

Topics	Day
Basic discussion on database systems.	Day 1
Comparison between file systems and Relational data bases; OLTP vs OLAP	
Explain the Relationships in a sample DB	
Data Definition Language (DDL)	
Data Manipulation Language (DML)	
Data Query Language (DQL)	Day 2
Data Control Language (DCL)	
Transaction Control Language (TCL)	
Creating Database	
Restore Database	
Data Types in SQL	Day 3
Introduction to basic select statement - All clause	
Where Clause	
basic Operators, in , between , like	
Order of Processing of Queries	Day 4
Group By Clause, Distinct	
Having Clause	
Order by clause, Top	
Aggregate functions	Day 5
Usage of case when	
String Functions, Date Functions, Conversion Functions, FORMAT function	
Derived Tables	
predicates	Day 6
Between ... And	
In	
Like	Day 7
Is Null	
Primary and Unique key, Surrogate Key, Natural Key	
Referential Keys	
Schemas	
Simple/Inner Joins	Day 8
Left Outer	
Right Outer	
Full Join	
Cross Join	Day 9
Cross/Outer Apply	
Sub queries	
Co-related Sub Queries	
Exists Clause	

Rank, Dense Rank, Ntile, Row_Number, Top (Analytical), OVER Clause	Day 10
SQL 2016 Functions	
CTE, Recursive CTE	
INSERT, DELETE, UPDATE, MERGE, Alter, Truncate Differences Between Delete and	
Indexes	Day 11
Constraints	
Defaults	
Column level and table Level Constraints	
Views	
Indexed views	
Normal Forms	Day 12
Synonyms	
Codd rules	
Stored Procedures	
In put and out put parameters	
Control statements - If, ELSE, WHILE	
Cursors	
Temporary tables - #Tables	
Table Variables	
OUTPUT clause	Day 13
Error Handling (TRY ...CATCH)	
- RAISERROR	
- THROW	
SP_executeSQL	
Dynamic queries	
Parameterized Dynamic queries	
SQL Injection	
Transaction Management	Day 14
Isolation Levels /ACID Properties/Dirty Reads/Phantom Reads/Dead locks	
Begin Transaction	
Commit Transaction	
Rollback Transaction	
Save Transaction	
Implicit Transactions	
Scalar valued Functions	Day 15
Table valued functions	
Triggers, , OFFSET FETCH	
XML Operations (AUTO,EXPLICIT,RAW)	
MERGE	
Rollup, Cube, Grouping Sets	
Execution plans	Day 16,17
Exercise review	Day 18
Exercise review	Day 19
SQL Profiler Usage	Day 20
Performance Monitor	