Extract Data Using Filtering and Element Operations

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Module Goals

- **Using the where expression**

- **Finding an item in a List<T> collection**

- **Searching for an item using...**
  - **First() / FirstOrDefault()**
  - **Last() / LastOrDefault()**
  - **Single() / SingleOrDefault()**

Searching

Find Multiple Items with Where Expression

```
(from prod in Products
where prod.Name == "Test"
select prod)
```

```
(from prod in Products
where prod.Name == "Test"
&& prod.StandardCost > 100
select prod)
```
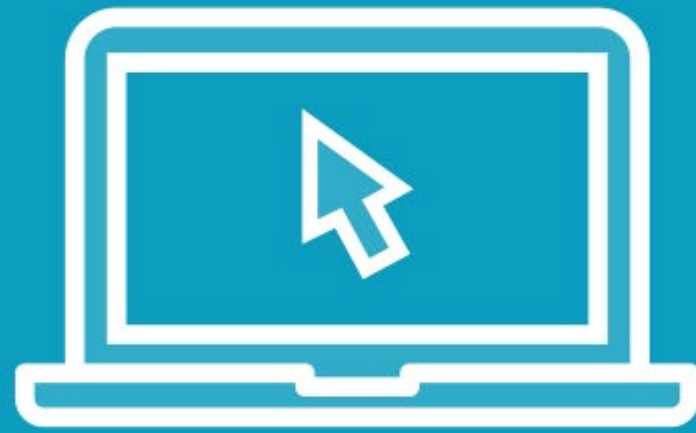
Demo

- **Where expression**

Demo

- **Where expression with two fields**

Demo

- Using a custom extension method for filtering

Finding a Single Value

Select a Single Item

**First() /
FirstOrDefault()**

**Last() /
LastOrDefault()**

**Single() /
SingleOrDefault()**
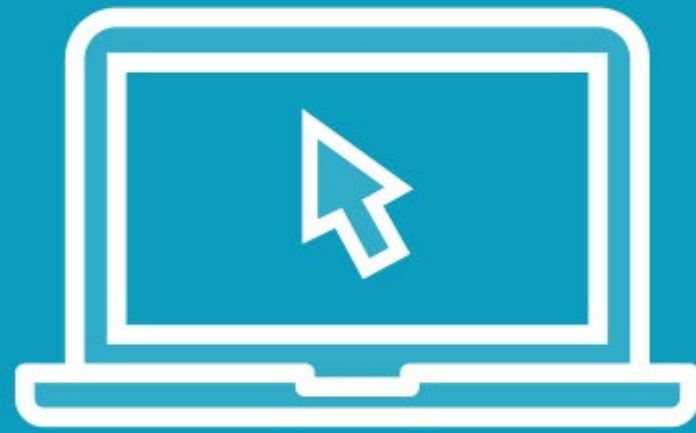
Need to Catch Exceptions

First()

Last()

Single()

SingleOrDefault()

Demo

– **First / FirstOrDefault expressions**

Demo

- **Last / LastOrDefault expressions**

Demo

– **Single / SingleOrDefault expressions**

Module Summary

- **Use where expression to return multiple items**

- **Locate a single item**
  - **First() / FirstOrDefault()**
  - **Last() / LastOrDefault()**
  - **Single() / SingleOrDefault()**
- **Catch exceptions where appropriate**
- **Check for null where appropriate**

Up Next:
Extract Distinct Values, Assign Values and Partition Collections