

LINQ operators : Assigning, comparing, flattening, grouping and joining elements

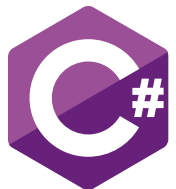




Agenda

Looping and assigning
Comparing
Flattening
Grouping
Set operations
Joining

Looping and assigning elements



LINQ Operators

Assignment

Properties of each element can be modified

Assignment

To assign a single element property use the `Single` operator

To assign multiple elements properties use the `ForEach` operator

ForEach

Performs an `Action<T>` on each `T` element of a `List<T>`

Demo

Single and multiple assignment

Assigning

Set the name of the actor with id 32653 to Samuel Lee Jackson

Set the popularity of all the actors to 10

Compare sequences



LINQ Operators

Compare sequences

`SequenceEqual` compares two sequences

Demo

Compare two collections

Comparing

Compare two movie sequences

Flattening sequence



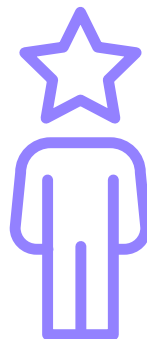
LINQ Operators



Return of the Jedi



Luke Skywalker



Mark Hamill



Han Solo



Harrison Ford



Princess Leia



Carrie Fisher



SelectMany

Is also a projection operator

One to many projection

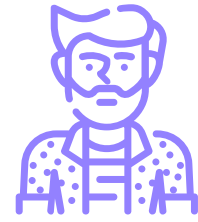
Projects each element and flattens the parent and child sequences in one sequence



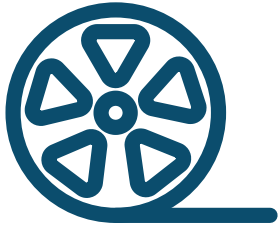
Return of the Jedi



Luke Skywalker



Mark Hamill



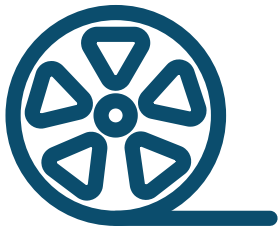
Return of the Jedi



Han Solo



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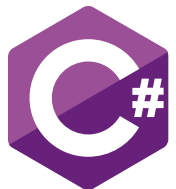
Demo

Use the SelectMany operator

Flattening

Flatten the movies and their associated casts

Grouping elements



LINQ Operators

GroupBy

GroupBy groups the elements of a sequence

Demo

Group the elements of a sequence

Grouping

Group movies by vote average

Group movies by vote average and project on an anonymous type

Group movies having more than 10 elements by vote average

Set operations



LINQ Operators

Set operations

Operations that produce a result set that is based on the presence or the absence of elements in one or more collections

Intersect

Intersect returns two sequences
intersection

Except

Except returns two sequences difference

Union

Union returns two sequences union

Demo

Use set operators

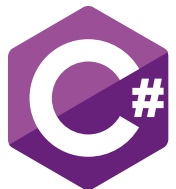
Set operations

Get two hashsets intersection without using LINQ

Get two hashsets intersection

Get two movie lists intersection

Join sequences



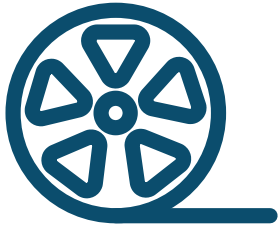
LINQ Operators

Join

Correlates data of two sequences in one resulting sequence

Join

Join operator joins the elements of two sequences based on matching keys (inner join)



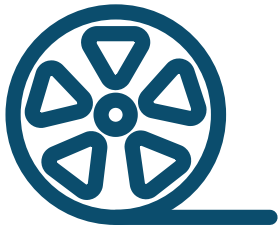
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Princess Leia



Carrie Fisher

GroupJoin

GroupJoin operator creates a sequence with one-to-many relationship from two sequences



Return of the
Jedi



1:N

Luke Skywalker



Han Solo



Princess Lea



Demo

Join and group join sequences

Joining

Get movies, casts and actors (inner join)

Get movies and casts (group join)



Summary

The ForEach operator loops over a sequence

SequenceEqual compares two sequences

The SelectMany operator projects each element flattens parent and child sequences in one sequence

The GroupBy operator groups the elements of a sequence

The Intersect, Except and Union operators return two sequences intersection, difference and union

The Join operator correlates data of two sequences

The GroupJoin operator creates a sequence with one-to-many relationship from two sequences