Advance SQL Database Training

SQL Server Architecture

- SQL Server Components and SQL OS

SQL Server Security and Data Security and Compliance

- Authenticating Connections to SQL Server
- Authorizing Logins to Connect to Databases
- Protecting Data with Masking and Data Classification
- Writing Secure Code (Stored procedure, Parameterized Queries)

Automating SQL Server Management

- Automating SQL Server Management
- Working with SQL Server Agent
- Database Design and Modelling Data Vault (The Hub, The Link, The Satellite)

SQL Performance Tuning

- Index Creation Approach (Clustered, Non-Clustered, Column Store using include and covering, Fill Factor)
- Query Store
- Partitioning (Range Partitioning)
- Understanding Query Execution Plan (Estimated, Actual and Live Query Statistics)
- Table Scan, Index Scan, Index Seek, Key, Lookup
- Nested Loop, Merge Join, Sort, Aggregation
- Reading tool Tip and execution plan

Advanced Optimization Approaches

- Scheduling, and Waits, Deadlocks, Deadlock Priority, Locking.
- Memory and Resource Management
- Query Memory Grant
- Max Degree of Parallelism (MAXDOP)
- In Memory Table
- Manual Statistics update and Histogram

Azure SQL Management and Understanding of overall Azure SQL Services with demo

- Plan and Implement Data Platform Resources Deployment (Practical Deployment)

- Monitor and Optimize Operational Resources
- ARM Template Deployment (Using Windows PowerShell, Azure porta using custom deployment)
- Automated Backup, Backup to URL and Geo-Replica

Azure Data Factory and Migration SSIS Package to Azure Data Factory

- Deploying SSIS Packages in Azure Data Factory
- Using the SSIS Integration Runtime in ADF
- Configuring and Running SSIS Packages in ADF
- Monitoring SSIS Package Execution in ADF

Project Management

- Azure DevOps - SQL Database Projects
- Repos - branching strategy, Pipeline - CI/CD
- Test Plans, Artifacts, GIT