



LINQ EXCEPT()

VS

HASHSET EXCEPTWITH()

@romain-od



www.code-review.tech



SCENARIO

First list :
actualCustomers

Second list :
prospectCustomers

Prospect can already in
customer list.

Find prospect
that not customer
yet

@romain-od



www.code-review.tech



LINQ EXCEPT()

Produces the set difference of two sequences.



[Benchmark]

```
public List<Customer> LINQMethod()
{
    return prospectCustomers.Except(actualCustomers)
                             .ToList();
}
```

@romain-od



www.code-review.tech



HASHSET EXCEPTWITH()

Removes all elements in the specified collection from the current `HashSet<T>` object.



[Benchmark]

```
public HashSet<Customer> HashSetMethod()  
{  
    var hashSet = new HashSet<Customer>(actualCustomers);  
    hashSet.ExceptWith(prospectCustomers);  
    return hashSet;  
}
```

@romain-od



www.code-review.tech



HASHSET CONTAINS()

Fill a new list<> iterating over the prospectCustomers list, checking the condition



[Benchmark]

```
public List<Customer> AlternativeMethod()
{
    var result = new List<Customer>();
    var actualCustomersSet = new HashSet<Customer>(actualCustomers);

    foreach (var customer in prospectCustomers)
        if (!actualCustomersSet.Contains(customer))
            result.Add(customer);

    return result;
}
```

@romain-od



www.code-review.tech



BENCHMARK RESULT

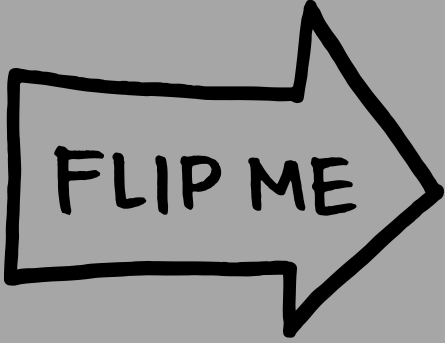
| Method | ListSize | Mean | Error | StdDev | Median |
|-------------------|----------|--------------|------------|--------------|--------------|
| ----- | ----- | ----- | ----- | ----- | ----- |
| LINQMethod | 1000 | 77.46 us | 2.703 us | 7.578 us | 80.34 us |
| HashSetMethod | 1000 | 56.35 us | 1.033 us | 0.862 us | 56.12 us |
| AlternativeMethod | 1000 | 56.23 us | 0.896 us | 1.726 us | 55.74 us |
| LINQMethod | 10000 | 1,452.98 us | 37.222 us | 104.984 us | 1,498.16 us |
| HashSetMethod | 10000 | 811.96 us | 15.914 us | 29.498 us | 811.56 us |
| AlternativeMethod | 10000 | 822.84 us | 50.507 us | 145.723 us | 863.75 us |
| LINQMethod | 100000 | 27,934.57 us | 937.949 us | 2,614.627 us | 27,083.14 us |
| HashSetMethod | 100000 | 16,704.04 us | 327.012 us | 479.330 us | 16,595.08 us |
| AlternativeMethod | 100000 | 17,500.71 us | 339.817 us | 417.326 us | 17,507.04 us |

If you need to handle large datasets and prioritize performance, using a `HashSet<>` is the recommended choice.

@romain-od



www.code-review.tech






THANKS FOR READING
SHARE YOUR THOUGHTS

FOLLOW ME FOR MORE SHARING



@romain-od 

www.code-review.tech