

Database -> Power BI -> Dashboard

C#->Database -> HTML/JS/CSS->NodeJS-> Power platform-> SSRS-> Power BI -> MS\_Azure Services (CRM - Dynamics)

DDL, DCL, and TCL Commands	
SQL Fundamentals	<p>SQL commands it is a Standard structured Query language</p> <ol style="list-style-type: none"> <li>1. Store data</li> <li>2. retrieve data</li> <li>3. manipulate</li> <li>4. manage data</li> </ol> <p>in a relational database.</p> <p>features :</p> <ul style="list-style-type: none"> <li>● Simple syntax</li> <li>● High performance on large datasets</li> <li>● Industry wise accepted</li> </ul>
	Constraints
	Primary key
	Foreign key
	Types of constraints - Not null, Check, Unique.
	DDL Commands
	DCL & TCL Commands
Grant & Revoke, Commit & Rollback	
Advanced Queries, Functions, and Joins	
Function in SQL Server	Functions
	Built-in Functions
	Scalar functions (e.g., LEN, ROUND, GETDATE)
	Aggregate functions (e.g., SUM, AVG, COUNT)
	User-defined Functions

Working with Queries	Aggregate functions
	Joins
	Inner join
	Left join
	Right join
	Self-join
	Full outer join
	Cross join

## Working with Queries

	Set operators
	Union
	Intersect
	Minus

Power Platform & Reporting Tools (3 Day)	
PO1: How to work with data, carry strategic decision making and reporting	
Fundamentals of Power Platform	What is Microsoft Power Platform Overview of Power BI, Power Apps, Power Automate, Power Virtual Agents How Power Platform components work together Common enterprise use cases and integrations
SSRS – Reporting Fundamentals	Introduction to SSRS architecture Standard operations in SSRS (Data Sources, Datasets, Reports) Creating a simple SSRS report using SQL Server Report deployment and execution
Reporting Tool Comparison & Visualization	SSRS (SQL-native reporting) vs Power BI (modern visualization) When to use SSRS vs Power BI in real projects Limitations and strengths of each tool Reporting best practices and performance considerations

Category	Purpose	Examples
DDL	Structure definition	CREATE, ALTER, DROP
DML	Data manipulation	INSERT, UPDATE, DELETE
DCL	Access control	GRANT, REVOKE
TCL	Transaction control	COMMIT, ROLLBACK
DQL	Data querying	SELECT

Constraints : they are rules that are applied to table column to ensure data accuracy and integrity.

Constraint	Description	Example Use Case
PRIMARY KEY	Uniquely identifies a record	Employee ID

FOREIGN KEY	Links two tables	Orders → Customers
NOT NULL	Prevents empty values	Name field
UNIQUE	Ensures unique values	Email ID
CHECK	Validates condition	Age > 18

Foreign key : we can't connect two tables with a relationship using foreign key.

1. Enforces referential integrity constraints : prevents invalid data
2. Links table -> parent - child relationship

Function in SQL:

Scalar : LEN(), ROUND(), GETData()

Aggregate : SUM(), AvG(), COUNT()

ms\_dynamicsDB | Execute | SQLQuery1.sq...ot connected\*

```

29 FROM Students;
30
31 SELECT * FROM Students;
32
33 -- Grouping
34 SELECT CourseId, COUNT(*) AS StudentCount
35 FROM Students
36 GROUP BY CourseId;
37
38 SELECT COUNT(*) AS TotalStudents FROM Students;
39
40
41

```

121 % No issues found

Results Messages

	StudentId	Email	Age	CourseId
1	1	rahul@gmail.com	20	101
2	2	neha@gmail.com	22	102
3	3	amit@gmail.com	19	101
4	4	amitabh@gmail.com	21	101

  

CourseId	StudentCount
101	3
102	1

  

TotalStudents
4

Here we can see after grouping that there are 3 students with 101 course ID and 1 with 102 course ID