Comparing lists
The joy, the pain... and the pitfalls!

Discussion & Workshop

with Jose

Colba

Motivation

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When does this happen?

Some real cases:

- Changing some values of many elements of a list and “Saving”.
- Reordering a list, adding elements, removing elements.

This produces:

- An input list with updated values
- A base list with with the original values

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Hints

- Do items have ids?
- Who creates these ids?
- Are items simple? Do they have subfields?

Additional issues

- Does any action need to be taken afterwards for the added/deleted items? (consequences)
- Does the order matter?

Ideas?

Brute force - overwrite ✕

Manual: toAdd, toUpdate, toDelete

What comes to mind?

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- Manual work
- JOIN
- Clever dictionary
- Zip

Manual work: toAdd, toUpdate, toDelete

Pros:

- Extremely clear
- High debugging & logging control
- Good for consequences

Cons:

- Very verbose
- Possibly not very performant

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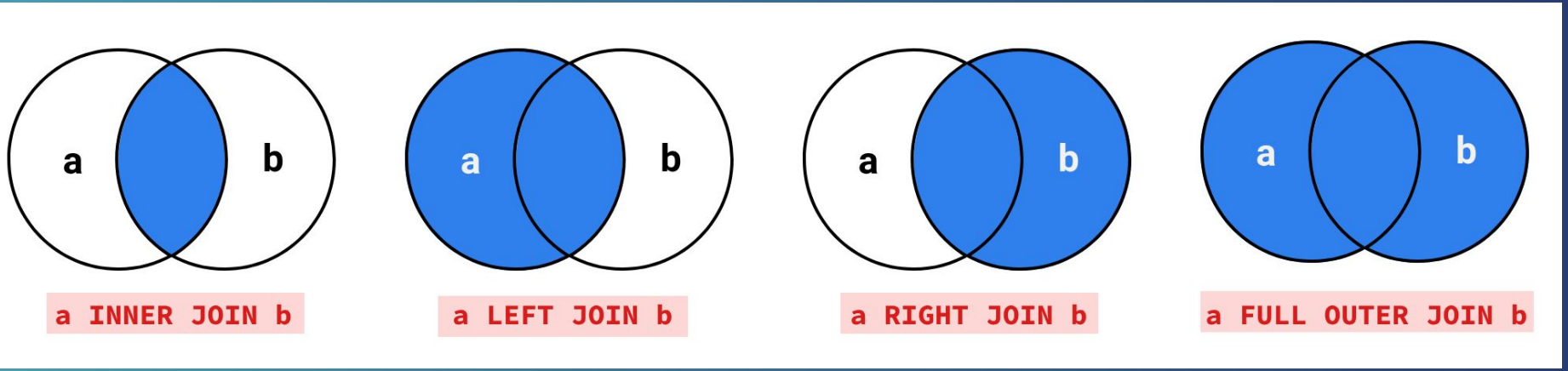
JOIN


a
b
a INNER JOIN b
a
b
a LEFT JOIN b
a
b
a RIGHT JOIN b
a
b
a FULL OUTER JOIN b

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Clever dictionary

Dictionary of {key, (ValueFromA?, ValueFromB?)}

Pros:
- Clear
- Performant
- Iterable
- Good for consequences

Cons:
- ? (audience?)

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Enumerable.Zip

```
int[] numbers = { 1, 2, 3, 4 };
string[] words = { "one", "two", "three" };

var numbersAndWords = numbers.Zip(words, (a, b) =>
a + " " + b);

foreach (var item in numbersAndWords)
    Console.WriteLine(item);

// 1 one
// 2 two
// 3 three
```

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Workshop

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Situation

- We own a bookshop
- There is a competing bookshop
- We want to be more successful. Or maybe collaborate

Basic use cases

Who has more books?

From the common collections, who has more complete?

Workshop

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Situation

- We own a bookshop
- There is a competing bookshop
- We want to be more successful. Or maybe collaborate

Not so basic use cases

Exchange complete collections

Steal books from one bookshop to another. Buy the rest

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Situation

- We own a bookshop
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Advanced use cases

Steal books from authors we don't have

Book exchange between bookshops