

## Part 37 – Unique & Non-Unique indexes

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# In this session we will learn

- What is a Unique Index
- Difference between unique index and unique constraint

## Prerequisite:

Part 9 - Unique Key Constraint

Part 35 - Introduction to Indexes in SQL Server

Part 36 - Clustered and Non-Clustered indexes

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# Unique Index

Unique index is used to enforce uniqueness of key values in the index.

```
CREATE TABLE [tblEmployee]
(
    [Id] int Primary Key,
    [FirstName] nvarchar(50),
    [LastName] nvarchar(50),
    [Salary] int,
    [Gender] nvarchar(10),
    [City] nvarchar(50)
)
```

**Note:** By default, PRIMARY KEY constraint, creates a unique clustered index.

**UNIQUENESS** is a property of an Index, and both CLUSTERED and NON-CLUSTERED indexes can be UNIQUE.

```
Create Unique NonClustered Index
UIX_tblEmployee_FirstName_LastName
On tblEmployee (FirstName, LastName)
```

## Difference between Unique Constraint and Unique Index

There are no major differences between a unique constraint and a unique index. In fact, when you add a unique constraint, a unique index gets created behind the scenes.

# Unique Index

## When should you be creating a Unique constraint over a unique index?

To make our intentions clear, create a unique constraint, when data integrity is the objective. This makes the objective of the index very clear. In either cases, data is validated in the same manner, and the query optimizer does not differentiate between a unique index created by a unique constraint or manually created.

### Useful points to remember:

1. **By default**, a PRIMARY KEY constraint, creates a unique clustered index, where as a UNIQUE constraint creates a unique Non-Clustered index. These defaults can be changed if you wish to.
2. **A UNIQUE constraint or a UNIQUE index** cannot be created on an existing table, if the table contains duplicate values in the key columns. Obviously, to solve this, remove the key columns from the index definition or delete or update the duplicate values.

# Additional Resources

- PRAGIM Home Page:

- [www.PragimTech.com](http://www.PragimTech.com)

- Resources:

- ASP.NET Interview Questions
  - [www.VenkatASPInterview.Blogspot.com](http://www.VenkatASPInterview.Blogspot.com)
  - C# Interview Questions
  - [www.VenkatCSharpInterview.Blogspot.com](http://www.VenkatCSharpInterview.Blogspot.com)
  - SQL Server Interview Questions
  - [www.venkatsqlinterview.Blogspot.com](http://www.venkatsqlinterview.Blogspot.com)