LANGUAGE INTEGRATED QUERY(LINQ)

Language-Integrated Query (LINQ) is the name for a set of technologies based on the integration of query capabilities directly into the C# language. Traditionally, queries against data are expressed as simple strings without type checking at compile time or IntelliSense support. Furthermore, you have to learn a different query language for each type of data source: SQL databases, XML documents, various Web services, and so on. With LINQ, a query is a first-class language construct, just like classes, methods, events.

Course Duration: 2 days

Prerequisites:

- Candidate should have knowledge of c#.
- Candidate should have knowledge on visual studio 2019.
- Candidate should have knowledge on .net framework.

MODULE 1. Query expression basics

- What is a query and what does it do?
  - What is a query expression?
  - Query variable
- Explicit and implicit typing of query variables
  - Starting a query expression
  - Ending a query expression
- Filtering, ordering, and joining
  - Subqueries in a query expression

MODULE 2: Write LINQ queries in C#.

- Mixed query and method syntax.
- Query a collection of objects.
- How to return a query from a method.
- Store the results of a query in memory.

MODULE 3: Group query results

- Group by single property example
- Group by value example
- Group by a range example
- Group by comparison example
- Group by Anonymous type.
- Create a nested group

MODULE 4:Perform a subquery on a grouping operation

- Group results by contiguous keys
- Dynamically specify predicate filters at run time
- Perform inner joins
- Example - Simple key join
- Example - Composite key join
- Example - Multiple join
- Example - Inner join by using grouped join

MODULE 5: Perform grouped joins

- Example - Group join

- Example - Group join to create XML
- Perform left outer joins
- Join by using composite keys

MODULE 6: Perform custom join operations

- Cross-join
- Non-equijoin
- Merge CSV files

MODULE 7: Handle null values in query expressions

- Handle exceptions in query expressions