZenGRC and several others have been made to solve this manual process and automate it. However not all companies have the funds to purchase these tools. Our GRC department is on a limited budget and wants to find out controls which are in place in the several departments: Finance, IT and HR without purchasing these tools. These Controls are documented and extracted from three separate sources. One in CSV, Excel and the other in SQL database.

## Describing the Work Solution.

The data analytics team creates a workflow that follows this analysis:



We begin by extracting our IT Compliance data from the SQL database using the input tool in the In/Out Palette.

The screenshot displays the Microsoft SQL Server Management Studio interface. The left pane shows the 'Object Explorer' with the 'IT COMPLIANCE' database selected. The central pane shows the 'SQLQuery9.sql' script with the following query:

```

/***** Script for SelectTopRows command from SMS *****
SELECT TOP (1000) [Control_Identifier]
, [Control (or Control Enhancement)_Name]
, [Control_Text]
, [Related_Controls]
, [Respond]
, [Risk]
FROM [IT COMPLIANCE].[dbo].[IT]

SELECT RISK
FROM IT
WHERE RESPOND = 'YES';

SELECT COUNT(RISK)
FROM IT;

```

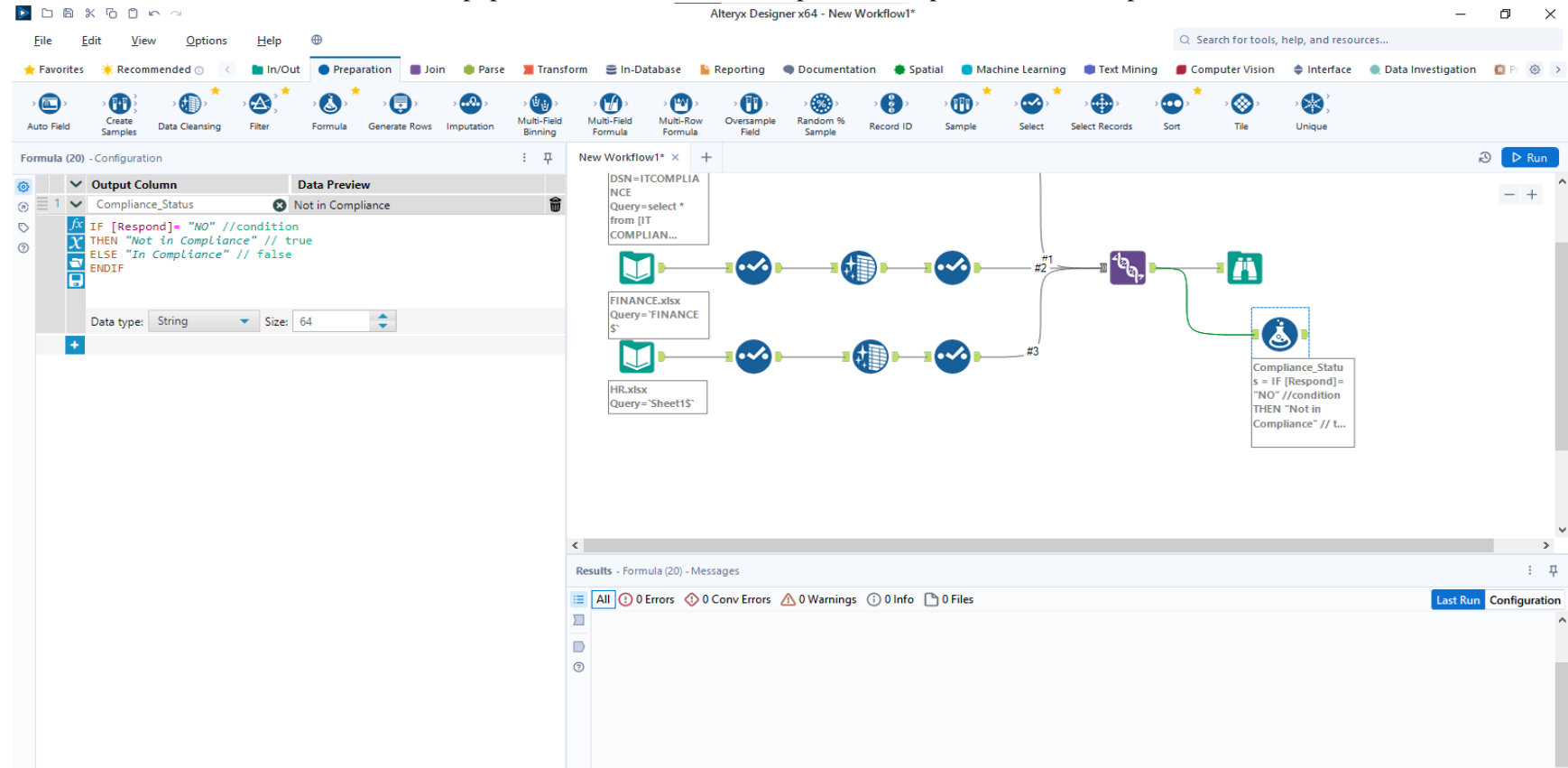
The bottom pane shows the 'Results' tab with the following data:

	Control Identifier	Control (or Control Enhancement) Name	Control Text	Related Controls	Respond	RISK	DEPARTMENT
33	AC-4(1)	Information Flow Enforcement   Object Security and Priv...	Use [Assignment: organization-defined security and ...	None.	YES	MO...	IT
34	AC-4(2)	Information Flow Enforcement   Processing Domains	Use protected processing domains to enforce [Assig...	SC-39.	YES	MO...	IT
35	AC-4(3)	Information Flow Enforcement   Dynamic Information Flo...	Enforce [Assignment: organization-defined informatio...	SI-4.	YES	MO...	IT
36	AC-4(4)	Information Flow Enforcement   Flow Control of Encrypte...	Prevent encrypted information from bypassing [Assig...	SI-4.	YES	MO...	IT
37	AC-4(5)	Information Flow Enforcement   Embedded Data Types	Enforce [Assignment: organization-defined limitations...	None.	YES	MO...	IT
38	AC-4(6)	Information Flow Enforcement   Metadata	Enforce information flow control based on [Assignme...	AC-16, SI-7.	YES	MO...	IT
39	AC-4(7)	Information Flow Enforcement   One-way Flow Mechanis...	Enforce one-way information flows through hardwar...	None.	YES	MO...	IT
40	AC-4(8)	Information Flow Enforcement   Security and Privacy Poli...	(a) Enforce information flow control using [Assignme...	None.	YES	MO...	IT
		RISK					
1		HIGH					
2		HIGH					
3		HIGH					
4		HIGH					
5		HIGH					

The status bar at the bottom indicates 'Query executed successfully.' and shows the connection to 'KOJOKWAKYE\MSSQLSERVER1 (15...)' with the database 'IT COMPLIANCE'.

After setting up the connection to extract data from the SQL database, we continued with the extraction of the other two files needed for the compliance tracking project. We began our data transformation on all three by first cleaning the data by changing incorrect data types into appropriate ones and used the data cleansing tool to remove all null values and white spaces from the field. We also used the select tool to rename column headers as they were longer, they needed. We used the Union tool in the Join palette to combine all the datasets into a single data stream and set the configuration to Autoconfigure by name since the column headers are the same for all datasets. We performed another data cleansing

and created a conditional column that will populate whether a control at a particular department is in compliance or not.



We then use the Output tool in the In/out palette to load the data into a new excel file, the SQL database and Tableau Cloud for further visualization.

Tableau link here : <https://prod-useast-a.online.tableau.com/t/cyber/views/TrackingControls/Dashboard1> (All permissions are granted with no restrictions to access the data. Workflow will be scheduled to refresh whenever a compliance status changes). To access this link, the user will need to create a cloud account to interact with the dashboard. **See pic below for Tableau Visualization.**

## Benefits

1. Time Saving.

2. 2. Money Saved till the organization is ready to invest in other tools.

Future projects will be expanding this through all departments

