

Designing Advanced Data Architectures for Business Intelligence Assignment 2

Name – Krisha Lakhani
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1. SQL Server

Connect to Server

SQL Server

Login | Connection Properties | Always Encrypted | Additional Connection Parameters

Server

Server type: Database Engine

Server name: LAPTOP-V0JOF100

Authentication: SQL Server Authentication

Login: damg7370_fall25

Password: *****

☒ Remember password

Connection Security

Encryption: Mandatory

☒ Trust server certificate

Host name in certificate:

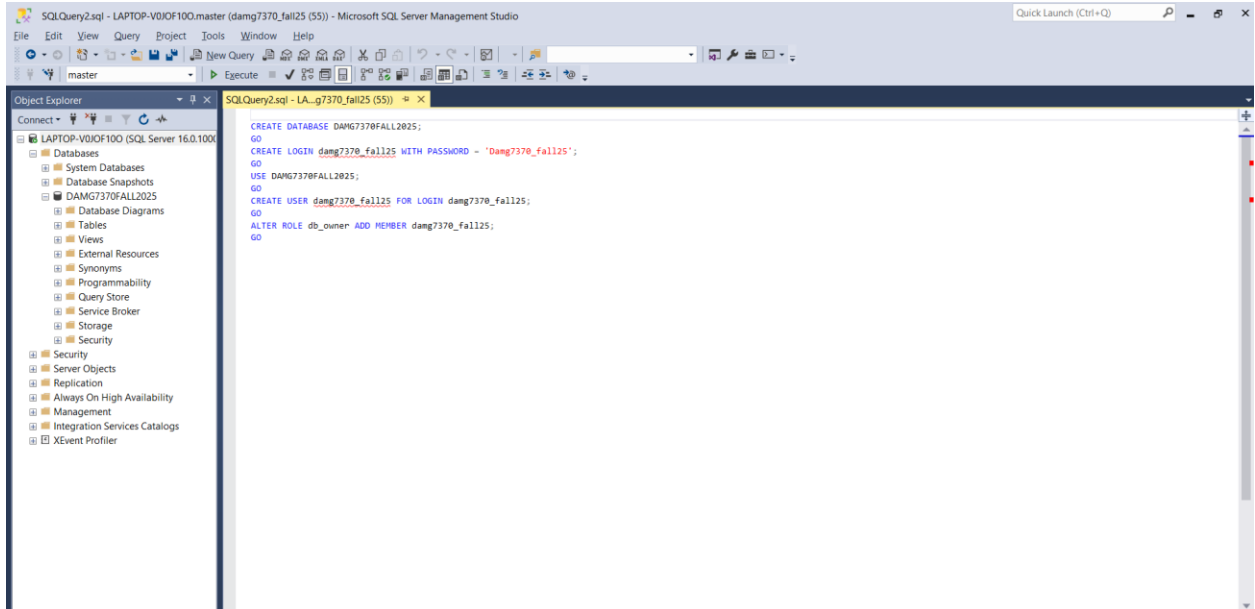
Connect Cancel Help Options <<

Designing Advanced Data Architectures for Business Intelligence

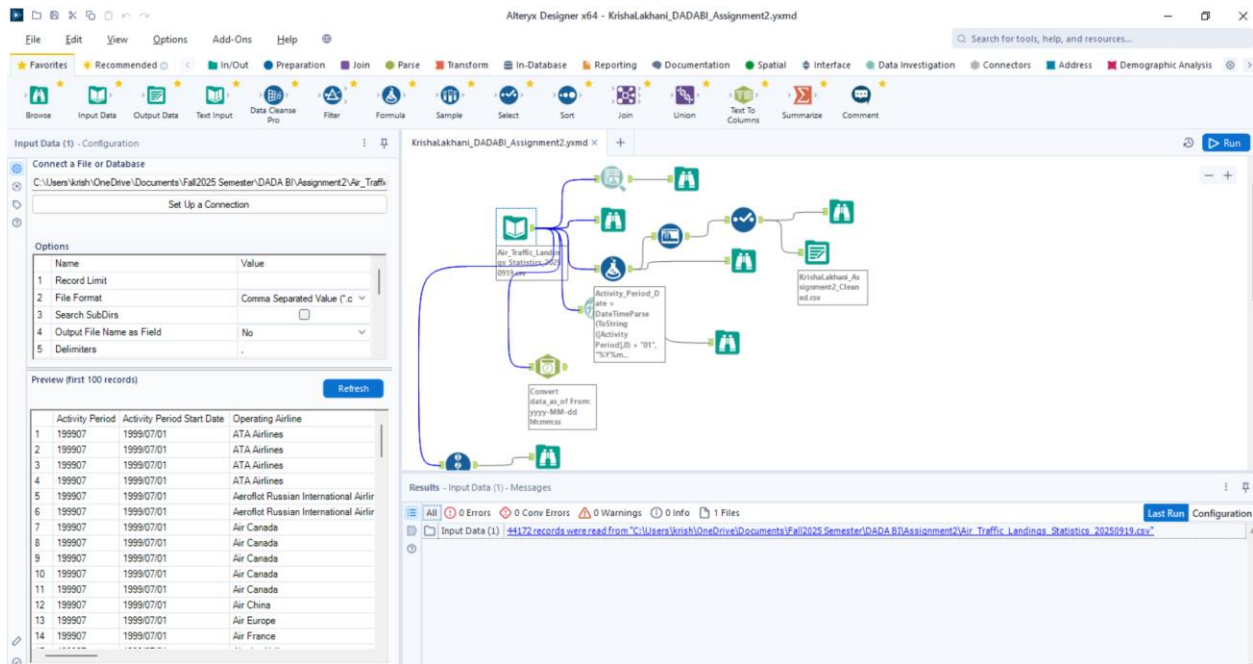
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2. Alteryx



Designing Advanced Data Architectures for Business Intelligence

Assignment 2

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The screenshot displays the Alteryx Designer v64 interface. The top menu bar includes File, Edit, View, Options, Add-Ons, and Help. The main toolbar contains various tools categorized by function: Browse, Input Data, Output Data, Text Input, Data Cleanse, Filter, Formula, Sample, Select, Sort, Join, Union, Text To Columns, Summarize, and Comment. The 'Browse (9) - Configuration' window on the left shows the profile of the data source, displaying 44,172 records with 17 fields and a size of 1.2 MB. It lists fields such as 'Activity Period', 'Activity Period Start Date', and 'Operating Airline'. The 'Results - Browse (9) - Input' window on the right shows a table of 17 records. The table has columns: Record, Activity Period, Activity Period Start Date, Operating Airline, Operating Airline IATA Code, and Published Airline. The data includes records for various airlines like ATA Airlines, Aeroflot Russian International Airlines, Air Canada, Air China, Air Europe, Air France, and Alaska Airlines.

Record	Activity Period	Activity Period Start Date	Operating Airline	Operating Airline IATA Code	Published Airline
1	199907	1999/07/01	ATA Airlines	TZ	ATA Airlines
2	199907	1999/07/01	ATA Airlines	TZ	ATA Airlines
3	199907	1999/07/01	ATA Airlines	TZ	ATA Airlines
4	199907	1999/07/01	ATA Airlines	TZ	ATA Airlines
5	199907	1999/07/01	Aeroflot Russian International Airlines	[null]	Aeroflot Russian International Airlines
6	199907	1999/07/01	Aeroflot Russian International Airlines	[null]	Aeroflot Russian International Airlines
7	199907	1999/07/01	Air Canada	AC	Air Canada
8	199907	1999/07/01	Air Canada	AC	Air Canada
9	199907	1999/07/01	Air Canada	AC	Air Canada
10	199907	1999/07/01	Air Canada	AC	Air Canada
11	199907	1999/07/01	Air Canada	AC	Air Canada
12	199907	1999/07/01	Air China	CA	Air China
13	199907	1999/07/01	Air Europe	PE	Air Europe
14	199907	1999/07/01	Air France	AF	Air France
15	199907	1999/07/01	Alaska Airlines	AS	Alaska Airlines
16	199907	1999/07/01	Alaska Airlines	AS	Alaska Airlines

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Designing Advanced Data Architectures for Business Intelligence

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Formula (20) - Configuration

Output Column: Data Preview

1. Activity_Period_Date: 1999-07-01

Formula: `DateTimeParse(ToString([Activity Period],@) + "01", "%Y%m%d")`

Data type: Date, Size: 10

2. data_as_of: 2025-08-21 16:21:32

3. data_loaded_at: 2025-08-22 23:03:26

4. Dt_Created_By: krish

5. Dt_Created_Dt: 2025-09-23 14:46:29

Formula: `DateTimeParse(ToString([Activity Period],@) + "01", "%Y%m%d")`

Data type: V_WString, Size: 1073741823

Formula: `DateTimeToUTC(DateTimeNow())`

Results - Formula (20) - Messages

Browse (21) - Configuration

44,172 records displayed, 20 fields, 1.3 MB

Profile

44,172 records displayed, 20 fields, 1.3 MB

Activity Period

Activity Period	Count
199907	175
201710	173
199909	171
202405	170
199908	169

307 more >

Activity Period Start Date

Activity Period Start Date	Count
1999/07/01	175
2017/10/01	173
1999/09/01	171
2024/05/01	170
1999/08/01	169

307 more >

Operating Airline

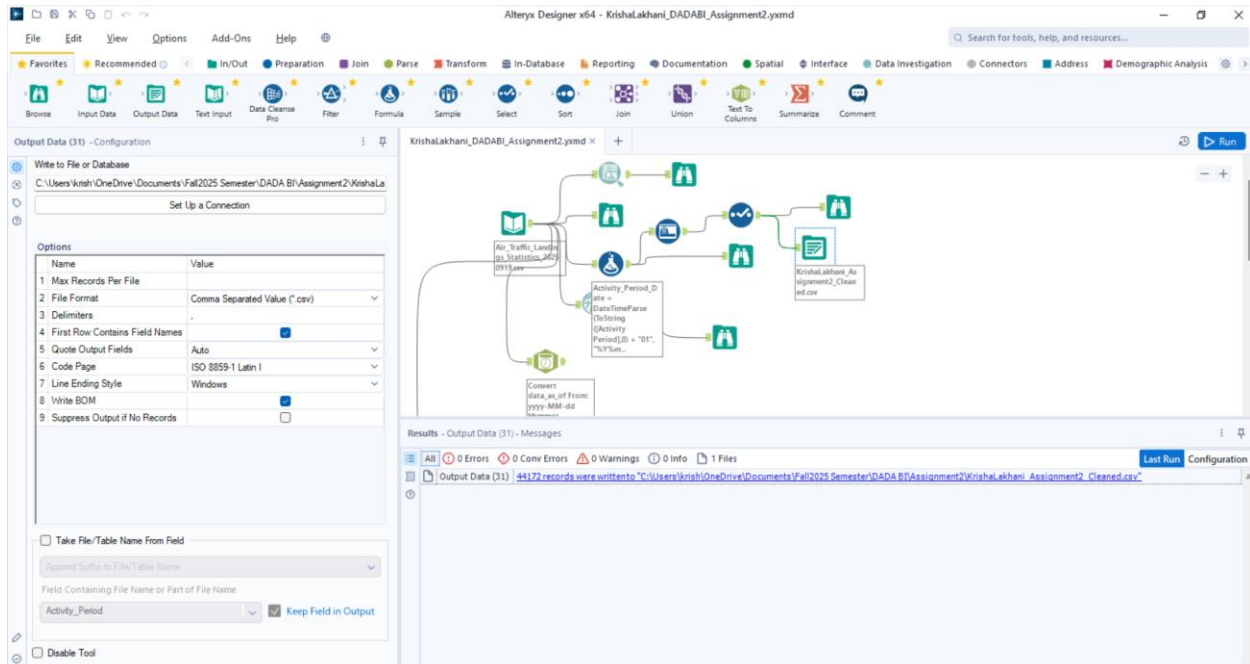
Operating Airline	Count
United Airlines	5,983
United Airlines - Pre 07/01/2013	3,195
Delta Air Lines	2,692

Results - Browse (21) - Input

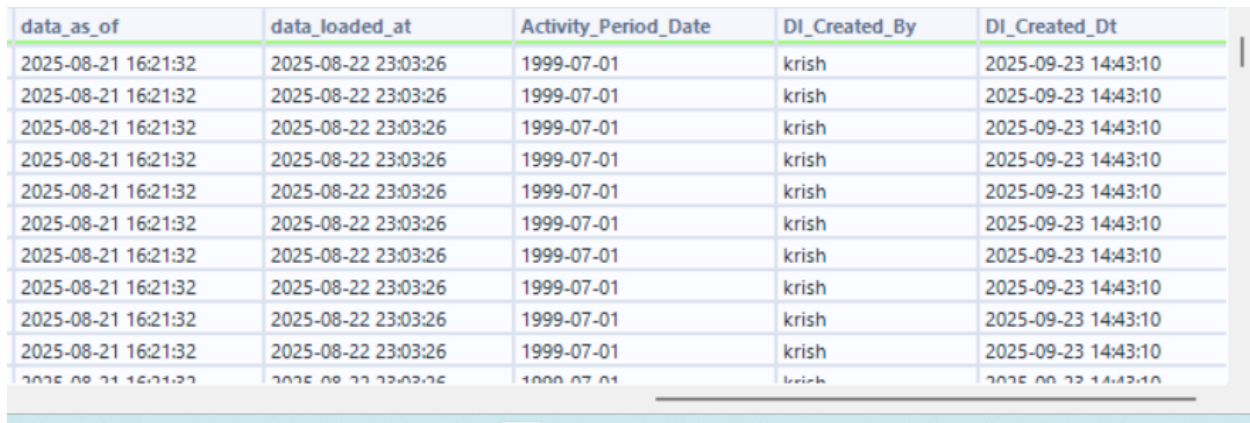
20 of 20 Fields, 44,172 records displayed, 1.3 MB

Record	Landing Count	Total Landed Weight	data_as_of	data_loaded_at	Activity_Period_Date	Dt_Created_By	Dt_Created_Dt
1	618,000	2025-08-21 16:21:32	2025-08-22 23:03:26	1999-07-01	krish	2025-09-23 14:43:10	
2	15,444,000	2025-08-21 16:21:32	2025-08-22 23:03:26	1999-07-01	krish	2025-09-23 14:43:10	
3	25,418,000	2025-08-21 16:21:32	2025-08-22 23:03:26	1999-07-01	krish	2025-09-23 14:43:10	
4	368,000	2025-08-21 16:21:32	2025-08-22 23:03:26	1999-07-01	krish	2025-09-23 14:43:10	
5	2,879,955	2025-08-21 16:21:32	2025-08-22 23:03:26	1999-07-01	krish	2025-09-23 14:43:10	
6	1,543,220	2025-08-21 16:21:32	2025-08-22 23:03:26	1999-07-01	krish	2025-09-23 14:43:10	
7	1,088,000	2025-08-21 16:21:32	2025-08-22 23:03:26	1999-07-01	krish	2025-09-23 14:43:10	
8	7,140,000	2025-08-21 16:21:32	2025-08-22 23:03:26	1999-07-01	krish	2025-09-23 14:43:10	
9	320,000	2025-08-21 16:21:32	2025-08-22 23:03:26	1999-07-01	krish	2025-09-23 14:43:10	
10	1,610,400	2025-08-21 16:21:32	2025-08-22 23:03:26	1999-07-01	krish	2025-09-23 14:43:10	
11	21,442,000	2025-08-21 16:21:32	2025-08-22 23:03:26	1999-07-01	krish	2025-09-23 14:43:10	
12	11,969,967	2025-08-21 16:21:32	2025-08-22 23:03:26	1999-07-01	krish	2025-09-23 14:43:10	
13	293,200	2025-08-21 16:21:32	2025-08-22 23:03:26	1999-07-01	krish	2025-09-23 14:43:10	
14	19,525,505	2025-08-21 16:21:32	2025-08-22 23:03:26	1999-07-01	krish	2025-09-23 14:43:10	
15	29,161,000	2025-08-21 16:21:32	2025-08-22 23:03:26	1999-07-01	krish	2025-09-23 14:43:10	

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Record	FieldName	Name	Value
1	Activity Period	Name	Activity Period
2	Activity Period	Data Type	V_String
3	Activity Period	Size	254
4	Activity Period	Source	File: C:\Users\krishi\OneDrive\Documents\Fall202...
5	Activity Period	Description	[Null]
6	Activity Period	OKs	44172
7	Activity Period	Nulls	0
8	Activity Period	Non-Nulls	44172
9	Activity Period	Blanks	0
10	Activity Period	Values with Leading Whitespace	0

The screenshot shows the Alteryx Designer v64 interface. The top menu bar includes File, Edit, View, Options, Add-Ons, and Help. The main toolbar contains various data processing tools like Browse, Input Data, Output Data, Text Input, Data Cleanse, Filter, Formula, Sample, Select, Sort, Join, Union, Text To Columns, Summarize, and Comment. The 'Field Summary (4) - Configuration' window is open on the left, displaying a configuration for the field summary tool. The 'Results - Field Summary (4) - Messages' window is open on the right, showing a table with 0 errors, 0 conversion errors, 0 warnings, 0 info, and 0 files.

Record	FieldName	Name	Value
1	Activity Period	Name	Activity Period
2	Activity Period	Data Type	V_String
3	Activity Period	Size	254
4	Activity Period	Source	File: C:\Users\krishi\OneDrive\Documents\Fall202...
5	Activity Period	Description	[Null]
6	Activity Period	OKs	44172
7	Activity Period	Nulls	0
8	Activity Period	Non-Nulls	44172
9	Activity Period	Blanks	0
10	Activity Period	Values with Leading Whitespace	0

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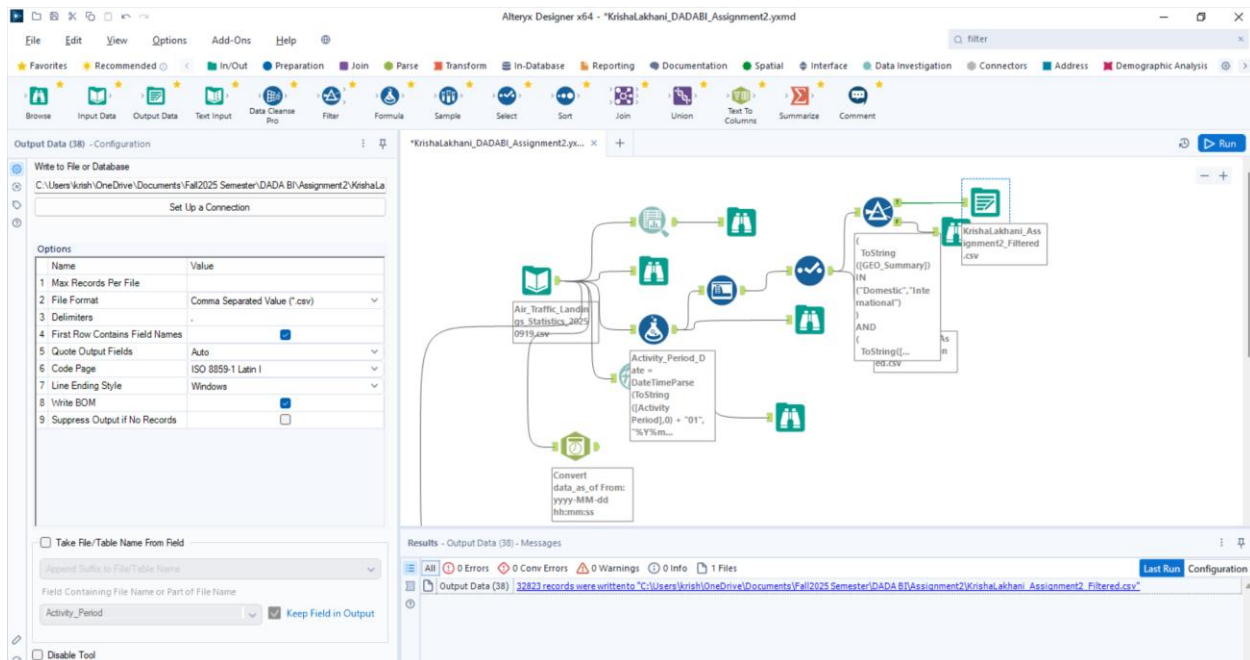
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The screenshot shows the Alteryx Designer v64 interface. The 'Record ID (29) - Configuration' pane on the left is active, showing the configuration for a new column named 'Sequence_Number'. The 'Starting Value' is set to 1, the 'Type' is 'Int32', and the 'Position' is 'First Column'. The 'Options' section shows 'Group by column (optional)' with 'Select All' checked. The main workspace displays a workflow diagram with a 'Text Input' tool connected to a 'Formula' tool. The formula tool is configured to calculate 'Activity_Period_Start' as 'DateTimeParse(DateTime(Concat([Activity_Period], "/"), "%Y%m%d"), "%Y%m%d")'. The 'Results - Record ID (29) - Messages' pane at the bottom shows 0 Errors, 0 Conv Errors, 0 Warnings, 0 Info, and 0 Files.

The screenshot shows the Alteryx Designer v64 interface with the 'Results - Browse (30) - Input' pane active. The 'Profile' section on the left shows 44,172 records displayed, 18 fields, 1.3 MB. The 'Results' table displays 18 of 18 fields for 44,172 records. The table columns are: Record, Sequence_Number, Activity_Period, Activity_Period_Start Date, Operating Airline, Operating Airline IATA Code, and Published Airline. The data shows records for various airlines including ATA Airlines, Aeroflot Russian International Airlines, and Air Canada.

Record	Sequence_Number	Activity_Period	Activity_Period_Start Date	Operating Airline	Operating Airline IATA Code	Published Airline
1	1	199907	1999/07/01	ATA Airlines	TZ	ATA Airlines
2	2	199907	1999/07/01	ATA Airlines	TZ	ATA Airlines
3	3	199907	1999/07/01	ATA Airlines	TZ	ATA Airlines
4	4	199907	1999/07/01	ATA Airlines	TZ	ATA Airlines
5	5	199907	1999/07/01	Aeroflot Russian International Airlines	[Null]	Aeroflot Russian International Airlines
6	6	199907	1999/07/01	Aeroflot Russian International Airlines	[Null]	Aeroflot Russian International Airlines
7	7	199907	1999/07/01	Air Canada	AC	Air Canada
8	8	199907	1999/07/01	Air Canada	AC	Air Canada
9	9	199907	1999/07/01	Air Canada	AC	Air Canada
10	10	199907	1999/07/01	Air Canada	AC	Air Canada

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The screenshot displays the Alteryx Designer x64 interface for a workflow titled "KrishaLakhani_DADABI_Assignment2.yxmd". The workflow includes several tools: "Air_Traffic_Landings_Statistics_2007_19910.csv", "Activity_Period_Start_Date", "Convert data as of From: yyyy-MM-dd", "Filter", "Join", "Text To Columns", "Summarize", and "Output Data". The left pane shows the configuration for the "Browse (39)" tool, displaying a profile of the data with fields like Activity_Period, Activity_Period_Start_Date, and Operating_Airline. The bottom pane shows the results of the workflow, displaying a table with columns: Record, Activity_Period, Activity_Period_Start_Date, Operating_Airline, Operating_Airline_IATA_Code, and Published_Airline.

Record	Activity_Period	Activity_Period_Start_Date	Operating_Airline	Operating_Airline_IATA_Code	Published_Airline
1	199907	1999/07/01	ATA Airlines	TZ	ATA Airlines
2	199907	1999/07/01	ATA Airlines	TZ	ATA Airlines
3	199907	1999/07/01	ATA Airlines	TZ	ATA Airlines
4	199907	1999/07/01	ATA Airlines	TZ	ATA Airlines