Aggregate a Group of Data
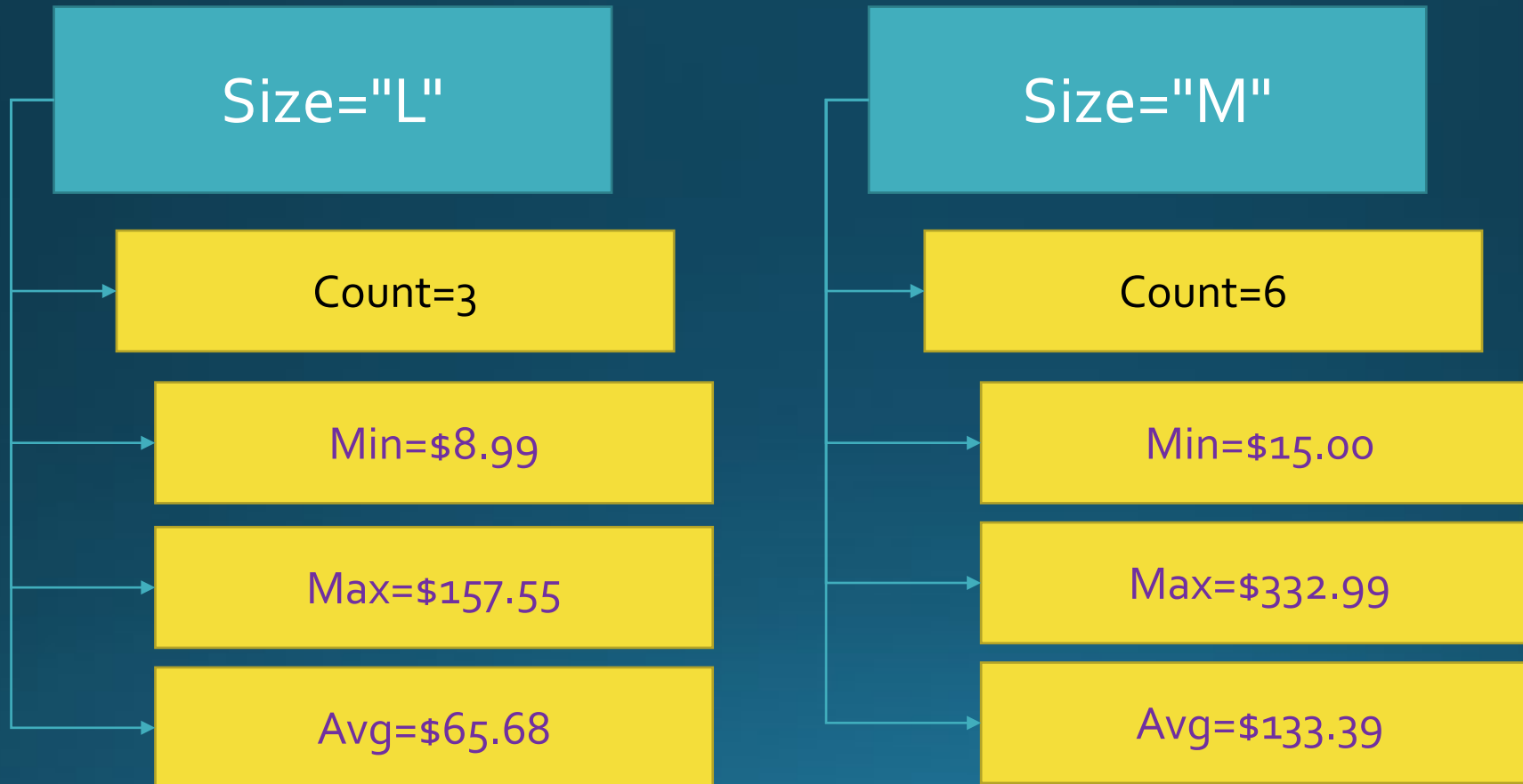
Group Aggregation

Group products by size

Calculate count, min, max and average for each size

Group Aggregation

Size="L"

Count=3

Min=$8.99

Max=$157.55

Avg=$65.68

Size="M"

Count=6

Min=$15.00

Max=$332.99

Avg=$133.39

- Aggregate/Grouping samples

Make Grouping More Efficient

More Efficient Group Aggregation

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

```
select new ProductStats
{

  Size = sizeGroup.Key,

  TotalProducts = sizeGroup.Count(),

  MinListPrice =
    sizeGroup.Min(s => s.ListPrice),

  MaxListPrice =
    sizeGroup.Max(s => s.ListPrice),

  AverageListPrice =
   sizeGroup.Average(s => s.ListPrice)
}
```

◄ Problem is each of the following lines of code is looping through the entire group collection each time
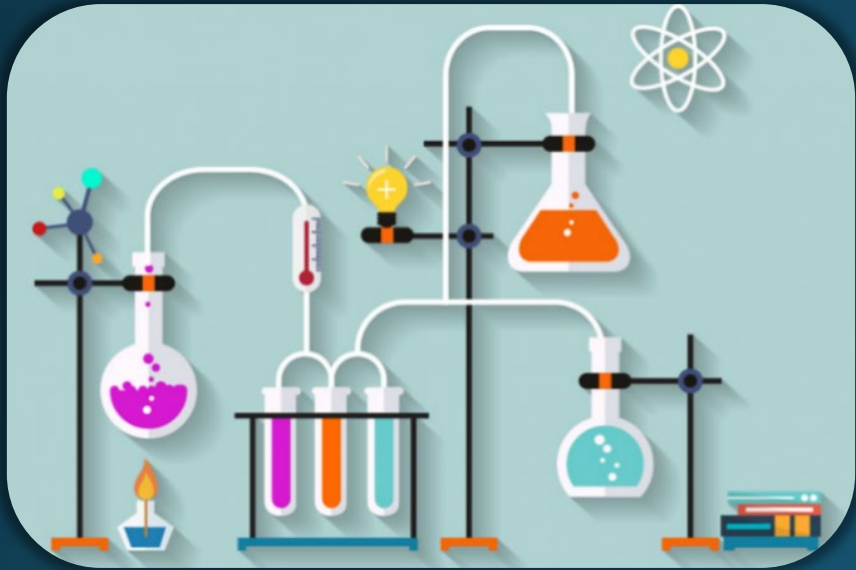
◄ Looping to get count

◄ Looping to get minimum

◄ Looping to get maximum

◄ Looping to get average

- More efficient sample

Aggregate/Grouping Lab