

Aggregating Data in Collections



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Module Goals



- **Use aggregate functions**
 - **Count**
 - **Min**
 - **Max**
 - **Average**
 - **Sum**
- **Use Aggregate() method**
- **Aggregate by a group of data**
- **More efficient aggregation**

Aggregate Functions

Aggregate Functions

**Calculate single value from
property in collections**

Method applied after query

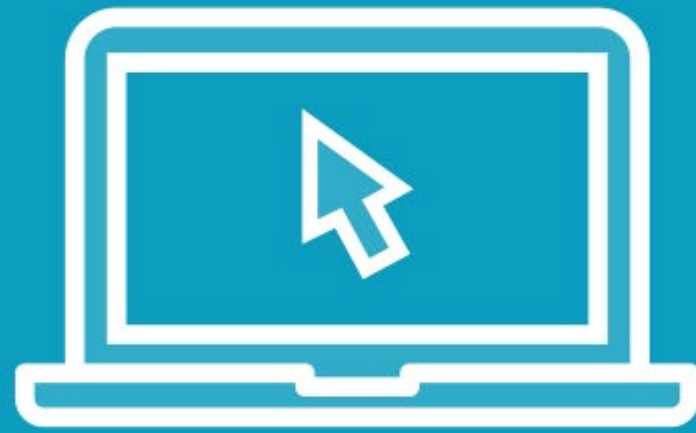
Demo



- **Count**
- **Count using filter**

Other Aggregate Functions

Demo



- **Minimum**
- **Maximum**

Demo



- **Average**
- **Sum**

Aggregate Method

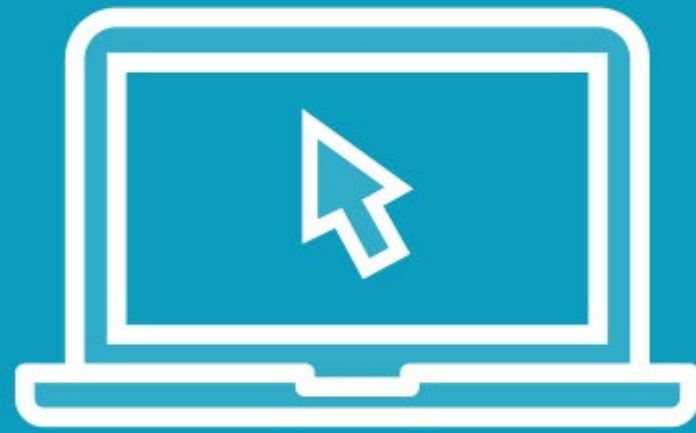
Aggregate Method

**Iterate over
collection**

**Supply a custom
method for
calculating**

**Returns a single
value**

Demo



- **Simulate Sum() using Aggregate**
- **Aggregate using custom expression**

Aggregate Using Grouping

Aggregate Method

Group products by size

**Calculate count, min, max and
average for each size**

Demo



- **Aggregate over a group of data**

More Efficient Aggregate Method

**Create class to hold
accumulators**

**One property for each count,
min, max, etc.**

Use `Aggregate()` method

**Only loops over data one time to
gather statistics**

Demo



- **More efficient aggregation using extension methods**

Module Summary



- **Learned to use aggregate functions**
 - **Count, min, max, sum, average**
- **Learned to use `Aggregate()` method**
- **Created a custom class with accumulators**
- **Built more efficient method of aggregating groups of data**

Up Next:

Understanding Deferred Execution in LINQ
