**SQL Query Developments**

* Writing advanced queries
* Functions, Stored Procedures, Packages, Hierarchical Queries
* Cursors: Implicit and Explicit
* Providing query for HTML Reports
* Triggers
* Dynamic SQL
* Materialized Views
* Query Optimization: Indexes
* Query Optimization: Explain Plans
* Query Optimization: Profiling
* Data Modelling: Normal Forms, 1 through 3
* Data Modelling: Primary & Foreign Keys
* Data Modelling: Table Constraints

**SQL Server data storage management**

* SQL Server file management architecture
* Creating database files
* Creating SQL Server log files
* Using SQL Server file groups
* Adding new file groups in SQL Server using SSMS
* Transactional logs and database recovery models
* Create database objects
* Create primary key foreign key relationships between tables
* Data Movement (Export and Import)

**Microsoft SQL Server Security**

**Microsoft SQL database session administration**

* Understand the differences between database connections and sessions
* Various dynamic management views (DMVs) for monitoring database activity
* How to kill a sql server session in SSMS
* Learn about the auto-commit, implicit and explicit transaction in sql server
* Run built-in reports in SSMS

**Managing data with the DTS utility**

* Using DTS to export and import SQL Server table data

**SQL Server Security management**

* Windows security management for the server
* Windows authentication mode
* SQL Server rights and role management

**SQL Server Backup & Recovery**

* SQL Server backup & recovery (Different Types)
* Incremental backups
* Restoring a SQL Server database
* Standby database overview
* Shipping SQL Server log files to standby databases

**SQL Server database Replication**

* Microsoft replication architectures
* Creating a replication topology
* Configuring SQL Server replication
* Database Mirroring

**Applying Service packs and performing database upgrade**

**SQL Server Job scheduling**

* Common database scheduled jobs
* Configuring SQLMail
* Setting SQL Server and server alert thresholds
* Creating customized error conditions
* Scheduling multi-step job streams

**Ratio Analysis – Performance Tuning**

* SQL Server monitoring for performance
* SQL Server startup parameter tuning
* T-SQL tuning
* Understanding database indexes
* Checking index fragmentation and maintain them
* Understanding and maintaining SQL Server Database statistics
* Understanding SQL Server Profiler
* How to create SQL Server traces
* SQL tuning for SQL Server
* Diagnosing storage and system problems
* Diagnosing session and O/S issues