Your Weekly .Net Dose

WHERE() VS TAKEWHILE()

LINQ

IN C# .NET

Mohamed Fadel | .Net Core Developer

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Where() Method

- The Where() method is used to filter elements from a sequence based on a specified condition.
- returns a new sequence that contains only all the elements that satisfy the specified condition.
- The original sequence remains unchanged

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TakeWhile() Method

- The TakeWhile method is used to take elements from the beginning of a sequence while a specified condition is true.
- It returns a new sequence that contains elements from the start of the original sequence until the condition is false.
- Once the condition is false, it stops taking elements, even if there are more elements in the sequence that would satisfy the condition.

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Example

Assume we Have the Student Class contain the name and Score properties :

```
class Student
{
    7 references
    public string? Name { get; set; }
    7 references
    public int Score { get; set; }
}
```

Create New List of Students

```
var students = new List<Student>
{
    new Student { Name = "Mohamed", Score = 92 },
    new Student { Name = "Ali", Score = 85 },
    new Student { Name = "Khaled", Score = 78 },
    new Student { Name = "Adel", Score = 95 },
    new Student { Name = "Wael", Score = 88 }
};
```

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Query using Where()

Suppose we want to inquire about students with a Score greater than 90

```
var highScorers = students.Where(s => s.Score > 90);
Console.WriteLine("Filtering with Where :");
foreach (var student in highScorers)
{
    Console.WriteLine(student.Name);
}
```

Output

```
Filtering with Where :
Mohamed
Adel
```

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Query using TakeWhile()

Suppose we want to inquire about students with a Score greater than 90

```
var firstThreeHighScorers = students
    .TakeWhile(s => s.Score > 90);

Console.WriteLine("\nFiltering with TakeWhile :");
foreach (var student in firstThreeHighScorers)
{
    Console.WriteLine(student.Name);
}
```

Output

```
Filtering with TakeWhile :
Mohamed
```

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I Hope it was Helpful

Mohamed Fadel | .Net Core Developer