Sri Lanka Institute of Information Technology

DWBI – Assignment Report

Data warehousing and Business Intelligence-IT3021

DWBI – Assignment 02

Submitted by:

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Contents

Step 1: Data source for the assignment 2

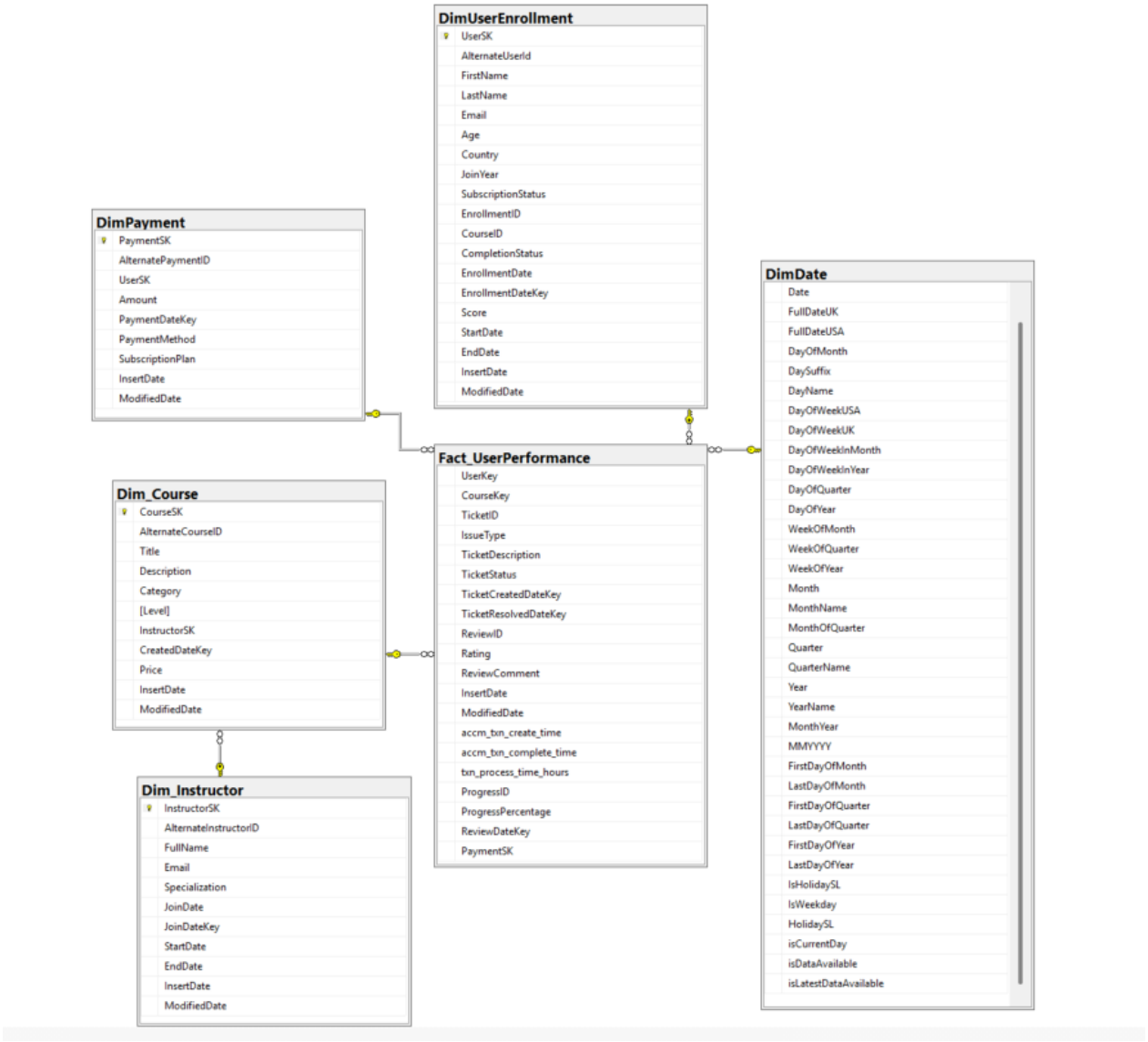
1 DataSource Description –Learning Platform

The data warehouse is designed for an **online learning platform**, capturing user interactions, course participation, payments, and support activities. The star schema facilitates fast analytical queries and business intelligence operations.
The central **Fact table** captures user performance metrics, and is surrounded by multiple **Dimension tables** that provide descriptive attributes related to users, courses, instructors, payments, and time.

- **Business Logic**:

Track how many support tickets each user raises and analyze their course progress to understand the relationship between support needs and learning

Engagement


DimUserEnrollment
UserSK
AlternateUserId
FirstName
LastName
Email
Age
Country
JoinYear
SubscriptionStatus
EnrollmentID
CourseID
CompletionStatus
EnrollmentDate
EnrollmentDateKey
Score
StartDate
EndDate
InsertDate
ModifiedDate
DimPayment
PaymentSK
AlternatePaymentID
UserSK
Amount
PaymentDateKey
PaymentMethod
SubscriptionPlan
InsertDate
ModifiedDate
DimDate
Date
FullDateUK
FullDateUSA
DayOfMonth
DaySuffix
DayName
DayOfWeekUSA
DayOfWeekUK
DayOfWeekInMonth
DayOfWeekInYear
DayOfQuarter
DayOfYear
WeekOfMonth
WeekOfQuarter
WeekOfYear
Month
MonthName
MonthOfQuarter
Quarter
QuarterName
Year
YearName
MonthYear
MMYYYY
FirstDayOfMonth
LastDayOfMonth
FirstDayOfQuarter
LastDayOfQuarter
FirstDayOfYear
LastDayOfYear
IsHolidaySL
IsWeekday
HolidaySL
isCurrentDay
isDataAvailable
isLatestDataAvailable
Fact_UserPerformance
UserKey
CourseKey
TicketID
IssueType
TicketDescription
TicketStatus
TicketCreatedDateKey
TicketResolvedDateKey
ReviewID
Rating
ReviewComment
InsertDate
ModifiedDate
accm_txn_create_time
accm_txn_complete_time
txn_process_time_hours
ProgressID
ProgressPercentage
ReviewDateKey
PaymentSK
Dim_Course
CourseSK
AlternateCourseID
Title
Description
Category
[Level]
InstructorSK
CreatedDateKey
Price
InsertDate
ModifiedDate
Dim_Instructor
InstructorSK
AlternateInstructorID
FullName
Email
Specialization
JoinDate
JoinDateKey
StartDate
EndDate
InsertDate
ModifiedDate

2. Table Descriptions

2.1 Fact User Performance

This is the central fact table that stores measurable events related to user activities, including performance metrics, ticket handling, reviews, and progress tracking.

Key Columns:

- UserSK – Foreign Key to DimUserEnrollment
- CourseKey – Foreign Key to Dim_Course
- TicketID – ID of support ticket
- TicketStatus – Open/Closed
- TicketCreatedDateKey – Date Key of ticket creation (linked to DimDate)
- TicketResolvedDateKey – Date Key of resolution (linked to DimDate)
- ReviewID – Review Identifier
- Rating – Numeric rating
- ReviewComment – User feedback
- ProgressID – Progress tracking ID
- ProgressPercentage – Course progress %
- PaymentSK – Foreign Key to DimPayment
- accm_bn_create_time – Ticket create time (raw)
- accm_bn_complete_time – Ticket resolve time (raw)
- txn_process_time_hours – Total process time in hours

2.2 DimUserEnrollment

Stores information about users and their course enrollments.

Key Columns:

- UserSK – Surrogate Key
- AlternateUserId – External user ID
- FirstName, LastName, Email – Personal information
- Age, Country – Demographics
- JoinYear – Year user joined
- SubscriptionStatus – Free/Paid
- EnrollmentID – Unique enrollment key
- CourseID – Linked to Dim_Course
- CompletionStatus – Completed/In Progress
- EnrollmentDateKey – Linked to DimDate
- StartDate, EndDate – Enrollment duration

2.3 Dim_Course

Contains detailed information about courses offered on the platform.

Key Columns:

- **CourseSK – Surrogate Key**

- **AlternateCourseID – External Course ID**
- **Title – Course title**
- **Description – Course overview**
- **Category – Subject area**
- **Level – Beginner/Intermediate/Advanced**
- **InstructorSK – Foreign Key to Dim_Instructor**
- **Price – Course price**
- **CreatedDateKey – Linked to DimDate**

2.4 Dim_Instructor

Stores information about course instructors.

Key Columns:

- **InstructorSK – Surrogate Key**
- **AlternateInstructorID – External ID**
- **FullName – Name of instructor**
- **Email – Contact**
- **Specialization – Area of expertise**
- **JoinDate, StartDate, EndDate – Duration of engagement**
- **JoinDateKey – Linked to DimDate**

2.5 DimPayment

Captures payment transactions for course subscriptions.

Key Columns:

- **PaymentSK – Surrogate Key**
- **AlternatePaymentID – External Payment ID**
- **UserSK – Foreign Key to DimUserEnrollment**
- **Amount – Payment amount**
- **PaymentMethod – Credit, Debit, UPI, etc.**
- **SubscriptionPlan – Plan type (Monthly, Annual)**
- **PaymentDateKey – Linked to DimDate**

2.6 DimDate

A classic date dimension that provides hierarchical and descriptive time information for all time-based analysis.

Key Columns:

- **DateKey – Primary Key (formatted as YYYYMMDD)**
- **FullDateUK / FullDateUSA – Date formats**
- **Day, Week, Month, Quarter, Year – Calendar breakdown**
- **DayOfWeek, IsHoliday – Business calendar insights**
- **MonthName, QuarterName – Textual representation**

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4. Usage in Reports

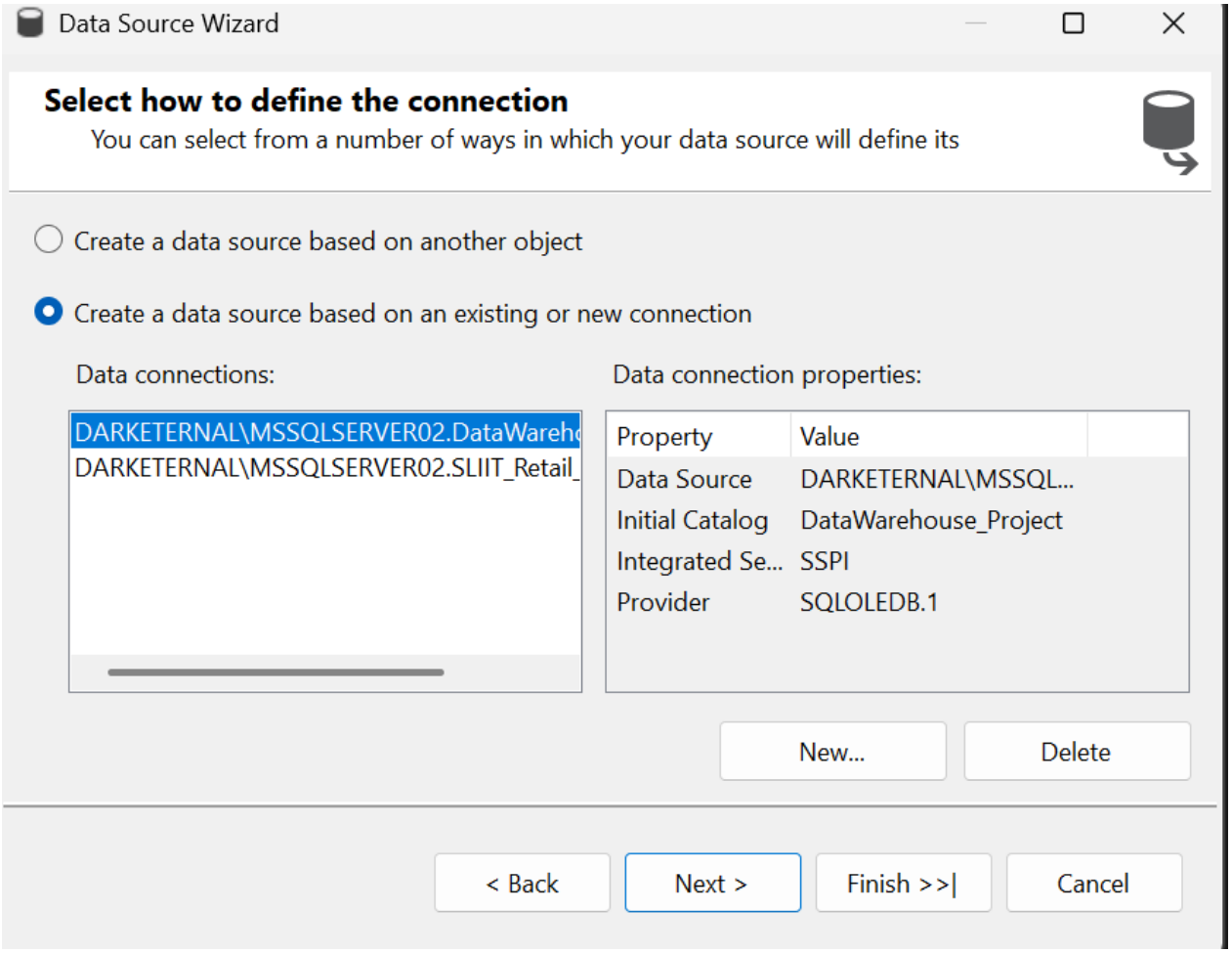
This data warehouse is used as the data source for:

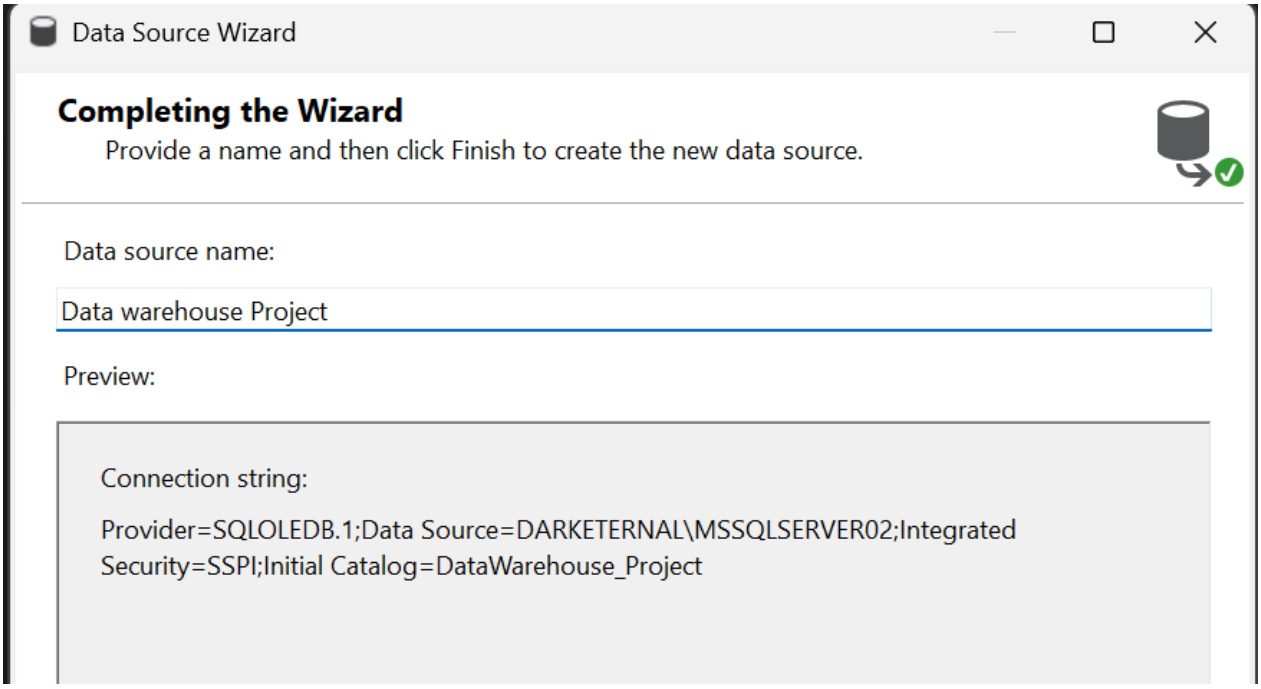
- Drill-through reports in Power BI (e.g., from high-level user performance down to payment or enrollment detail).
- Time-based performance tracking.
- Analyzing subscription trends, course popularity, and instructor effectiveness.
- Measuring ticket resolution efficiency and review sentiments.

3. SSAS Cube implementation-Learning Platform

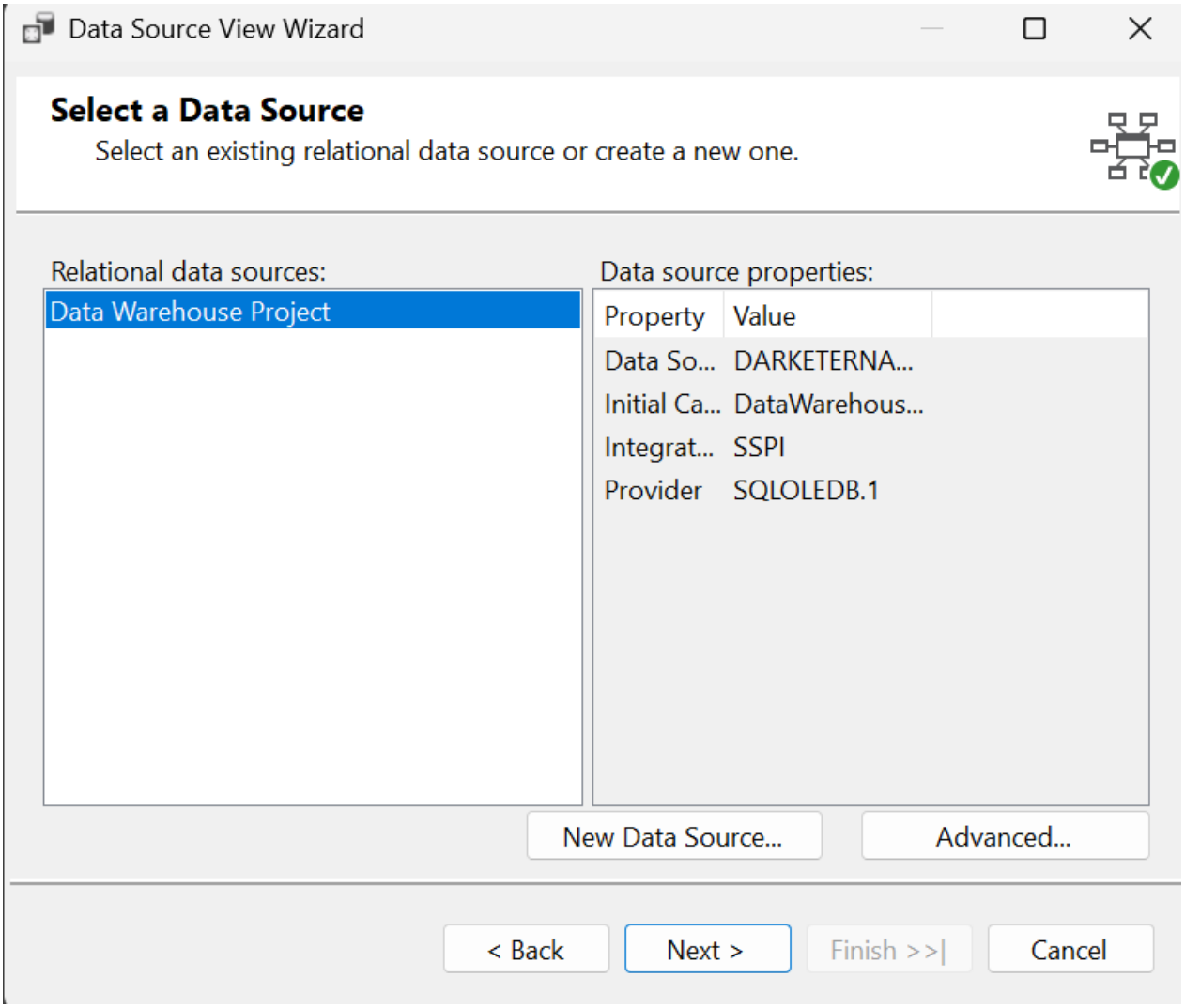
This SSAS cube analyzes user performance and support interactions on an e-learning platform. It connects to a SQL Server data warehouse and includes key dimensions like User, Course, Instructor, and Date. The main fact table captures metrics such as ticket activity, course progress, and reviews. Role-playing date dimensions are used to track events like ticket creation and review dates. The cube supports rollups and drilldowns to help identify patterns in user engagement and support needs.

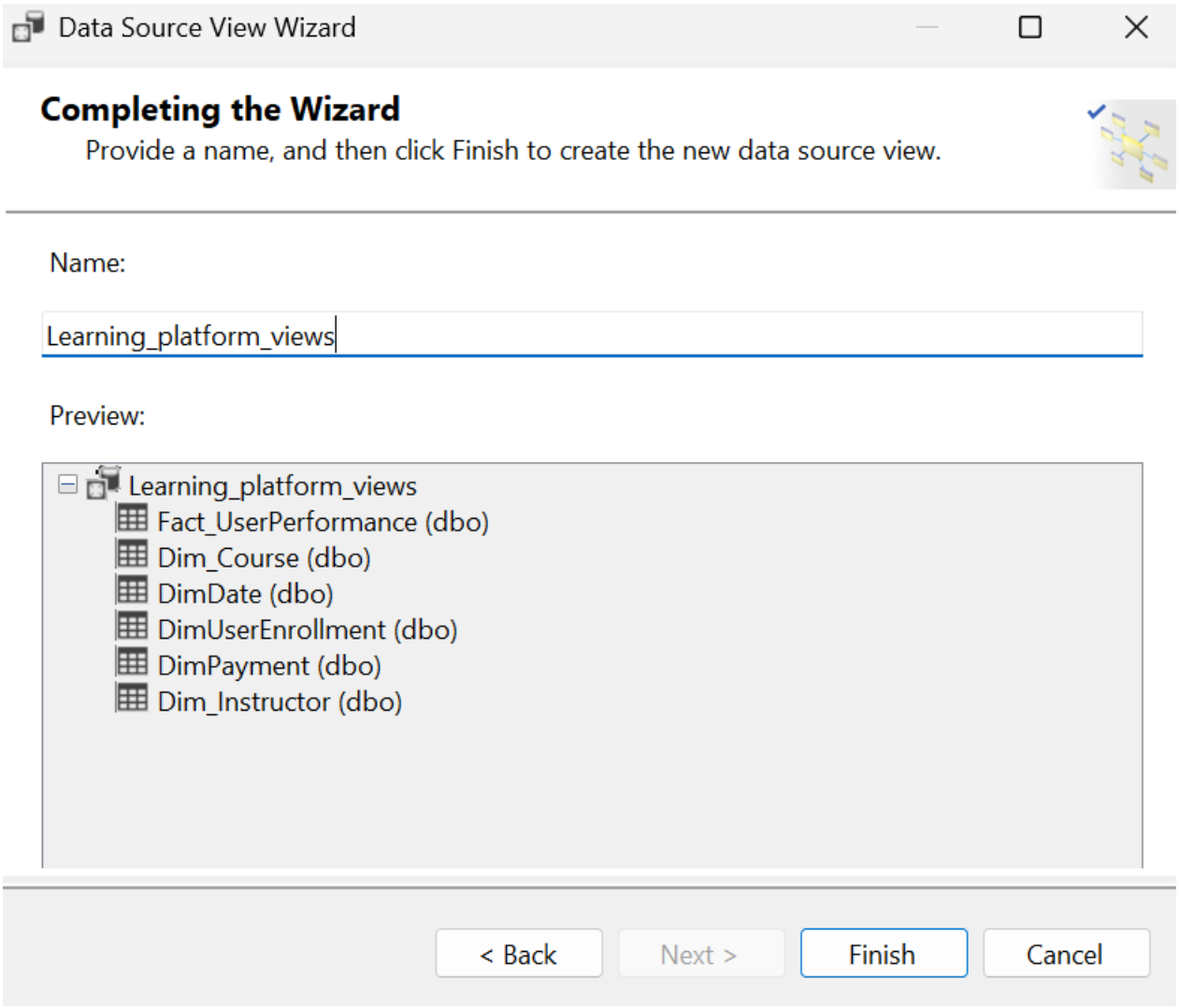
1. Data Source Setup

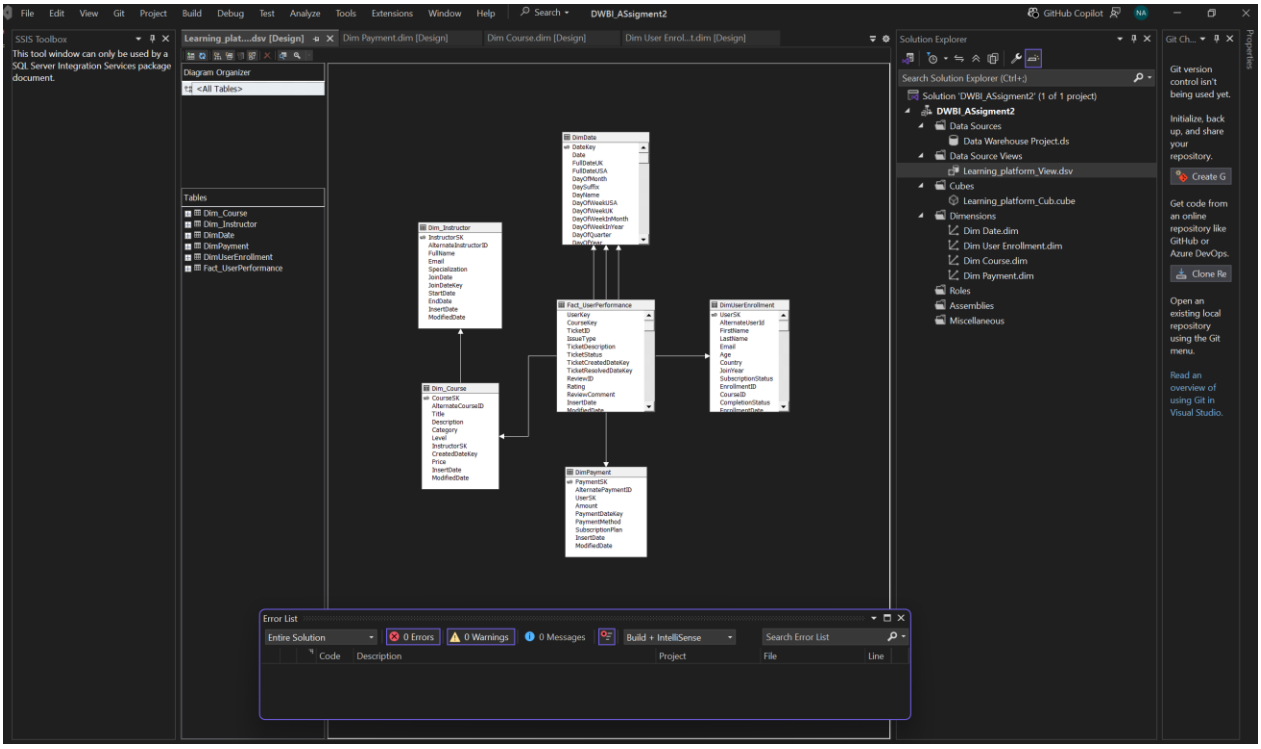




- Created a Data Source View (DSV) and selected all fact and dimension tables:

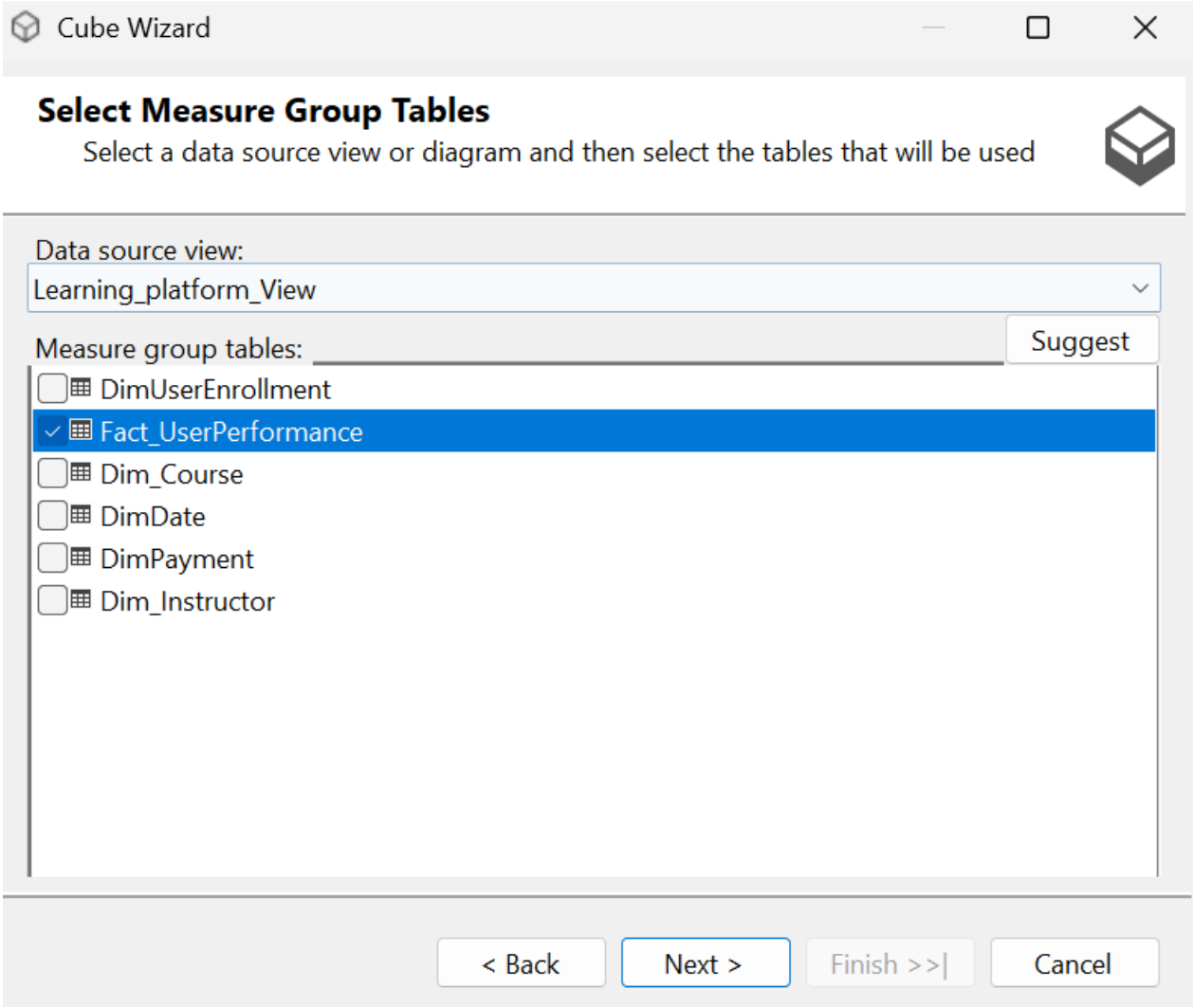

Data Source View Wizard
Select a Data Source
Select an existing relational data source or create a new one.
Relational data sources:
Data Warehouse Project
Data source properties:
Property
Value
Data So...
DARKETERNA...
Initial Ca...
DataWarehous...
Integrat...
SSPI
Provider
SQLOLEDB.1
New Data Source...
Advanced...
< Back
Next >
Finish >>|
Cancel

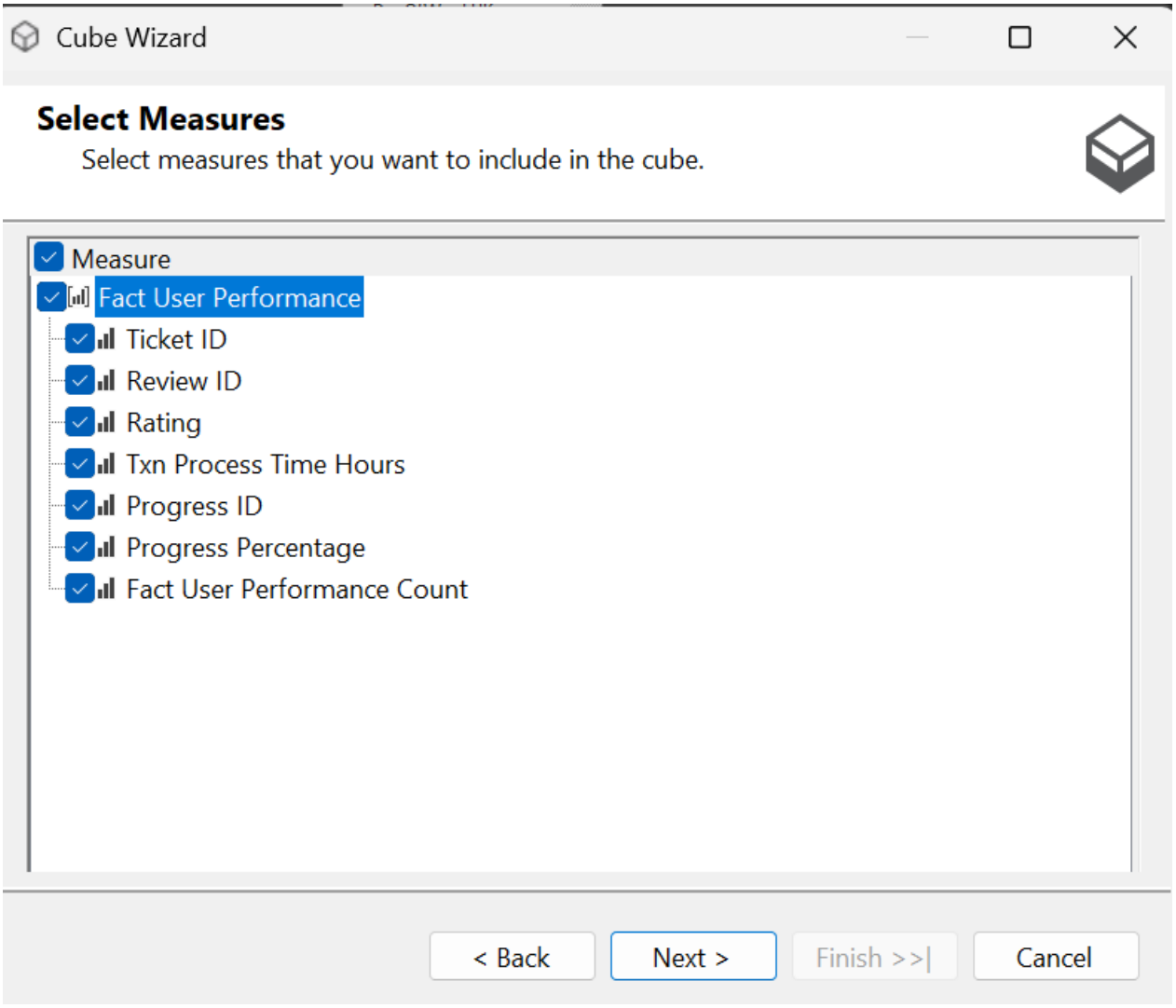

Data Source View Wizard
Completing the Wizard
Provide a name, and then click Finish to create the new data source view.
Name:
Learning_platform_views
Preview:
Learning_platform_views
Fact_UserPerformance (dbo)
Dim_Course (dbo)
DimDate (dbo)
DimUserEnrollment (dbo)
DimPayment (dbo)
Dim_Instructor (dbo)
< Back
Next >
Finish
Cancel


File Edit View Git Project Build Debug Test Analyze Tools Extensions Window Help
DWBI_ASsigment2
SSIS Toolbox
This tool window can only be used by a SQL Server Integration Services package document.
Diagram Organizer
<All Tables>
Tables
Dim_Course
Dim_Instructor
DimDate
DimPayment
DimUserEnrollment
Fact_UserPerformance
Solution Explorer
Solution 'DWBI_ASsigment2' (1 of 1 project)
DWBI_ASsigment2
Data Sources
Data Warehouse Project.ds
Data Source Views
Learning_platform_View.dsv
Cubes
Learning_platform_Cub.cube
Dimensions
Dim Date.dim
Dim User Enrollment.dim
Dim Course.dim
Dim Payment.dim
Roles
Assemblies
Miscellaneous
Error List
Entire Solution
0 Errors
0 Warnings
0 Messages
Build + IntelliSense
Search Error List
Code
Description
Project
File
Line

2.Cube Design

Launched the Cube Wizard and selected Fact_UserPerformance as the measure grou

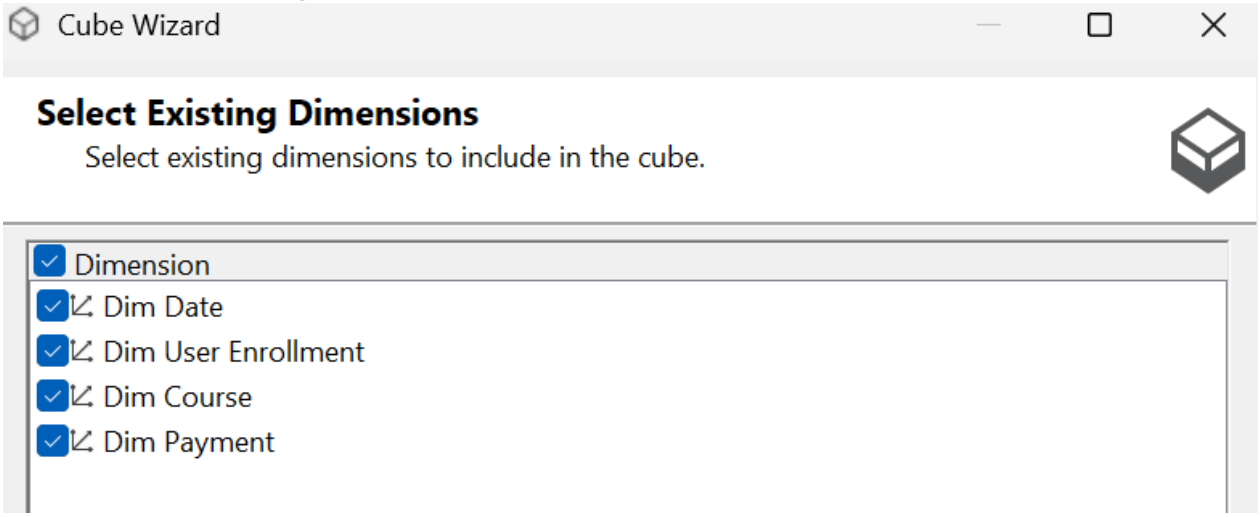


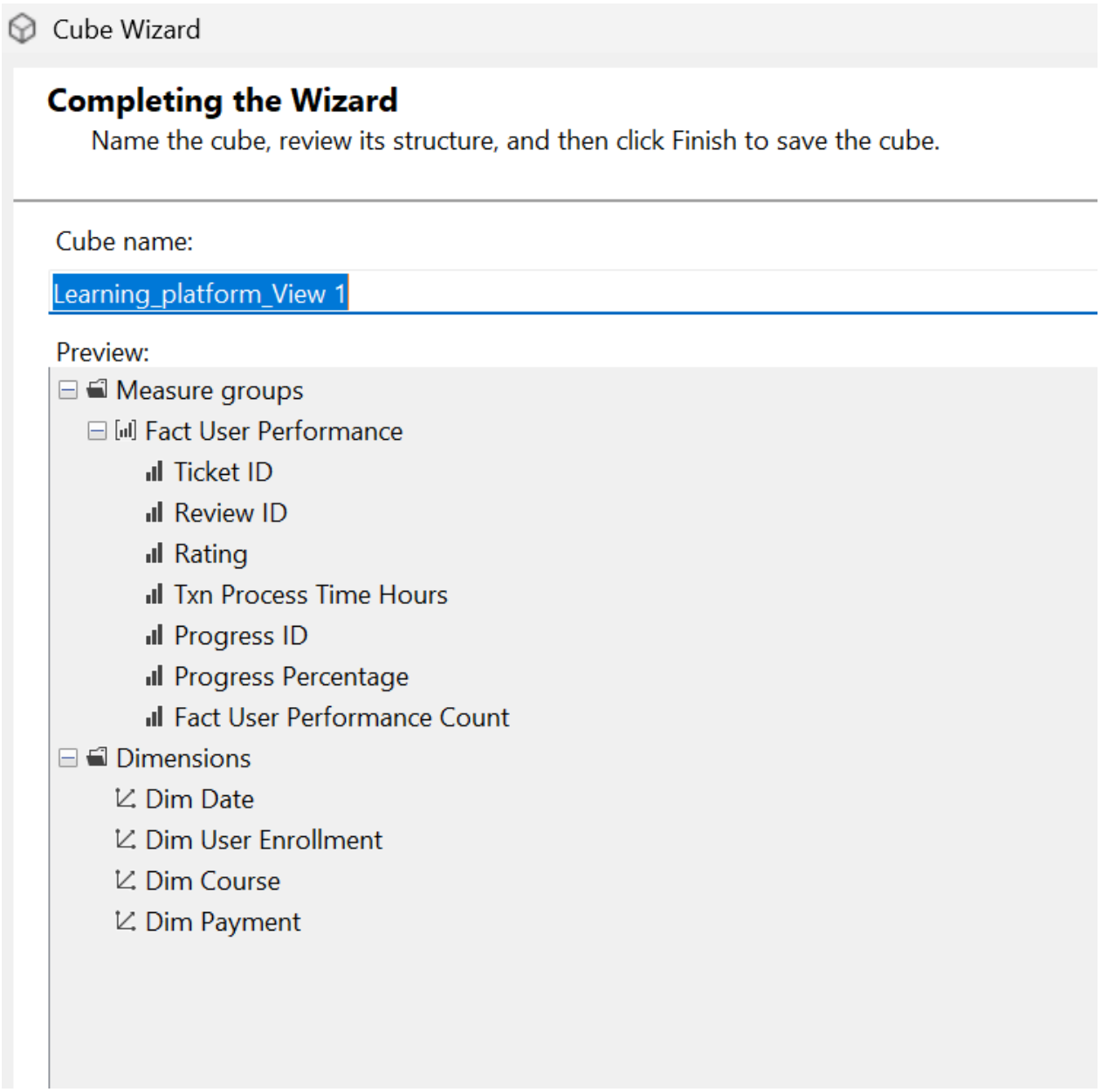

Cube Wizard
Select Measures
Select measures that you want to include in the cube.
Measure
Fact User Performance
Ticket ID
Review ID
Rating
Txn Process Time Hours
Progress ID
Progress Percentage
Fact User Performance Count
< Back
Next >
Finish >>|
Cancel

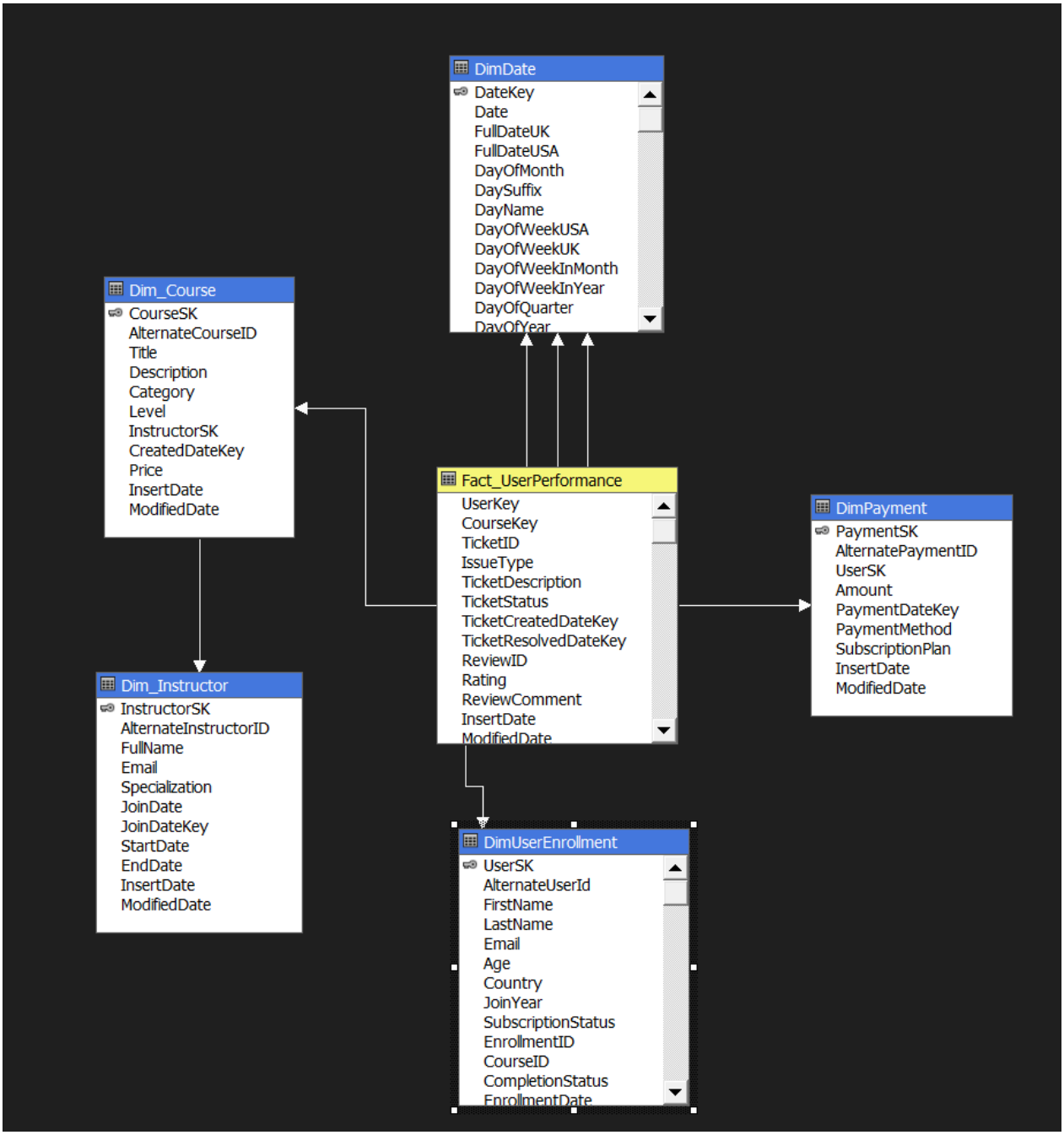
Automatically detected numeric measures from Fact_USerPErforrmance, including:

3.Dimensions and Hierarchies

Added the following Dimensions from the DSV



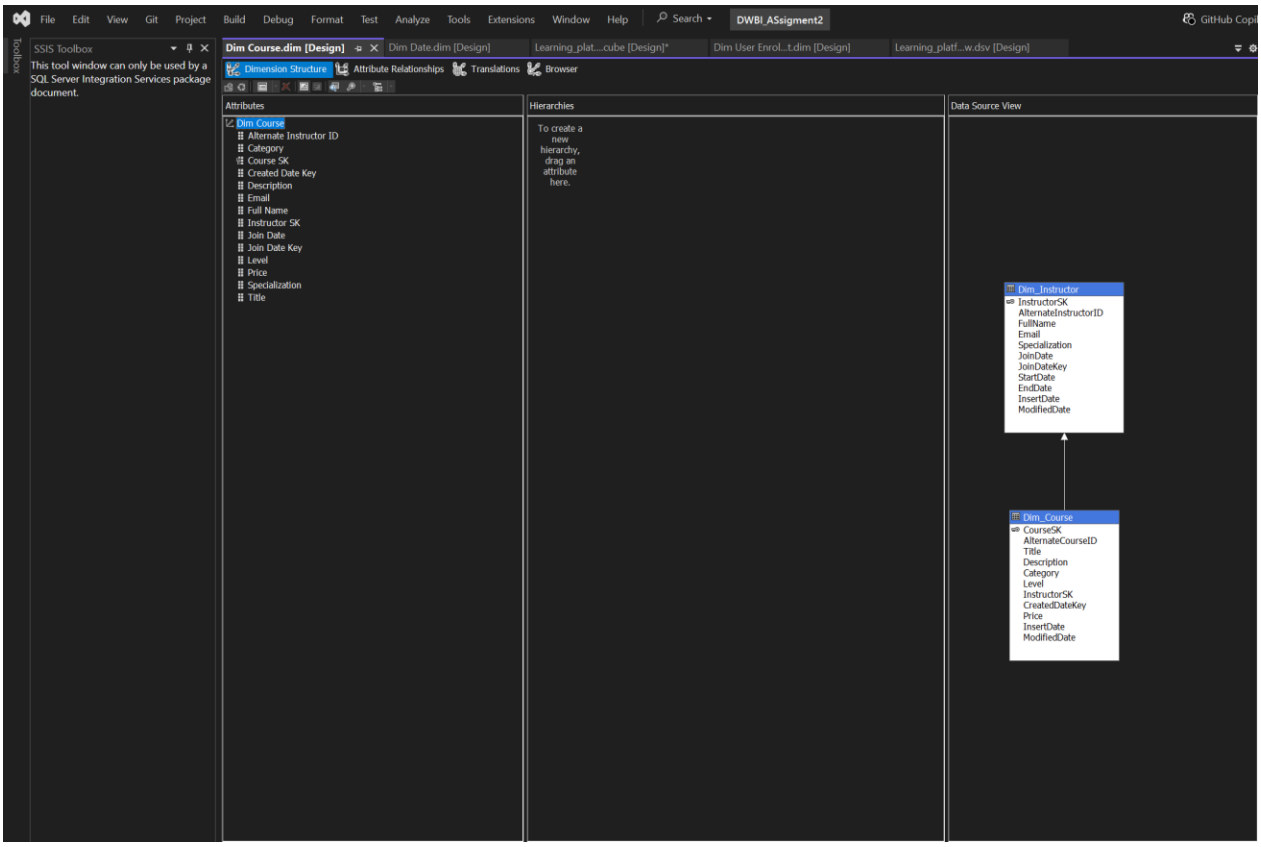

Cube Wizard
Completing the Wizard
Name the cube, review its structure, and then click Finish to save the cube.
Cube name:
Learning_platform_View 1
Preview:
Measure groups
Fact User Performance
Ticket ID
Review ID
Rating
Txn Process Time Hours
Progress ID
Progress Percentage
Fact User Performance Count
Dimensions
Dim Date
Dim User Enrollment
Dim Course
Dim Payment

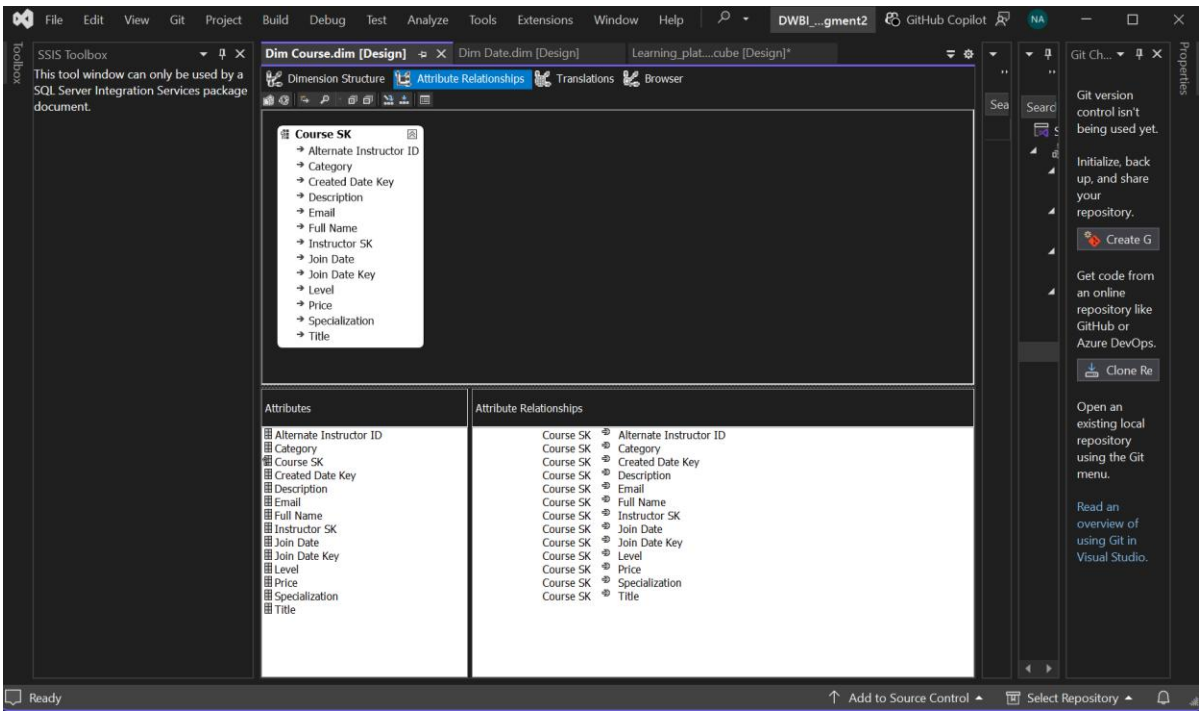

DimDate
DateKey
Date
FullDateUK
FullDateUSA
DayOfMonth
DaySuffix
DayName
DayOfWeekUSA
DayOfWeekUK
DayOfWeekInMonth
DayOfWeekInYear
DayOfQuarter
DayOfYear
Dim_Course
CourseSK
AlternateCourseID
Title
Description
Category
Level
InstructorSK
CreatedDateKey
Price
InsertDate
ModifiedDate
Fact_UserPerformance
UserKey
CourseKey
TicketID
IssueType
TicketDescription
TicketStatus
TicketCreatedDateKey
TicketResolvedDateKey
ReviewID
Rating
ReviewComment
InsertDate
ModifiedDate
DimPayment
PaymentSK
AlternatePaymentID
UserSK
Amount
PaymentDateKey
PaymentMethod
SubscriptionPlan
InsertDate
ModifiedDate
Dim_Instructor
InstructorSK
AlternateInstructorID
FullName
Email
Specialization
JoinDate
JoinDateKey
StartDate
EndDate
InsertDate
ModifiedDate
DimUserEnrollment
UserSK
AlternateUserId
FirstName
LastName
Email
Age
Country
JoinYear
SubscriptionStatus
EnrollmentID
CourseID
CompletionStatus
EnrollmentDate

4. Attribute Configuration

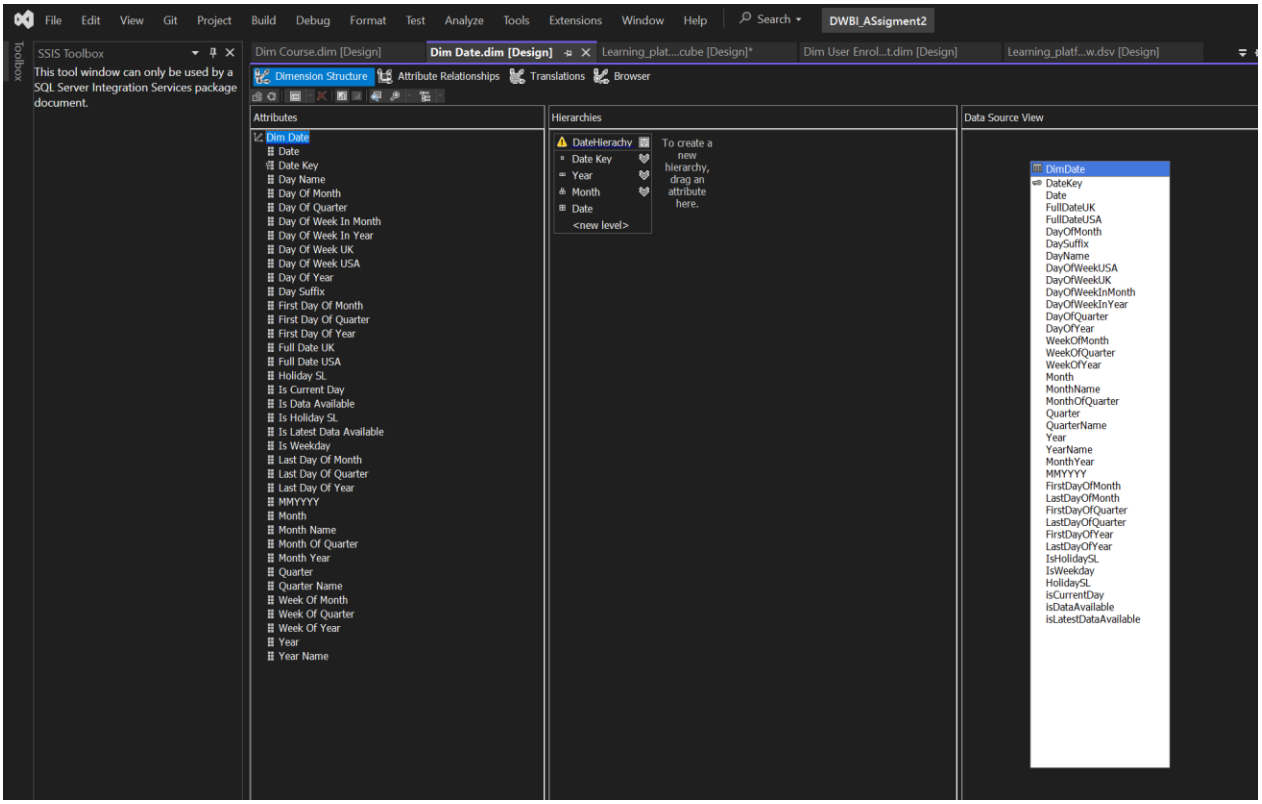
Verified relationships between dimension keys and fact foreign keys using the Dimension Usage tab.

Dim_Course




File Edit View Git Project Build Debug Test Analyze Tools Extensions Window Help
DWBI_...gment2
GitHub Copilot
SSIS Toolbox
This tool window can only be used by a SQL Server Integration Services package document.
Dim Course.dim [Design]
Dim Date.dim [Design]
Learning_plat....cube [Design]*
Dimension Structure
Attribute Relationships
Translations
Browser
Course SK
Alternate Instructor ID
Category
Created Date Key
Description
Email
Full Name
Instructor SK
Join Date
Join Date Key
Level
Price
Specialization
Title
Attributes
Attribute Relationships
Git version control isn't being used yet.
Initialize, back up, and share your repository.
Create G
Get code from an online repository like GitHub or Azure DevOps.
Clone Re
Open an existing local repository using the Git menu.
Read an overview of using Git in Visual Studio.
Ready
Add to Source Control
Select Repository

Dim_Date


File Edit View Git Project Build Debug Format Test Analyze Tools Extensions Window Help
Search
DWBI_ASsigment2
SSIS Toolbox
This tool window can only be used by a SQL Server Integration Services package document.
Dim Course.dim [Design]
Dim Date.dim [Design]
Learning_plat....cube [Design]*
Dim User Enrol...t.dim [Design]
Learning_platf...w.dsv [Design]
Dimension Structure
Attribute Relationships
Translations
Browser
Attributes
Dim Date
Date
Date Key
Day Name
Day Of Month
Day Of Quarter
Day Of Week In Month
Day Of Week In Year
Day Of Week UK
Day Of Week USA
Day Of Year
Day Suffix
First Day Of Month
First Day Of Quarter
First Day Of Year
Full Date UK
Full Date USA
Holiday SL
Is Current Day
Is Data Available
Is Holiday SL
Is Latest Data Available
Is Weekday
Last Day Of Month
Last Day Of Quarter
Last Day Of Year
MMYYYY
Month
Month Name
Month Of Quarter
Month Year
Quarter
Quarter Name
Week Of Month
Week Of Quarter
Week Of Year
Year
Year Name
Hierarchies
DateHierachy
Date Key
Year
Month
Date
<new level>
To create a new hierarchy, drag an attribute here.
Data Source View
DimDate
DateKey
Date
FullDateUK
FullDateUSA
DayOfMonth
DaySuffix
DayName
DayOfWeekUSA
DayOfWeekUK
DayOfWeekInMonth
DayOfWeekInYear
DayOfQuarter
DayOfYear
WeekOfMonth
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Year
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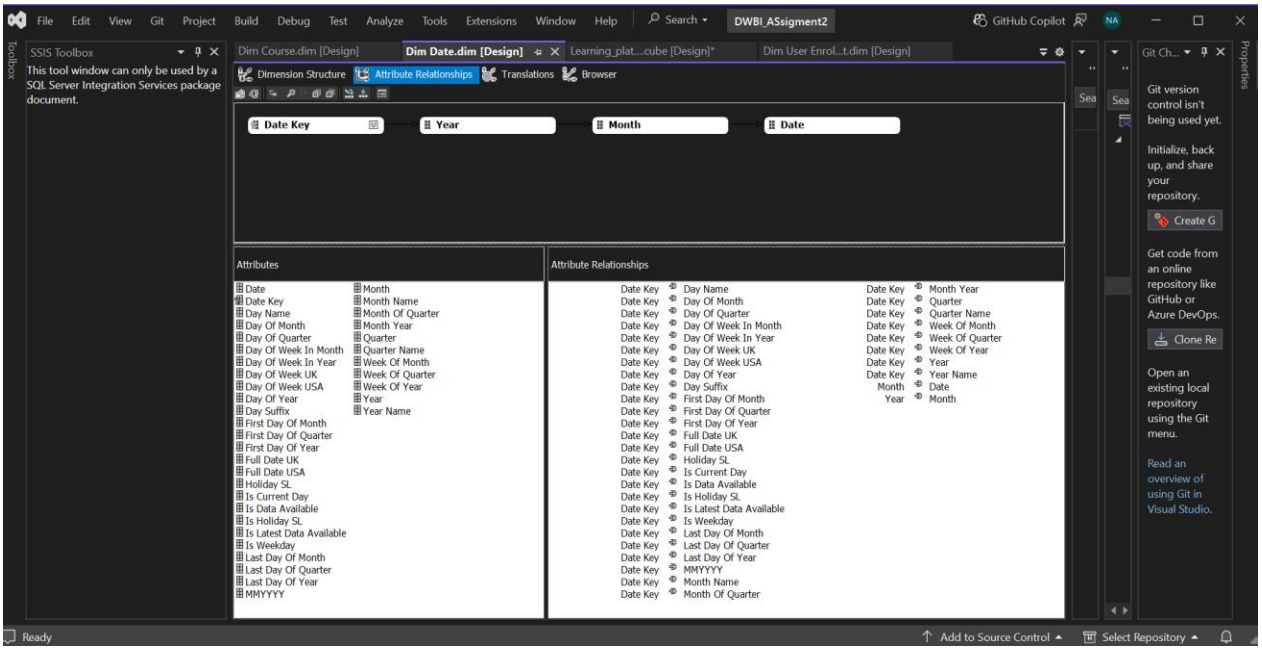
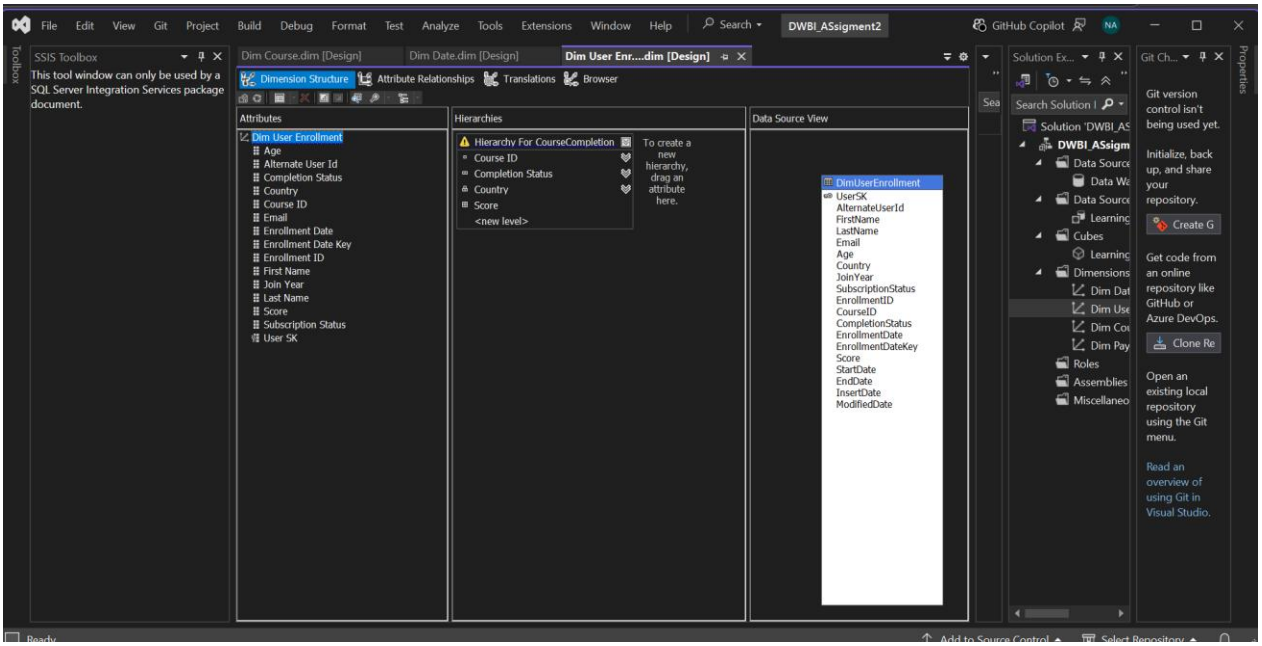
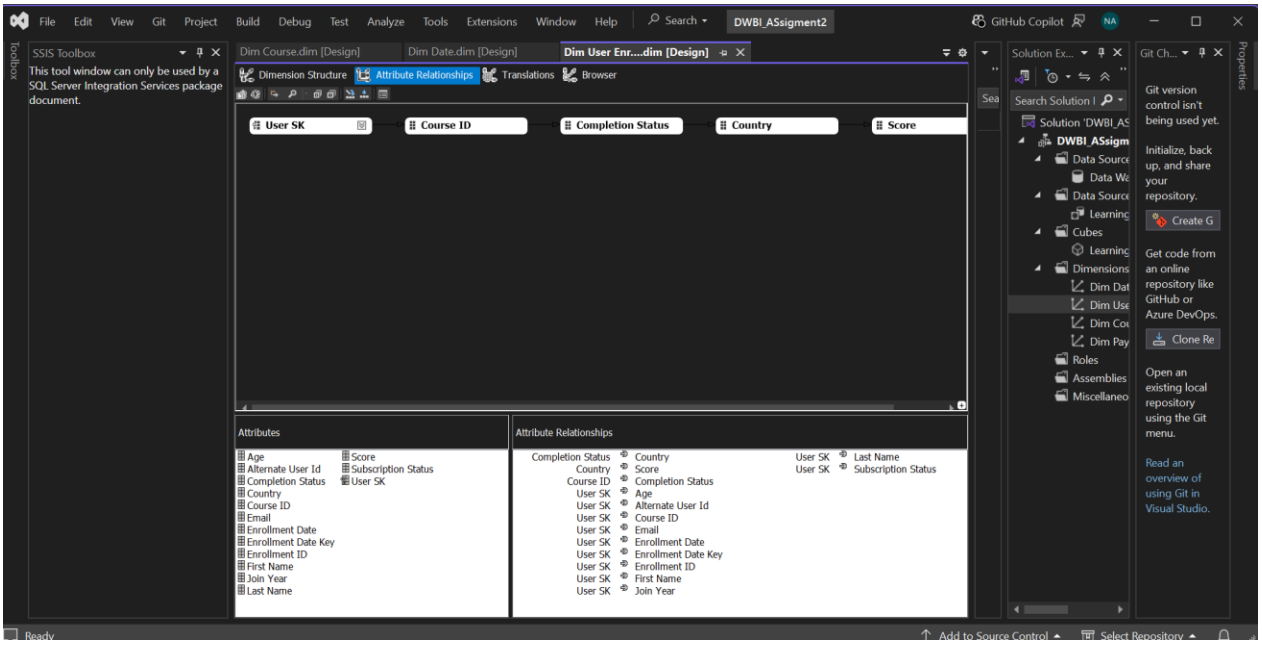
LastDayOfYear
IsHolidaySL
IsWeekday
HolidaySL
isCurrentDay
isDataAvailable
isLatestDataAvailable

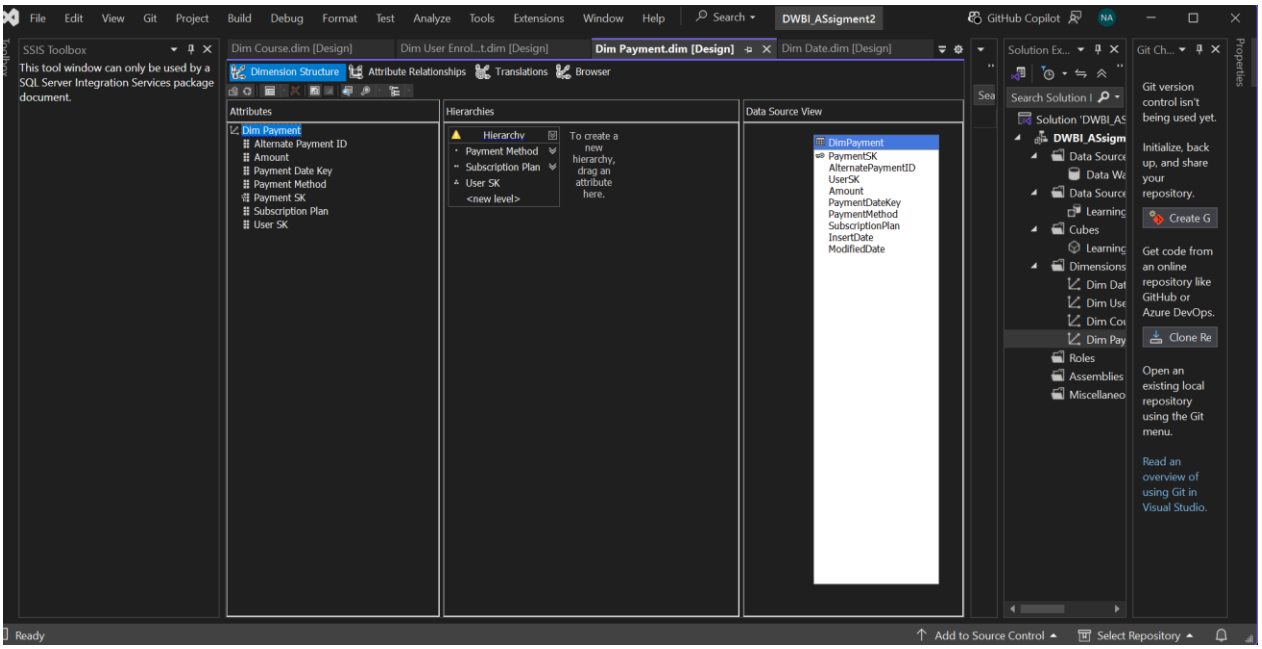


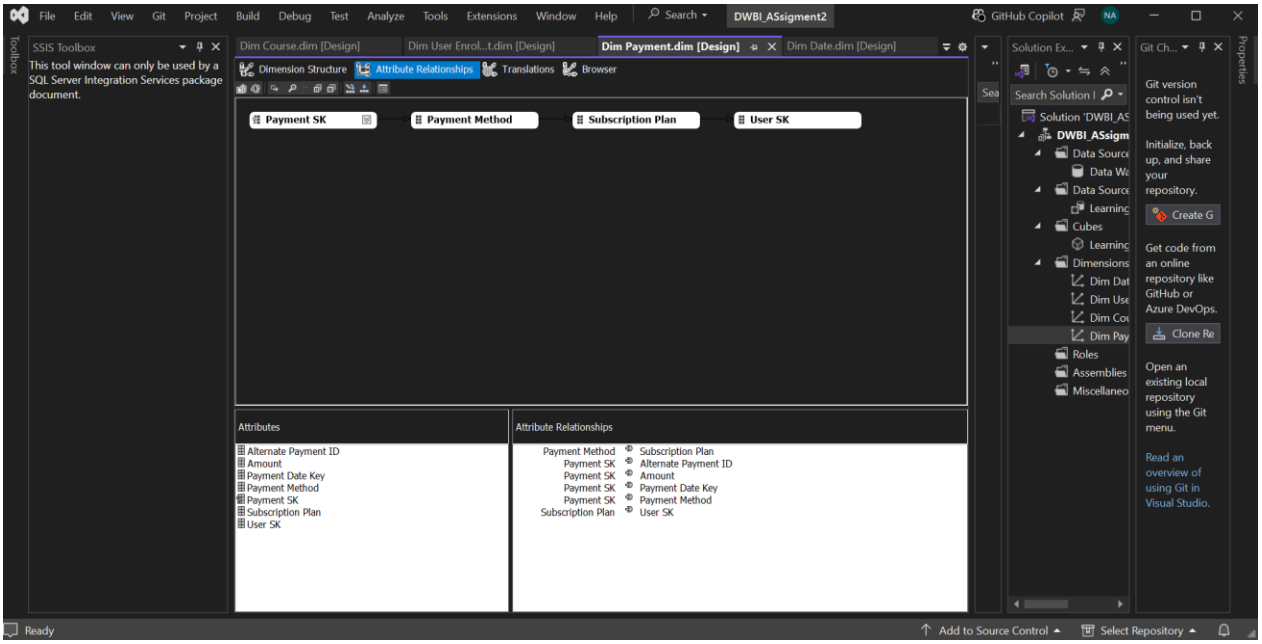
Dim_User_Enrollemt




File Edit View Git Project Build Debug Test Analyze Tools Extensions Window Help
Search
DWBI_ASsigment2
GitHub Copilot
SSIS Toolbox
This tool window can only be used by a SQL Server Integration Services package document.
Dim Course.dim [Design]
Dim Date.dim [Design]
Dim User Enr....dim [Design]
Dimension Structure
Attribute Relationships
Translations
Browser
User SK
Course ID
Completion Status
Country
Score
Attributes
Age
Alternate User Id
Completion Status
Country
Course ID
Email
Enrollment Date
Enrollment Date Key
Enrollment ID
First Name
Join Year
Last Name
Score
Subscription Status
User SK
Attribute Relationships
Completion Status
Country
Course ID
User SK
Solution Ex...
Search Solution
Solution 'DWBI_AS
DWBI_ASsigm
Data Source
Cubes
Dimensions
Roles
Assemblies
Miscellaneo
Git Ch...
Git version control isn't being used yet.
Initialize, back up, and share your repository.
Create G
Get code from an online repository like GitHub or Azure DevOps.
Clone Re
Open an existing local repository using the Git menu.
Read an overview of using Git in Visual Studio.
Properties
Ready
Add to Source Control
Select Repository

DimPayment


Dim Payment.dim [Design]
Dimension Structure
Attribute Relationships
Translations
Browser
Attributes
Hierarchies
Data Source View
Dim Payment
Alternate Payment ID
Amount
Payment Date Key
Payment Method
Payment SK
Subscription Plan
User SK
DimPayment
PaymentSK
AlternatePaymentID
UserSK
Amount
PaymentDateKey
PaymentMethod
SubscriptionPlan
InsertDate
ModifiedDate
Ready


Dim Payment.dim [Design]
Dimension Structure
Attribute Relationships
Translations
Browser
Payment SK
Payment Method
Subscription Plan
User SK
Attributes
Attribute Relationships
Alternate Payment ID
Amount
Payment Date Key
Payment Method
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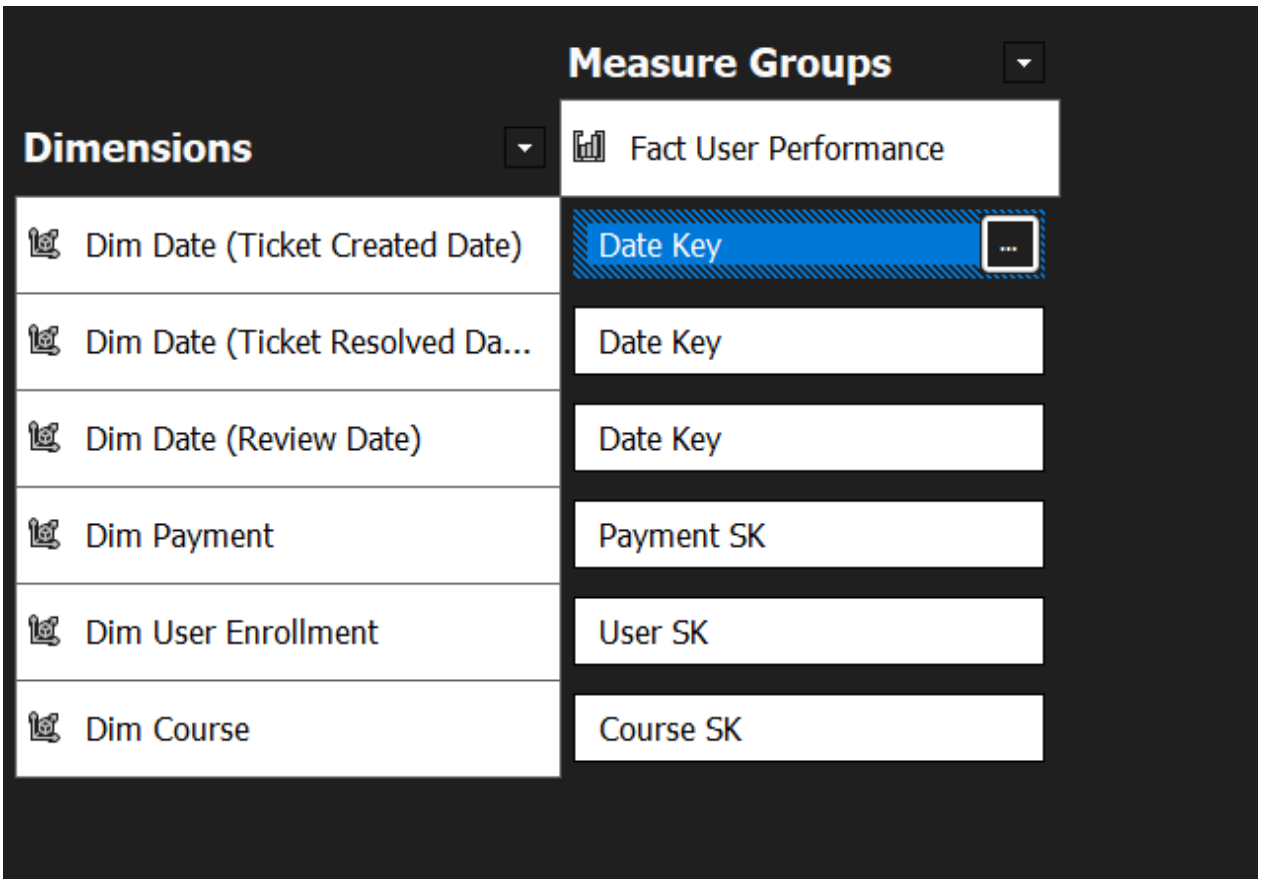
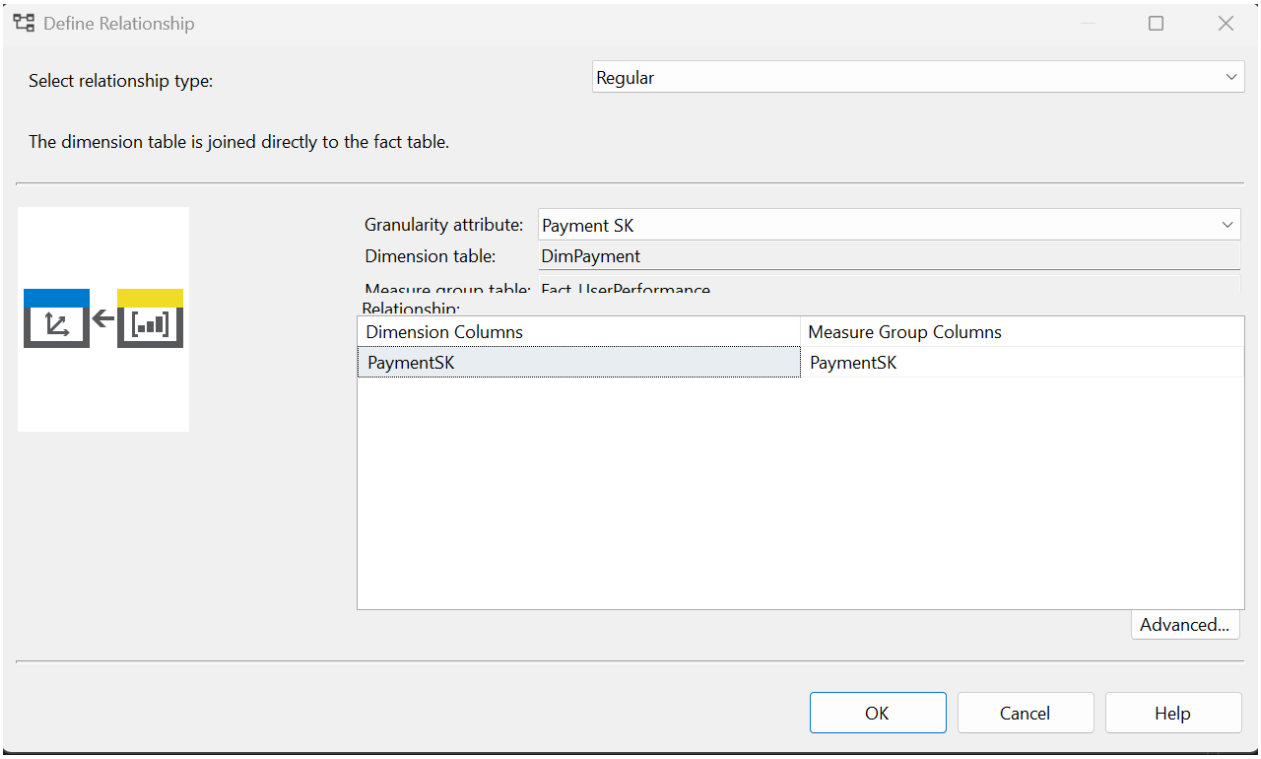
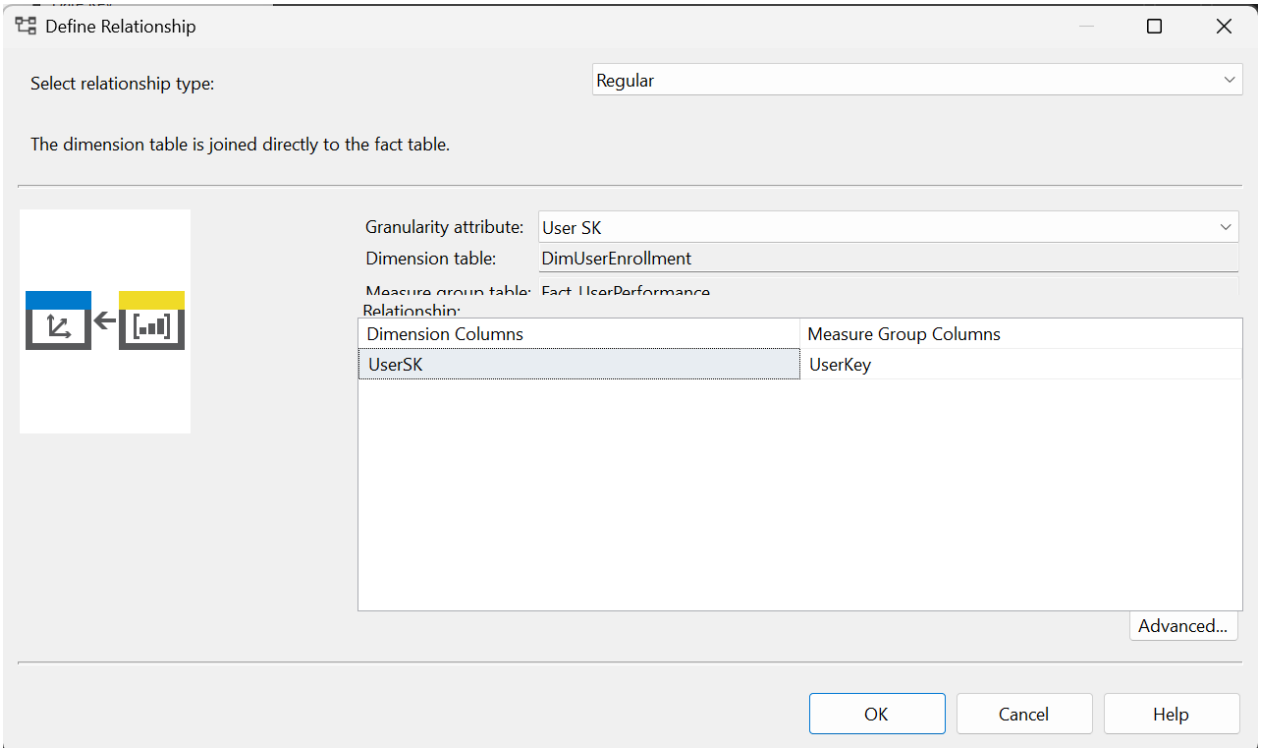
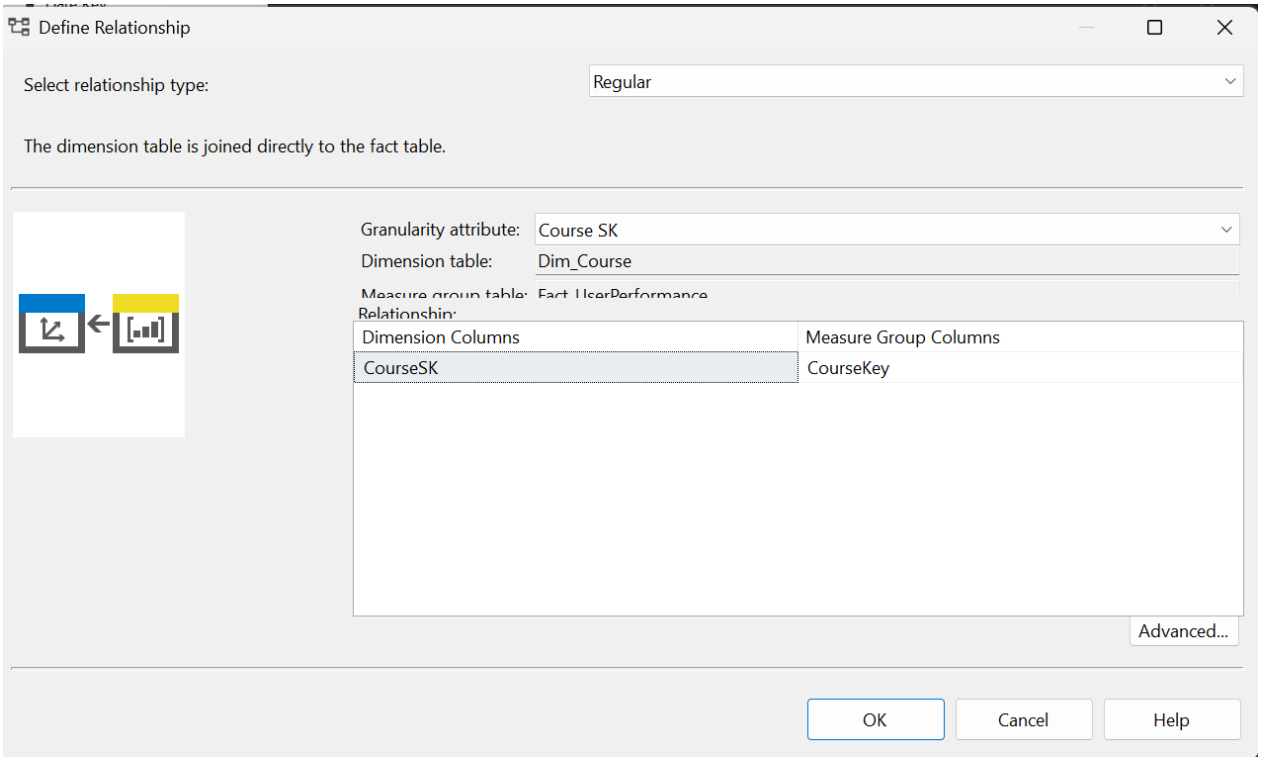
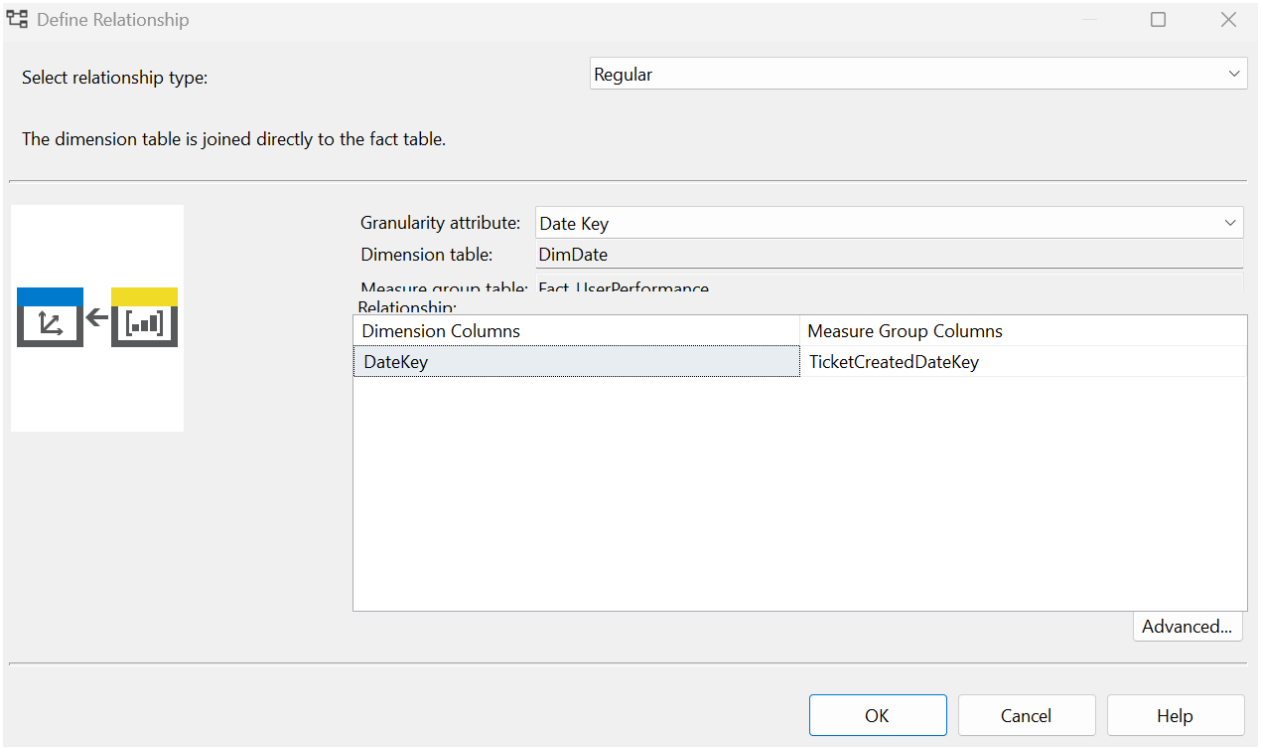
User SK
Payment Method Subscription Plan
Payment SK Alternate Payment ID
Payment SK Amount
Payment SK Payment Date Key
Payment SK Payment Method
Subscription Plan User SK
Ready

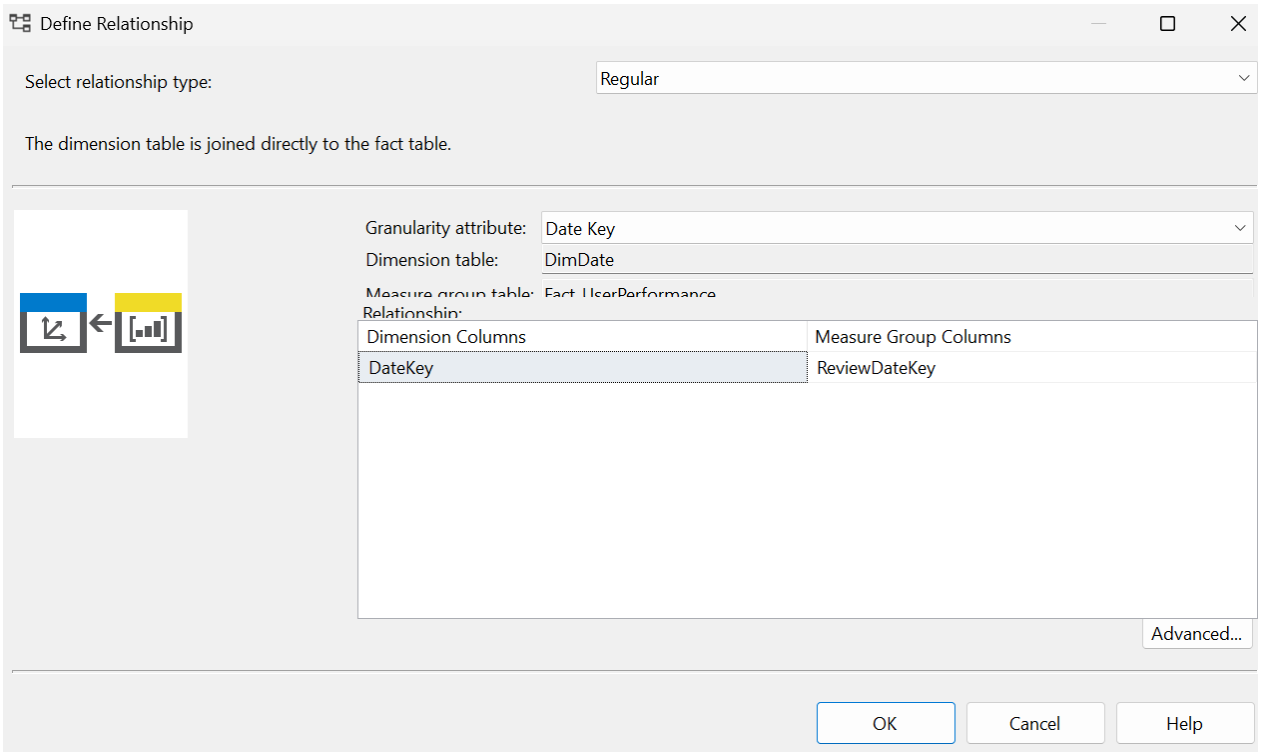

Measure Groups
Dimensions
Fact User Performance
Dim Date (Ticket Created Date)
Date Key
Dim Date (Ticket Resolved Da...
Date Key
Dim Date (Review Date)
Date Key
Dim Payment
Payment SK
Dim User Enrollment
User SK
Dim Course
Course SK


Define Relationship
Select relationship type:
Regular
The dimension table is joined directly to the fact table.
Granularity attribute:
Payment SK
Dimension table:
DimPayment
Relationship:
Dimension Columns
Measure Group Columns
PaymentSK
PaymentSK
Advanced...
OK
Cancel
Help


Define Relationship
Select relationship type:
Regular
The dimension table is joined directly to the fact table.
Granularity attribute:
User SK
Dimension table:
DimUserEnrollment
Measure group table:
Fact UserPerformance
Relationship:
Dimension Columns
Measure Group Columns
UserSK
UserKey
Advanced...
OK
Cancel
Help

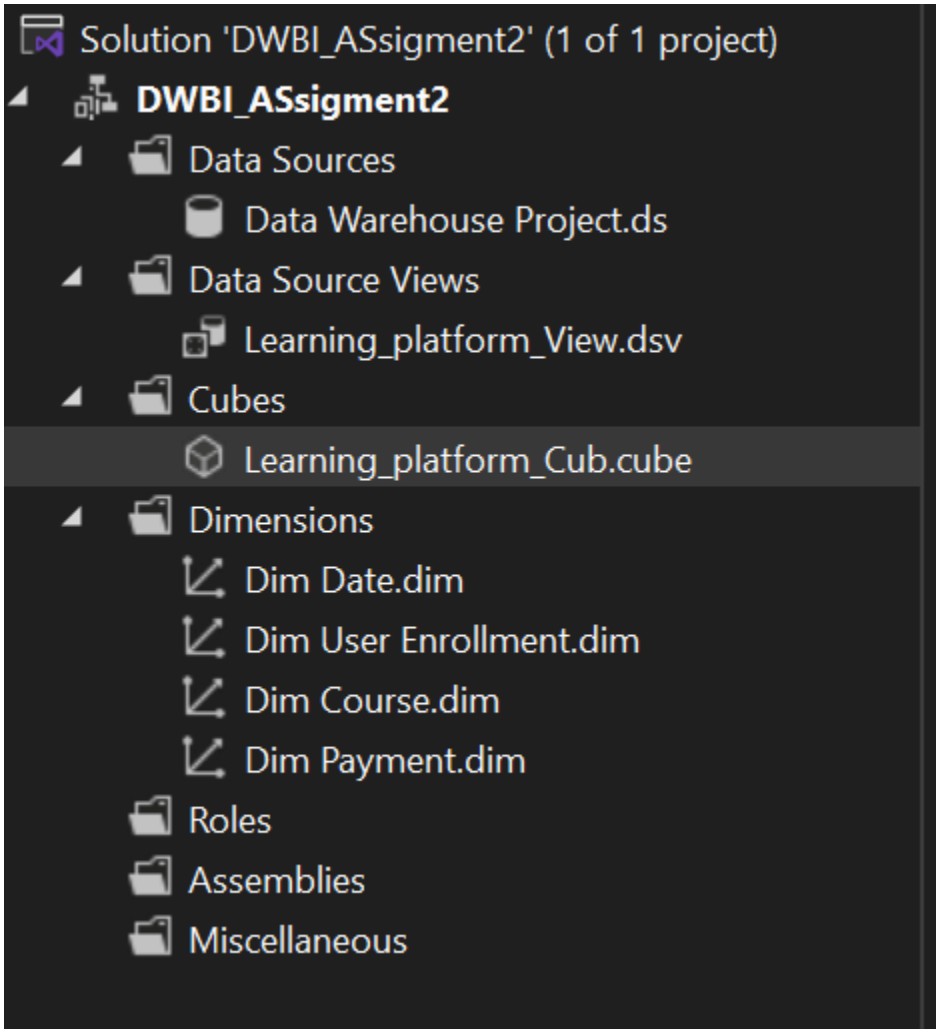

Define Relationship
Select relationship type:
Regular
The dimension table is joined directly to the fact table.
Granularity attribute:
Course SK
Dimension table:
Dim_Course
Measure group table:
Fact_UserPerformance
Relationship:
Dimension Columns
Measure Group Columns
CourseSK
CourseKey
Advanced...
OK
Cancel
Help


Define Relationship
Select relationship type:
Regular
The dimension table is joined directly to the fact table.
Granularity attribute:
Date Key
Dimension table:
DimDate
Measure group table:
Fact_UserPerformance
Relationship:
Dimension Columns
Measure Group Columns
DateKey
TicketCreatedDateKey
Advanced...
OK
Cancel
Help

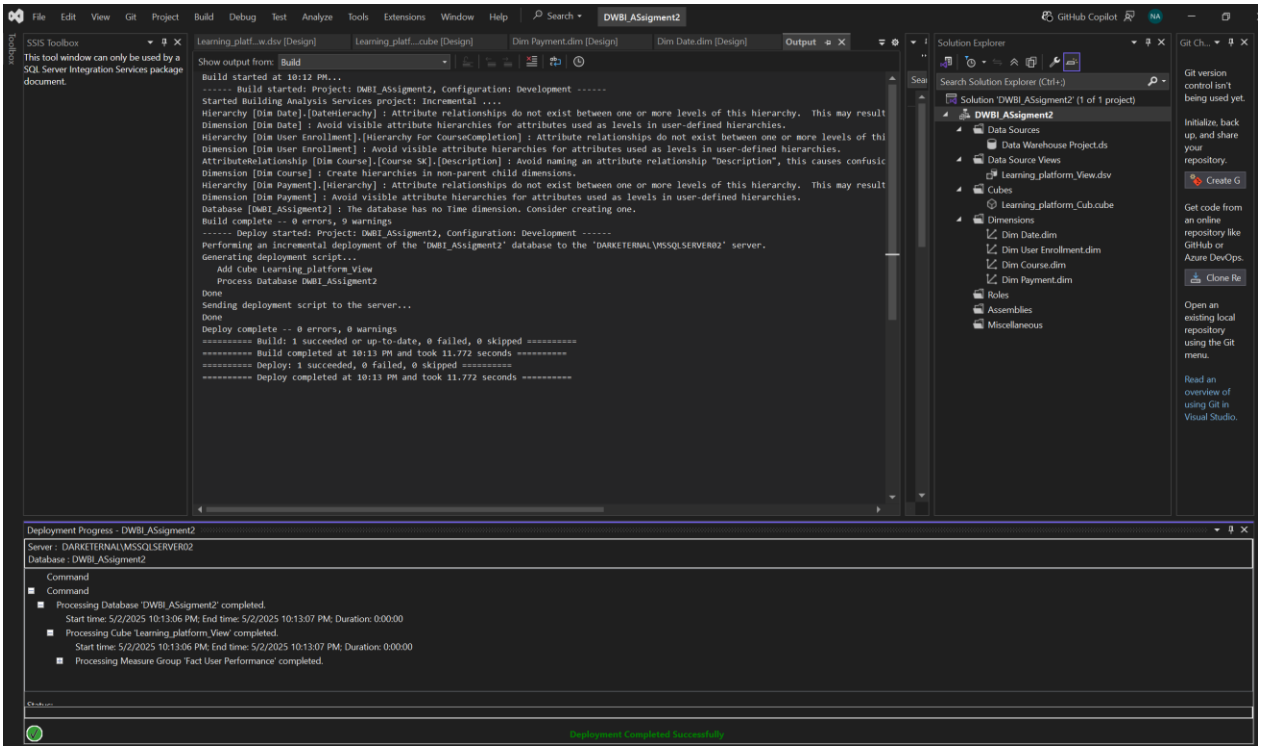

Define Relationship
Select relationship type:
Regular
The dimension table is joined directly to the fact table.
Granularity attribute:
Date Key
Dimension table:
DimDate
Measure group table:
Fact_UserPerformance
Relationship:
Dimension Columns
Measure Group Columns
DateKey
ReviewDateKey
Advanced...
OK
Cancel
Help

5. Deployment and Processing

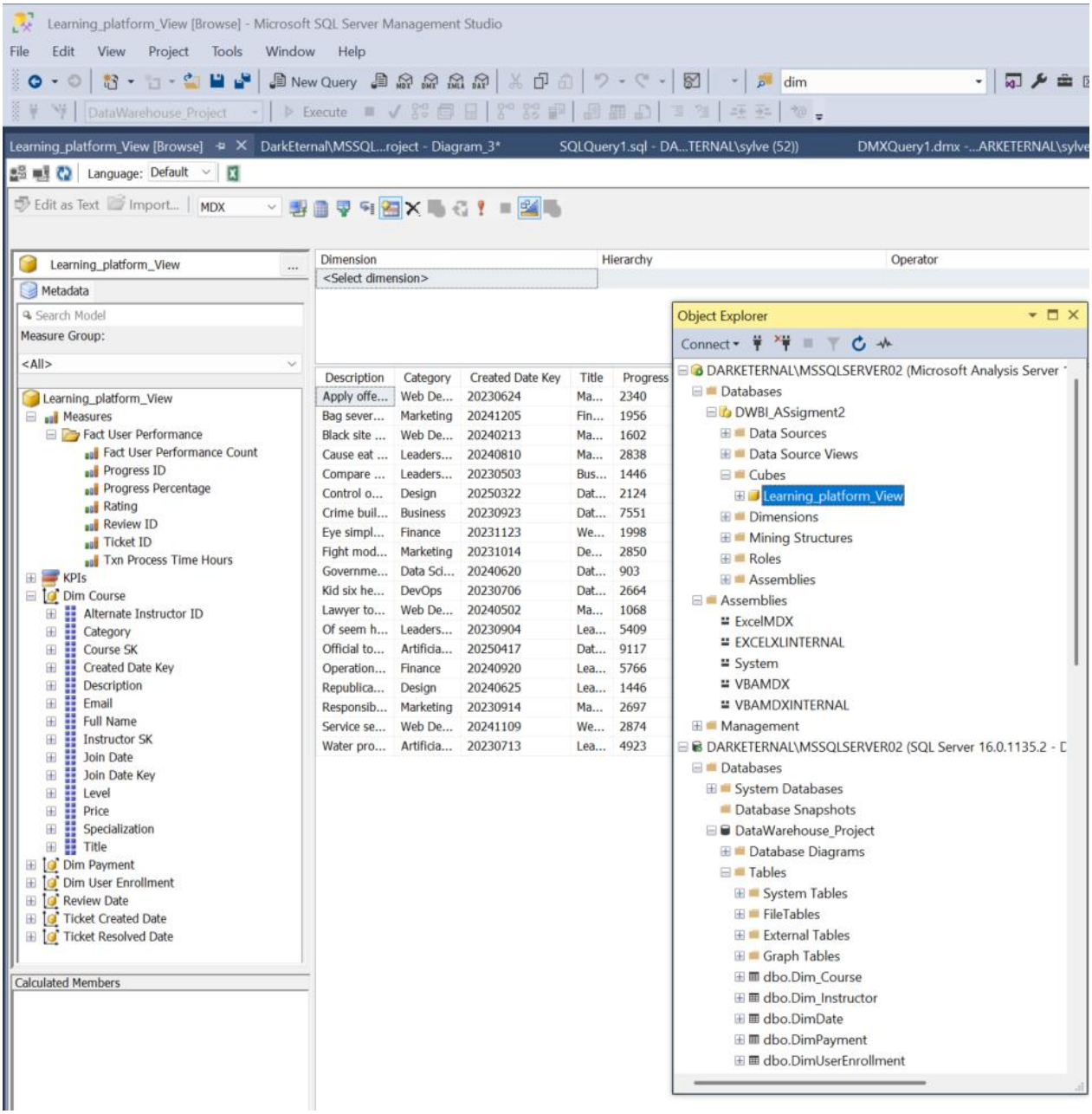
- Solution Explorer- CubeProject_IT22154576



- Deployed the cube to the local Analysis Services instance.
- Successfully processed the cube to load data.



- Validated cube structure in the SQL Analysis Server


Learning_platform_View [Browse] - Microsoft SQL Server Management Studio
File Edit View Project Tools Window Help
New Query
dim
DataWarehouse_Project
Execute
Learning_platform_View [Browse]
DarkEternal\MSSQL...roject - Diagram_3*
SQLQuery1.sql - DA...TERNAL\sylve (52))
DMXQuery1.dmx -...ARKETERNAL\sylve
Language: Default
Edit as Text
Import...
MDX
Learning_platform_View
Metadata
Search Model
Measure Group:
<All>
Learning_platform_View
Measures
Fact User Performance
Fact User Performance Count
Progress ID
Progress Percentage
Rating
Review ID
Ticket ID
Txn Process Time Hours
KPIs
Dim Course
Alternate Instructor ID
Category
Course SK
Created Date Key
Description
Email
Full Name
Instructor SK
Join Date
Join Date Key
Level
Price
Specialization
Title
Dim Payment
Dim User Enrollment
Review Date
Ticket Created Date
Ticket Resolved Date
Calculated Members
Dimension
Hierarchy
Operator
<Select dimension>
Description Category Created Date Key Title Progress
Apply offe... Web De... 20230624 Ma... 2340
Bag sever... Marketing 20241205 Fin... 1956
Black site ... Web De... 20240213 Ma... 1602
Cause eat ... Leaders... 20240810 Ma... 2838
Compare ... Leaders... 20230503 Bus... 1446
Control o... Design 20250322 Dat... 2124
Crime buil... Business 20230923 Dat... 7551
Eye simpl... Finance 20231123 We... 1998
Fight mod... Marketing 20231014 De... 2850
Governme... Data Sci... 20240620 Dat... 903
Kid six he... DevOps 20230706 Dat... 2664
Lawyer to... Web De... 20240502 Ma... 1068
Of seem h... Leaders... 20230904 Lea... 5409
Official to... Artificia... 20250417 Dat... 9117
Operation... Finance 20240920 Lea... 5766
Republica... Design 20240625 Lea... 1446
Responsib... Marketing 20230914 Ma... 2697
Service se... Web De... 20241109 We... 2874
Water pro... Artificia... 20230713 Lea... 4923
Object Explorer
Connect
DARKETERNAL\MSSQLSERVER02 (Microsoft Analysis Server
Databases
DWBI_ASsigment2
Data Sources
Data Source Views
Cubes
Learning_platform_View
Dimensions
Mining Structures
Roles
Assemblies
Assemblies
ExcelMDX
EXCELXLINTERNAL
System
VBAMDX
VBAMDXINTERNAL
Management
DARKETERNAL\MSSQLSERVER02 (SQL Server 16.0.1135.2 - D
Databases
System Databases
Database Snapshots
DataWarehouse_Project
Database Diagrams
Tables
System Tables
FileTables
External Tables
Graph Tables
dbo.Dim_Course
dbo.Dim_Instructor
dbo.DimDate
dbo.DimPayment
dbo.DimUserEnrollment

4. Demonstration of OLAP Operations

Business Logic: Track the support and the performance

Track how many support tickets each user raises and analyze their course progress to understand the relationship between support needs and learning

Engagement

OLAP Operations in Excel

The following OLAP operations were performed using PivotTables:

1. Roll-up

Data was aggregated from **individual Date records up to Year → Quarter → Month → Date** level.

- **Result:** Allows viewing of summarized **Rating** and **Progress Percentage** by time period, starting from yearly down to specific dates.
- **Rows:**
  Dim_Date → Year → Quarter → MonthName → Date
- **Columns:**
  Measure Type (Rating, Progress Percentage)
- **Values:**
  Rating, Progress Percentage

2. Drill-down

- **Result**: Observe how **user rating trends** change across time.
- **Fields**:
  - Columns: Dim_Date → Year, Quarter, Month (Hierarchy)
  - **Rows**: Category → Title → First Name → Last Name

- **Values**: Rating

3. Slicer

- A slicer was added to enable easy filtering of the PivotTable by **Subscription Status**.
- **Result:** Users can click on slicer buttons (Active, Cancelled, Inactive, Trial, Unknown) to instantly filter the country-by-category Progress Percentage summary to only those records matching the selected status.

Fields:

- **Slicer Field:**
  Fact_User_Performance → Subscription Status

4 Dice

- **Operation**: A **DICE** operation was performed to select a specific subcube of the data.
- **Result**: The data is sliced to show only selected countries (Barbados, Egypt, Estonia, French Polynesia) and categories across all subscription statuses, allowing focused analysis of **Progress Percentage**.
- **Fields**:
  - **Rows**: Category
  - **Columns**: Country
  - **Values**: Progress Percentage
  - **Filter applied**: Subscription Status = All (but could be used to narrow to specific user groups)

5. Pivot

- **Row Dimension – Title:**

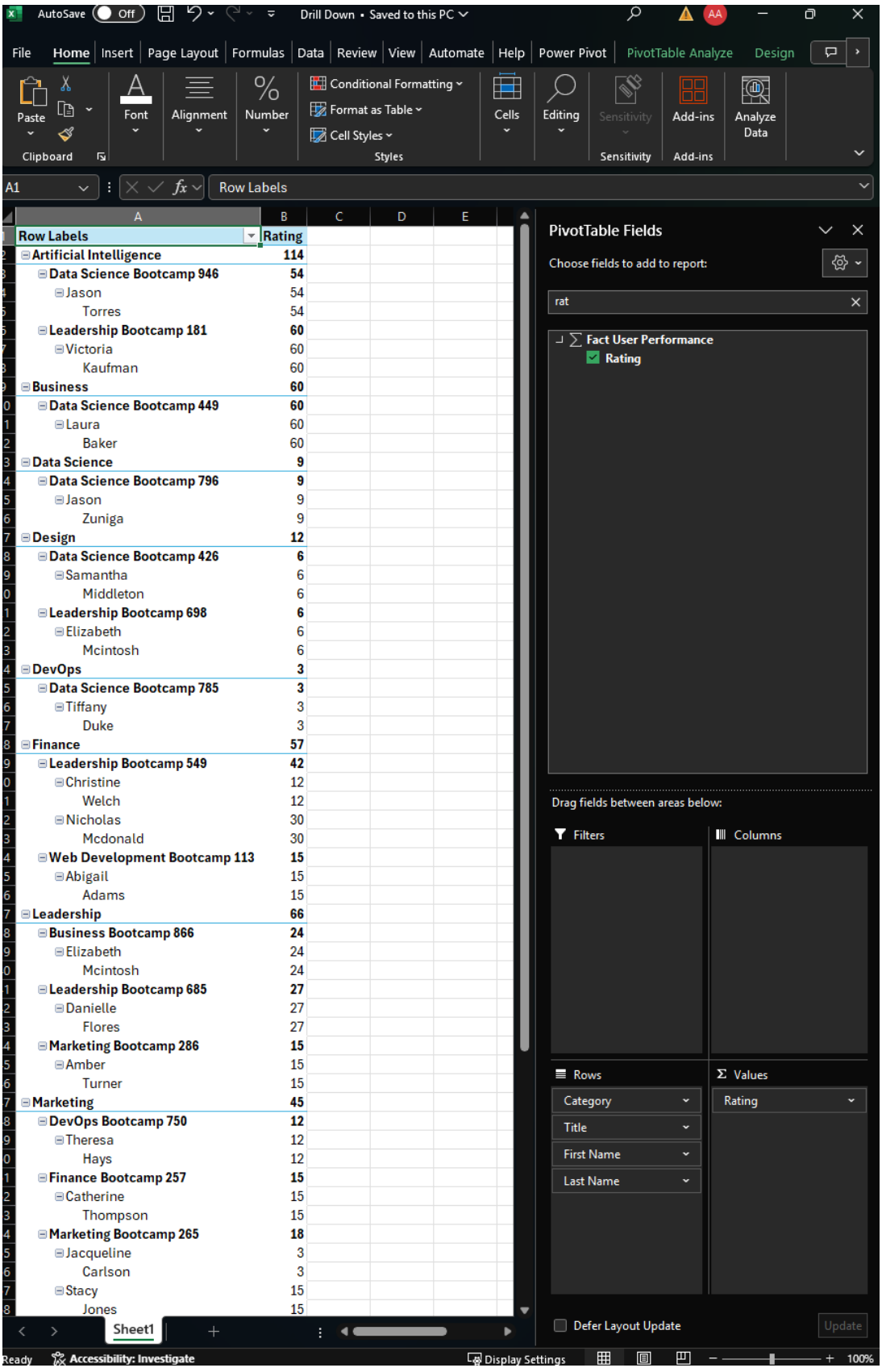
The rows list different bootcamp programs, each with a unique name and code. This allows us to compare how many ratings each specific bootcamp received.

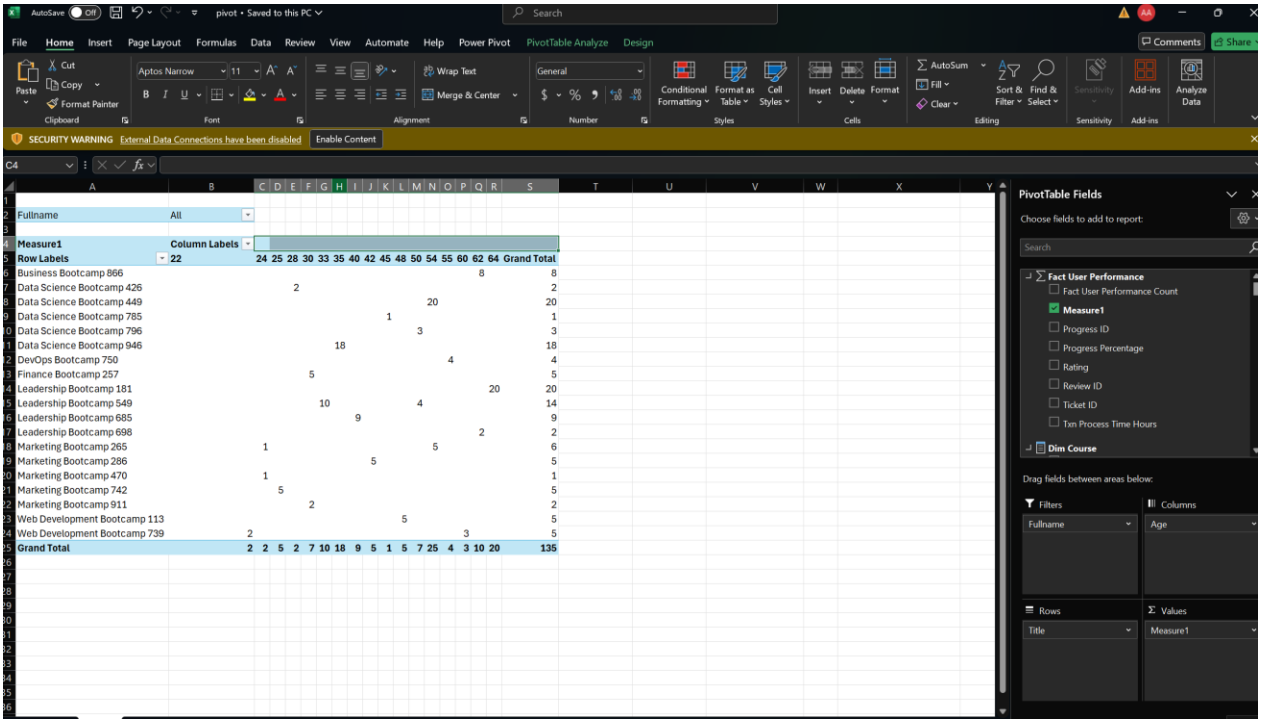
- **Column Dimension – Age:**

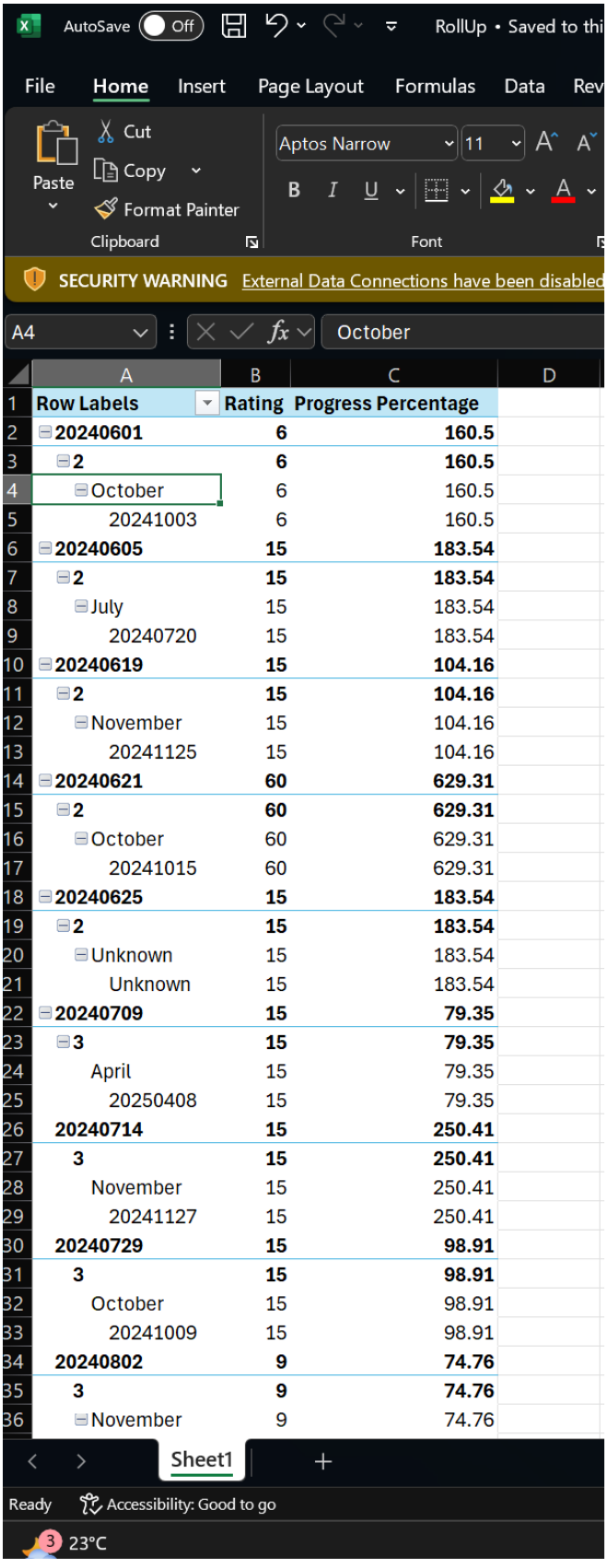
The columns represent the age of the users who gave ratings. Each column shows a specific age (like 22, 25, 30, etc.), helping us understand which age groups are rating each bootcamp.

- **Values – Measure1 (Rating Count):**

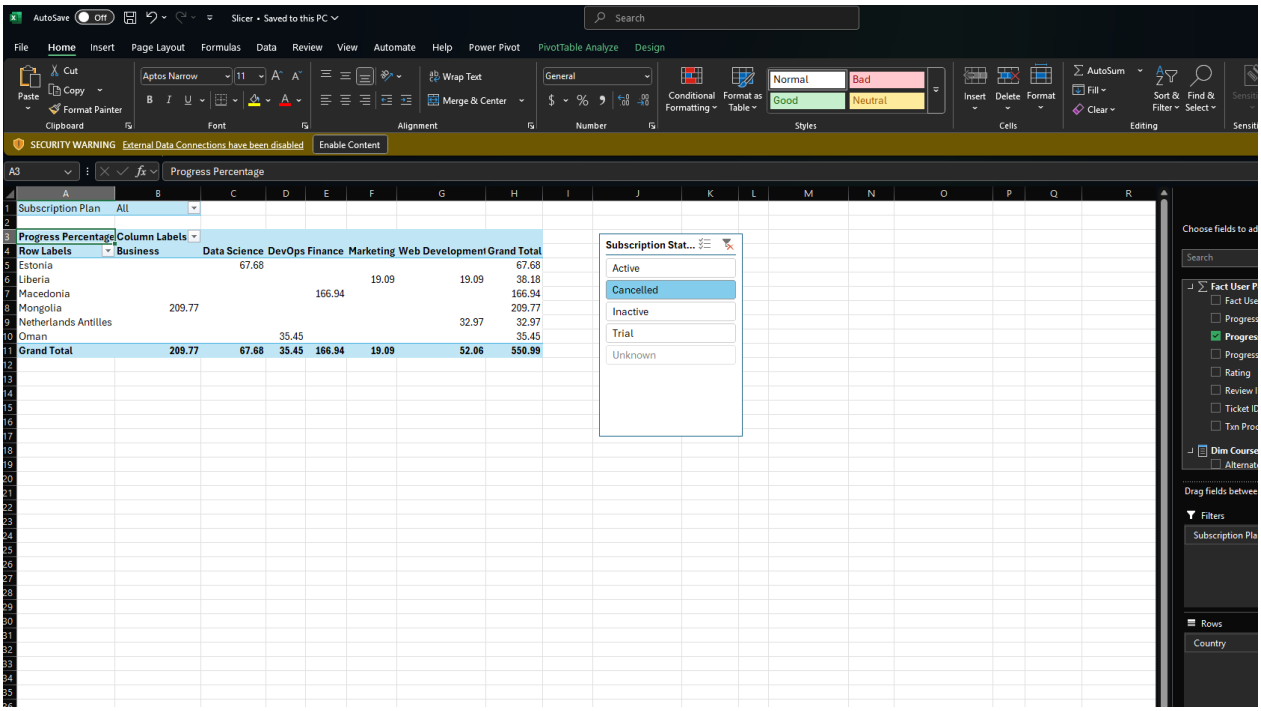
The numbers in the table show how many ratings were given by participants of each age group for each bootcamp. This helps identify the age distribution of users providing feedback and which bootcamps are receiving more engagement.

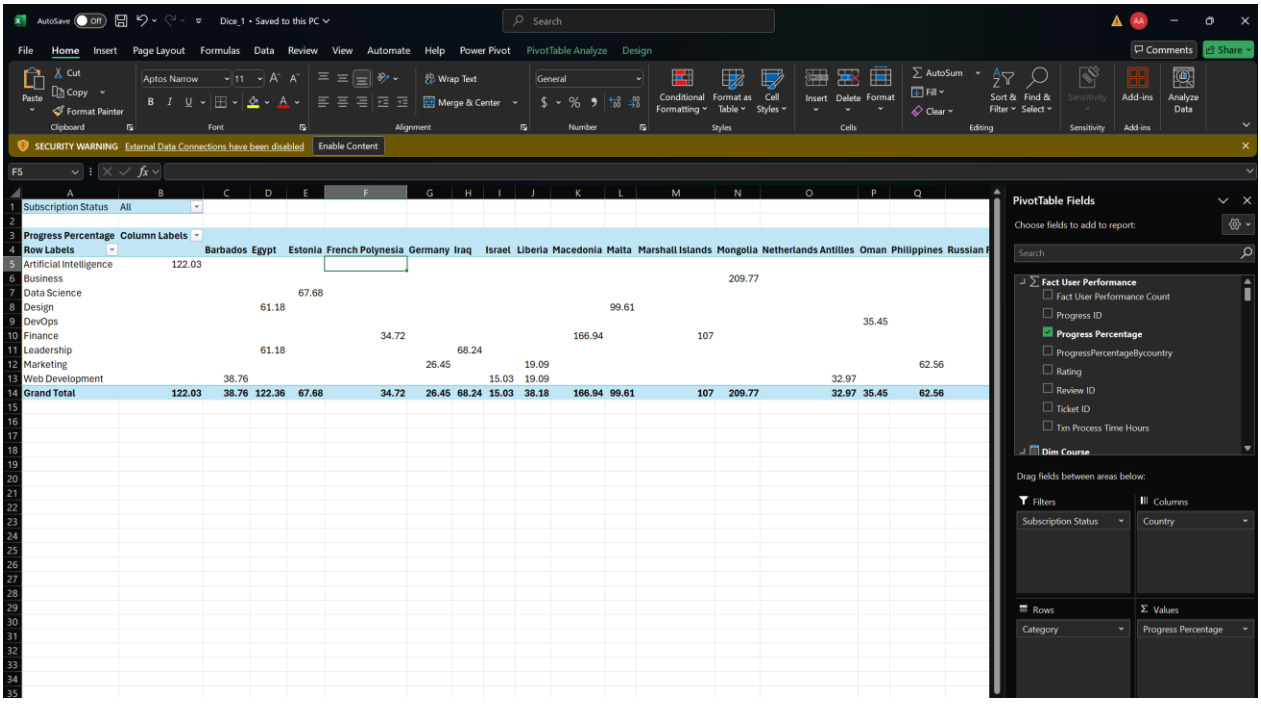

AutoSave Off
Drill Down • Saved to this PC
File Home Insert Page Layout Formulas Data Review View Automate Help Power Pivot PivotTable Analyze Design
Paste
Font
Alignment
Number
Conditional Formatting
Format as Table
Cell Styles
Styles
Cells
Editing
Sensitivity
Add-ins
Analyze Data
Clipboard
A1
Row Labels
Row Labels Rating
Artificial Intelligence 114
Data Science Bootcamp 946 54
Jason 54
Torres 54
Leadership Bootcamp 181 60
Victoria 60
Kaufman 60
Business 60
Data Science Bootcamp 449 60
Laura 60
Baker 60
Data Science 9
Data Science Bootcamp 796 9
Jason 9
Zuniga 9
Design 12
Data Science Bootcamp 426 6
Samantha 6
Middleton 6
Leadership Bootcamp 698 6
Elizabeth 6
Mcintosh 6
DevOps 3
Data Science Bootcamp 785 3
Tiffany 3
Duke 3
Finance 57
Leadership Bootcamp 549 42
Christine 12
Welch 12
Nicholas 30
Mcdonald 30
Web Development Bootcamp 113 15
Abigail 15
Adams 15
Leadership 66
Business Bootcamp 866 24
Elizabeth 24
Mcintosh 24
Leadership Bootcamp 685 27
Danielle 27
Flores 27
Marketing Bootcamp 286 15
Amber 15
Turner 15
Marketing 45
DevOps Bootcamp 750 12
Theresa 12
Hays 12
Finance Bootcamp 257 15
Catherine 15
Thompson 15
Marketing Bootcamp 265 18
Jacqueline 3
Carlson 3
Stacy 15
Jones 15
Sheet1
PivotTable Fields
Choose fields to add to report:
rat
Fact User Performance
Rating
Drag fields between areas below:
Filters
Columns
Rows
Values
Category
Title
First Name
Last Name
Rating
Defer Layout Update
Update
Ready
Accessibility: Investigate
Display Settings
100%


pivot • Saved to this PC
Search
File Home Insert Page Layout Formulas Data Review View Automate Help Power Pivot PivotTable Analyze Design
Comments Share
SECURITY WARNING External Data Connections have been disabled Enable Content
Fullname All
Measure1 Column Labels
Row Labels 22 24 25 28 30 33 35 40 42 45 48 50 54 55 60 62 64 Grand Total
Business Bootcamp 866 8 8
Data Science Bootcamp 426 2 2
Data Science Bootcamp 449 20 20
Data Science Bootcamp 785 1 1
Data Science Bootcamp 796 3 3
Data Science Bootcamp 946 18 18
DevOps Bootcamp 750 4 4
Finance Bootcamp 257 5 5
Leadership Bootcamp 181 20 20
Leadership Bootcamp 549 10 4 14
Leadership Bootcamp 685 9 9
Leadership Bootcamp 698 2 2
Marketing Bootcamp 265 1 5 6
Marketing Bootcamp 286 5 5
Marketing Bootcamp 470 1 1
Marketing Bootcamp 742 5 5
Marketing Bootcamp 911 2 2
Web Development Bootcamp 113 5 5
Web Development Bootcamp 739 2 3 5
Grand Total 2 2 5 2 7 10 18 9 5 1 5 7 25 4 3 10 20 135
PivotTable Fields
Choose fields to add to report:
Search
Fact User Performance
Fact User Performance Count
Measure1
Progress ID
Progress Percentage
Rating
Review ID
Ticket ID
Txn Process Time Hours
Dim Course
Drag fields between areas below:
Filters
Fullname
Columns
Age
Rows
Title
Values
Measure1



	A	B	C	D
1	Row Labels	Rating	Progress Percentage	
2	20240601	6	160.5	
3	2	6	160.5	
4	October	6	160.5	
5	20241003	6	160.5	
6	20240605	15	183.54	
7	2	15	183.54	
8	July	15	183.54	
9	20240720	15	183.54	
10	20240619	15	104.16	
11	2	15	104.16	
12	November	15	104.16	
13	20241125	15	104.16	
14	20240621	60	629.31	
15	2	60	629.31	
16	October	60	629.31	
17	20241015	60	629.31	
18	20240625	15	183.54	
19	2	15	183.54	
20	Unknown	15	183.54	
21	Unknown	15	183.54	
22	20240709	15	79.35	
23	3	15	79.35	
24	April	15	79.35	
25	20250408	15	79.35	
26	20240714	15	250.41	
27	3	15	250.41	
28	November	15	250.41	
29	20241127	15	250.41	
30	20240729	15	98.91	
31	3	15	98.91	
32	October	15	98.91	
33	20241009	15	98.91	
34	20240802	9	74.76	
35	3	9	74.76	
36	November	9	74.76	


Progress Percentage
Subscription Plan All
Progress Percentage Column Labels
Row Labels Business Data Science DevOps Finance Marketing Web Development Grand Total
Estonia 67.68
Liberia 19.09 19.09 38.18
Macedonia 166.94 166.94
Mongolia 209.77 209.77
Netherlands Antilles 32.97 32.97
Oman 35.45 35.45
Grand Total 209.77 67.68 35.45 166.94 19.09 52.06 550.99
Subscription Stat...
Active
Cancelled
Inactive
Trial
Unknown

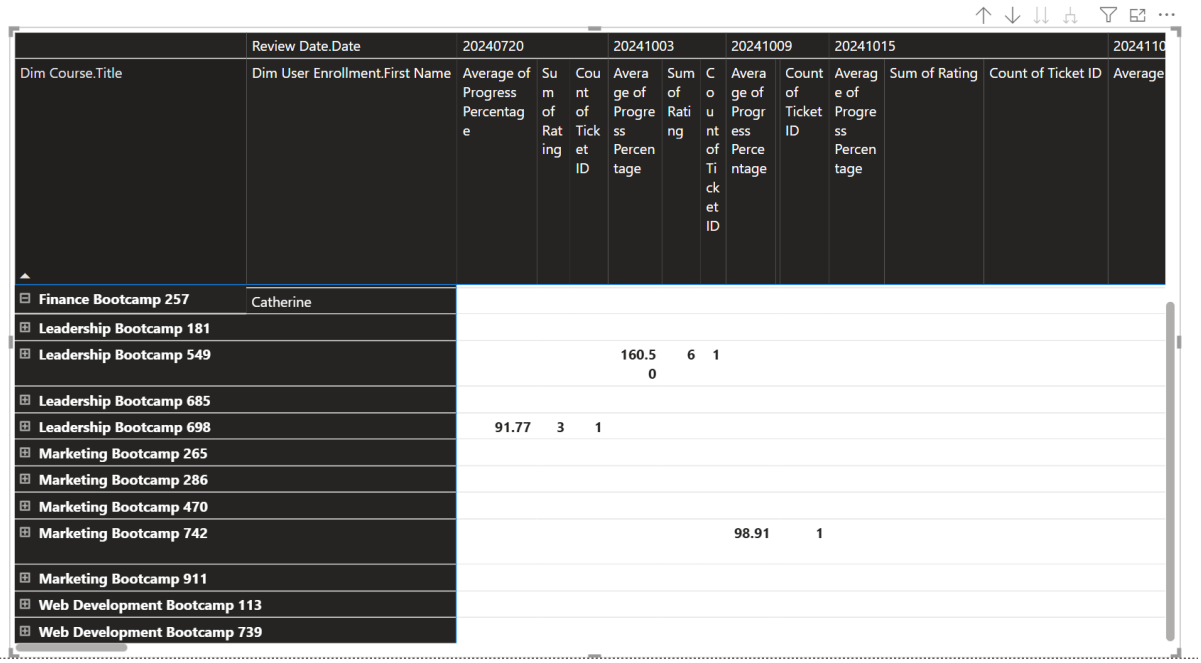

Subscription Status All
Progress Percentage Column Labels
Row Labels Barbados Egypt Estonia French Polynesia Germany Iraq Israel Liberia Macedonia Malta Marshall Islands Mongolia Netherlands Antilles Oman Philippines Russian
Artificial Intelligence 122.03
Business 209.77
Data Science 67.68
Design 61.18 99.61
DevOps 35.45
Finance 34.72 166.94 107
Leadership 61.18 68.24
Marketing 26.45 19.09 62.56
Web Development 38.76 15.03 19.09 32.97
Grand Total 122.03 38.76 122.36 67.68 34.72 26.45 68.24 15.03 38.18 166.94 99.61 107 209.77 32.97 35.45 62.56
PivotTable Fields
Choose fields to add to report:
Fact User Performance
Fact User Performance Count
Progress ID
Progress Percentage
ProgressPercentageBycountry
Rating
Review ID
Ticket ID
Txn Process Time Hours
Drag fields between areas below:
Filters
Subscription Status
Columns
Country
Rows
Category
Values
Progress Percentage

Power BI

The data for this report was sourced from an existing SSAS (SQL Server Analysis Services) cube. I used the **Get Data** option in Power BI and selected **Analysis Services** as the source type. After entering the server name, I connected to the appropriate cube using **Live Connection mode** to ensure real-time data interaction.

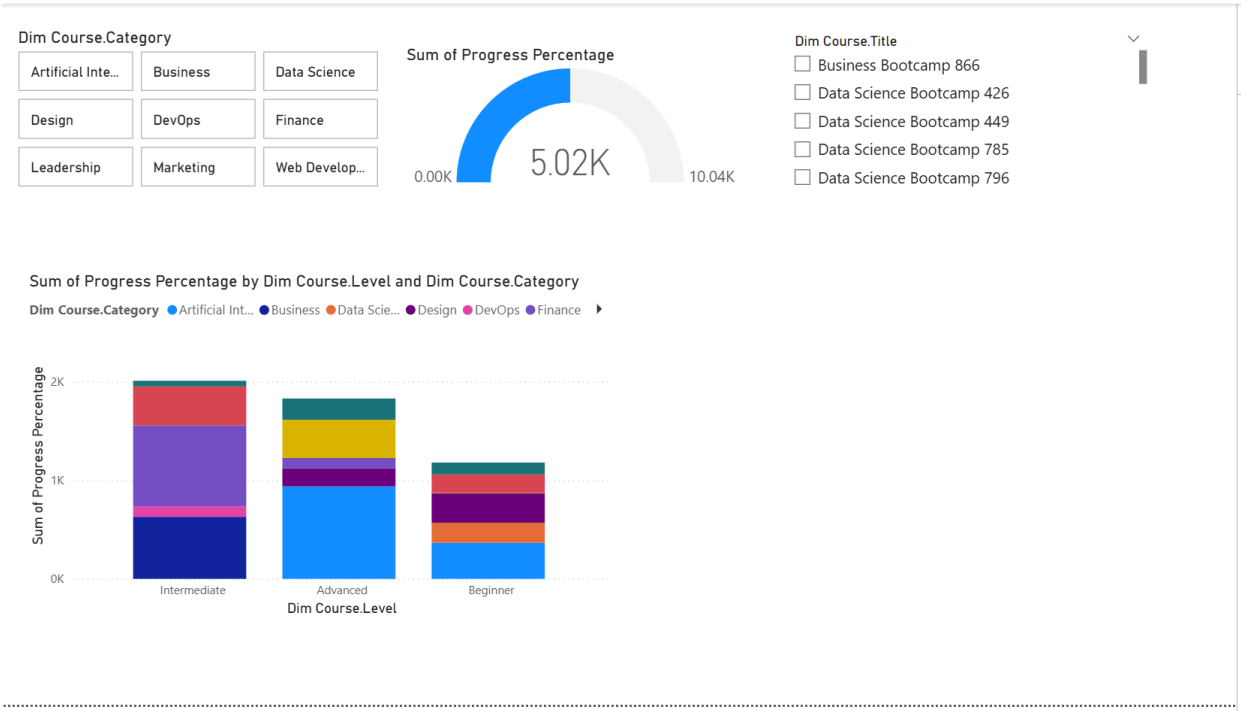
1 Report

I created a Matrix visual using Title and UserFirstName for rows, and added Ticket Count, Average Progress Percentage, and Sum of Ratings as values.

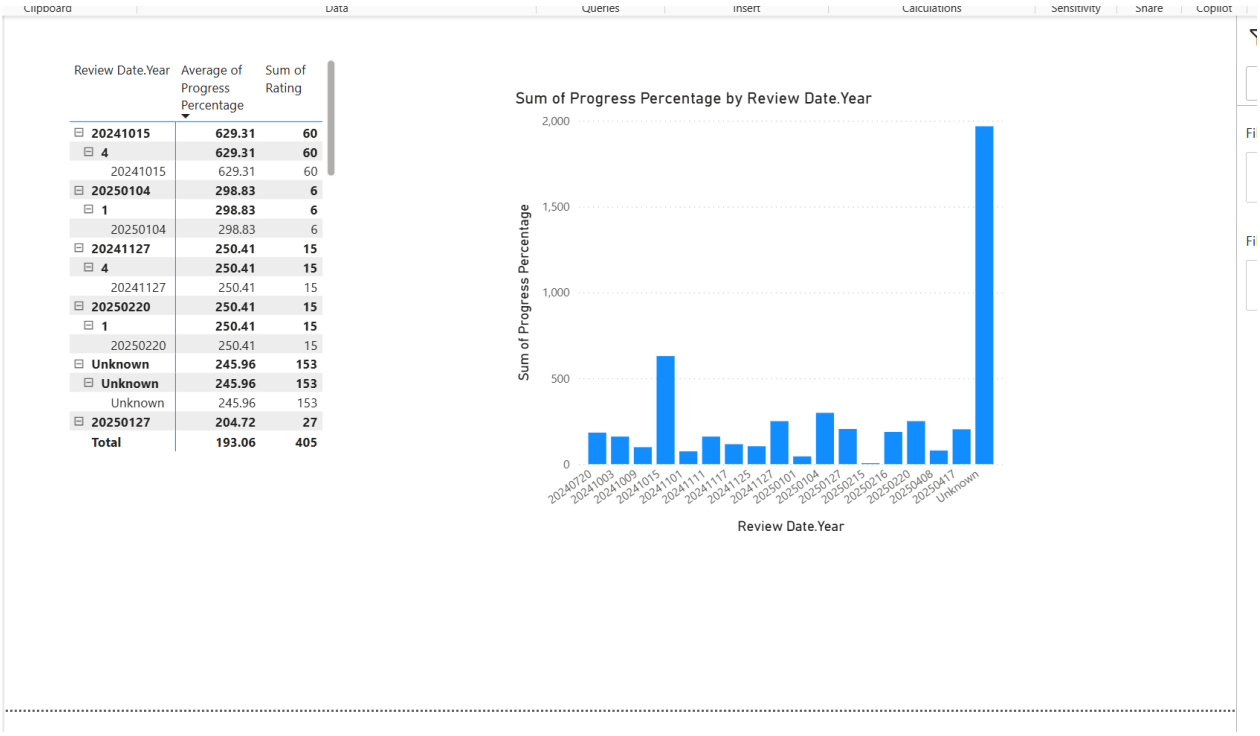


	Review Date.Date	20240720			20241003			20241009		20241015			2024110
Dim Course.Title	Dim User Enrollment.First Name	Average of Progress Percentage	Sum of Rating	Count of Ticket ID	Average of Progress Percentage	Sum of Rating	Count of Ticket ID	Average of Progress Percentage	Count of Ticket ID	Average of Progress Percentage	Sum of Rating	Count of Ticket ID	Average
Finance Bootcamp 257	Catherine												
Leadership Bootcamp 181													
Leadership Bootcamp 549					160.50	6	1						
Leadership Bootcamp 685													
Leadership Bootcamp 698		91.77	3	1									
Marketing Bootcamp 265													
Marketing Bootcamp 286													
Marketing Bootcamp 470													
Marketing Bootcamp 742								98.91	1				
Marketing Bootcamp 911													
Web Development Bootcamp 113													
Web Development Bootcamp 739													

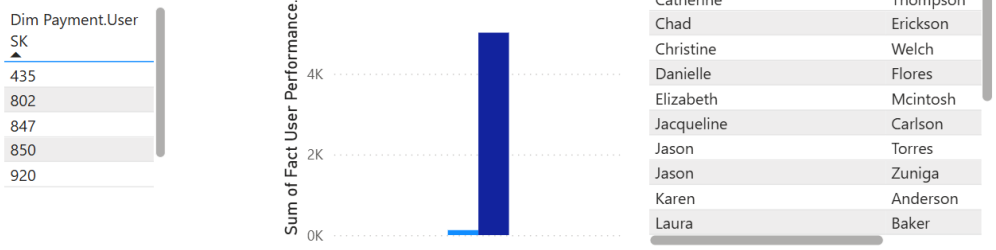
2 Report

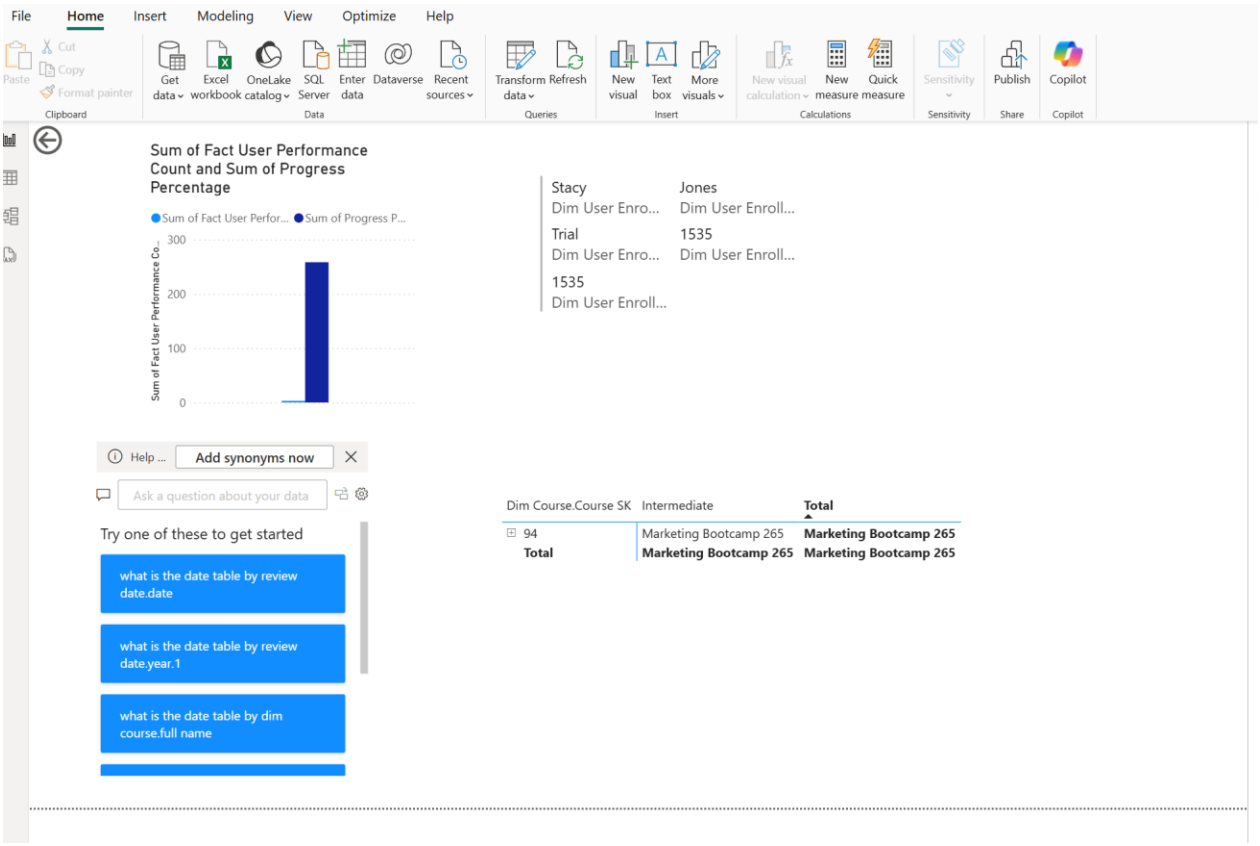


3 Report


Clipboard
Data
Queries
Insert
Calculations
Sensitivity
Share
Copilot
Review Date.Year
Average of Progress Percentage
Sum of Rating
20241015 629.31 60
4 629.31 60
20241015 629.31 60
20250104 298.83 6
1 298.83 6
20250104 298.83 6
20241127 250.41 15
4 250.41 15
20241127 250.41 15
20250220 250.41 15
1 250.41 15
20250220 250.41 15
Unknown 245.96 153
Unknown 245.96 153
Unknown 245.96 153
20250127 204.72 27
Total 193.06 405
Sum of Progress Percentage by Review Date.Year
Sum of Progress Percentage
2,000
1,500
1,000
500
0
20240720
20241003
20241009
20241015
20241101
20241111
20241117
20241125
20241127
20250101
20250104
20250127
20250215
20250216
20250220
20250408
20250417
Unknown
Review Date.Year

4 Report


Dim Payment.User SK
435
802
847
850
920
Sum of Fact User Performance Count and Sum of Progress Percentage
Sum of Fact User Perfor...
Sum of Progres...
Sum of Fact User Performance ...
6K
4K
2K
0K
Dim User Enrollment.First Name
Dim User Enr
Abigail Adams
Amber Turner
Catherine Thompson
Chad Erickson
Christine Welch
Danielle Flores
Elizabeth Mcintosh
Jacqueline Carlson
Jason Torres
Jason Zuniga
Karen Anderson
Laura Baker


File
Home
Insert
Modeling
View
Optimize
Help
Paste
Cut
Copy
Format painter
Clipboard
Get data
Excel workbook
OneLake catalog
SQL Server
Enter data
Dataverse
Recent sources
Data
Transform data
Refresh
Queries
New visual
Text box
More visuals
Insert
New visual calculation
New measure
Quick measure
Calculations
Sensitivity
Sensitivity
Publish
Share
Copilot
Copilot
Sum of Fact User Performance Count and Sum of Progress Percentage
Sum of Fact User Perfor...
Sum of Progress P...
Sum of Fact User Performance Co...
300
200
100
0
Stacy
Dim User Enro...
Jones
Dim User Enroll...
Trial
Dim User Enro...
1535
Dim User Enroll...
1535
Dim User Enroll...
Help ...
Add synonyms now
Ask a question about your data
Try one of these to get started
what is the date table by review date.date
what is the date table by review date.year.1
what is the date table by dim course.full name
Dim Course.Course SK
Intermediate
Total
94
Marketing Bootcamp 265
Marketing Bootcamp 265
Total
Marketing Bootcamp 265
Marketing Bootcamp 265