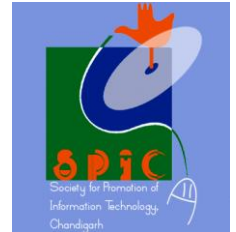


# 6 Weeks Training Module in SQL SERVER



## **MICROSOFT SQL SERVER 2012**

### **Installing Microsoft SQL Server 2012**

Understanding SQL Server 2012 Editions  
Installing a Default, Named, or Multiple Instances of SQL Server 2012  
Determining When to Use Multiple  
Determining Service Accounts  
Choosing an Authentication Mode  
Troubleshooting the Installation

### **Creating and Configuring Databases**

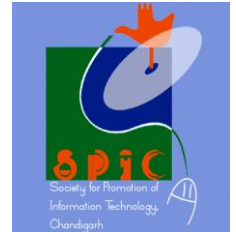
Data Files  
Log Files  
Configuring Filegroups  
How to Configure Data Files and Log Files  
Introducing RAID-0 , RAID-1, RAID-5  
Configuring Database Files with RAID Systems  
Introducing Extents and Pages  
Creating and Configuring Databases  
Recovery Models Overview  
How to Configure Recovery Models

### **Implementing Security in SQL Server 2012**

Using Windows Authentication Mode  
Using Mixed Mode  
Setting the Authentication Mode  
Understanding SQL Server Logins  
Understanding Fixed Server Roles  
Understanding Permissions  
Understanding Database Roles  
Managing Schemas  
Understanding Permission States  
Introducing Ownership Chains  
Introducing Linked Server Security

### **Working with Tables**

Introducing Built-in Data Types  
Introducing Computed Columns  
Nullability  
Identity  
Creating Tables  
Creating Temporary Tables  
Table Variables  
Assigning Permissions  
Implementing Rules  
Implementing Constraints  
Check Constraints  
Default Constraints  
Unique Constraints  
Primary Key Constraints



Foreign Key Constraints  
Creating User-Defined Types

### **Performing Indexing and Full-Text Searching**

Understanding Clustered Indexes  
Understanding Nonclustered Indexes

### **Working with Transact-SQL**

Construct SQL queries to return data  
Querying multiple tables using Join  
Determining the Columns to Return  
Modifying Data  
Creating Local and Global Temporary Tables  
Using the SELECT INTO Command  
Working with Transactions  
Beginning and Committing or Rolling Back Transactions

### **Creating Partitions**

Implement partitions  
Creating a Partition Function  
Creating a Partition Scheme  
Partitioning Tables and Indexes  
Querying Partitions  
Managing Partitions

### **Implementing Views**

How to Create a View  
Understanding ENCRYPTION, SCHEMABINDING,  
Understanding Ownership Chains

### **Creating Functions, Stored Procedures, and Triggers**

Creating Stored Procedures  
Recompiling Stored Procedures  
Assign Permissions to a Role for a Stored Procedure  
Understanding Triggers  
Introducing Functions  
Table-Valued Functions

### **Working with Flat Files**

Importing Data Using Bulk Insert  
Importing Data Using the bcp Utility  
Copying Data Using SSIS

### **Backing Up, Restoring, and Moving a Database**

Backing Up a Database  
Performing Full Backups  
Performing Differential Backups  
Transaction Log Backups  
Performing Filegroup Backups  
Restoring a Database  
Restoring a Full Backup  
Restoring a Differential Backup  
Restoring a Transaction Log Backup  
Moving a Database  
Moving a Database by Using Detach/Attach



### **Using Transact-SQL to Manage Databases**

Managing Index Fragmentation  
Understanding Index Fragmentation  
Identifying Index Fragmentation  
Managing Index Fragmentation  
Using DBCC CHECKDB  
DBCC CHECKDB

### **Working with HTTP Endpoints**

Understanding HTTP Endpoint Security  
Creating an HTTP Endpoint

### **Working with SQL Server Agent Jobs**

How to Create a SQL Server Agent Job  
How to Create Job Steps  
How to Create Job Schedules  
How to Configure an Operator  
Creating Alerts

### **Monitoring and Troubleshooting SQL Server Performance**

Working with SQL Server Profiler  
Defining a Trace  
Starting, Pausing, and Stopping a Trace  
Saving a Trace Log  
Creating a Replay Trace  
Using the Database Engine Tuning Advisor  
Building a Workload File  
Understanding Locking  
Terminating Processes  
Understanding Deadlocking

### **Managing Database Snapshots**

Creating a Database Snapshot  
Database Snapshot Structure  
Copy-On-Write Technology  
Retrieving Data from a Database Snapshot

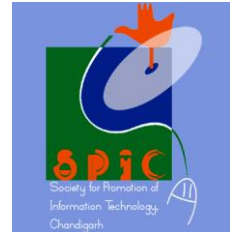
### **Implementing Database Mirroring**

Understanding Database Mirroring Roles  
Principal Role  
Mirror Role  
Witness Server  
Database Mirroring Endpoints  
Understanding Operating Modes  
High Availability Operating Mode  
High Performance Operating Mode  
High Protection Operating Mode  
Failing Over a Database Mirror  
Removing Database Mirroring

### **Implementing Log Shipping**

Configuring Log Shipping Options  
How to Enable the Primary Database  
Defining Log Shipping Backup Options

How to Configure Secondary Databases  
Configuring the Copy Files Task  
Configuring Log Shipping Restore Options  
How to Configure No Recovery Mode  
How to Configure Standby Mode



### **Managing Replication**

Understanding Replication Types  
Understanding Replication Terminology  
Replication Types  
Replication Agents  
Setting Up Replication  
How to Set Up the Distributor  
How to Create a Publication  
How to Subscribe to the Publication