

Lab 4: Sorting and Adding Totals

In this lab, we'll go through table manipulations.

Let's create a table. What we're going to do over here is we are going to get the `Total Sales` by state, we'll click `state` as a dimension and we'll click `total sales` and let's do `average sales` as well.

▼ Sales3

DIMENSIONS

Customer ID

Office ID

Salesperson ID

State

▶ Transaction Date

Transaction ID

MEASURES

Average Hours

Average Sales

Count

Hourly Price

Total Hours

Total Sales

Click `Run` and this tells us for each state, for example, California, we had 4.2 million sales from `California` and each sale you look at each sale, the average sale from California was ninety eight thousand.

Looker

Explore44 rows1.6sjust nowRun

Sales

Search

All FieldsIn Use

Product

Sales

DIMENSIONS

Customer ID

Office ID

Salesperson ID

State

Transaction Date

Transaction ID

MEASURES

Average Hours

Average Sales

Count

Hourly Price

Total Hours

Total Sales

Salesperson

DIMENSIONS

Office ID

Salesperson Age

Salesperson First Name

Salesperson Function

Salesperson ID

Filters

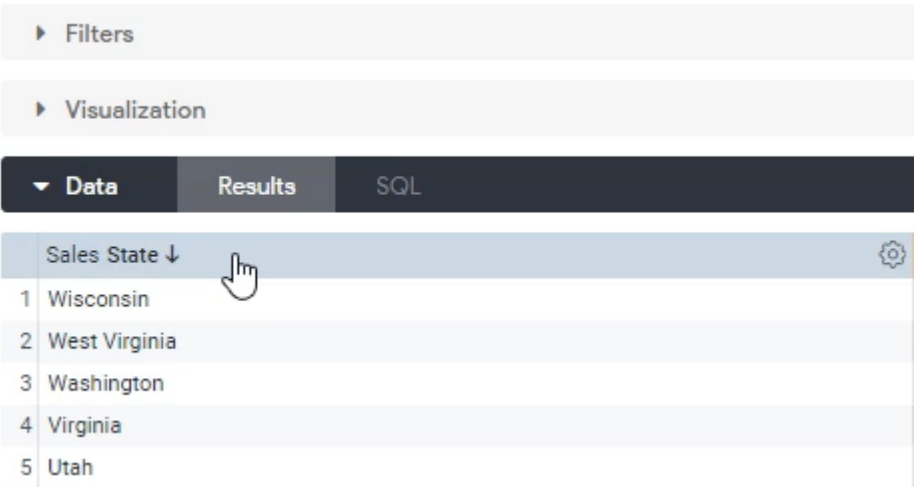
Visualization

DataResultsSQL

Sales StateSales Total Sales SAverage Sales

	Sales State	Sales Total Sales	Average Sales	Totals
1	California	\$4,243,391		\$98,454
2	Texas	\$3,189,560		\$75,942
3	Florida	\$2,659,290		\$65,784
4	New York	\$2,460,323		\$74,555
5	Ohio	\$2,310,289		\$52,411
6	Missouri	\$1,263,844		\$78,950
7	Pennsylvania	\$1,217,238		\$76,077
8	Virginia	\$1,166,172		\$83,298
9	Colorado	\$967,191		\$96,719
10	Alabama	\$804,582		\$67,542
11	Washington	\$785,089		\$78,509
12	Oklahoma	\$746,983		\$93,323
13	Arizona	\$720,750		\$90,094
14	Utah	\$683,914		\$99,131
15	Illinois	\$651,139		\$62,392
16	District of Columbia	\$647,886		\$58,899
17	Nebraska	\$573,466		\$81,924
18	Georgia	\$540,867		\$67,608
19	Michigan	\$537,127		\$76,732
20	South Carolina	\$509,146		\$101,829
21	North Carolina	\$492,925		\$54,769
22	Massachusetts	\$482,218		\$80,370
23	Indiana	\$475,145		\$93,033
24	Tennessee	\$419,917		\$69,886
25	Maryland	\$394,137		\$78,827
26	Louisiana	\$385,283		\$77,057
27	Iowa	\$305,144		\$76,291
28	Kentucky	\$279,704		\$69,656
29	Kansas	\$274,439		\$137,220

Now, currently, this is not sorted or ordered or anything like that. In order to sort, what we can do is just click the call that we want to sort out.



So this sort said that a you can click it again to sort it A to Z.

The screenshot shows a data interface with three tabs: 'Data', 'Results', and 'SQL'. The 'Data' tab is active, displaying a table of sales data. The table has three columns: 'Sales State', 'Sales Total Sales', and 'Sales Average Sales'. The 'Sales State' column is sorted in descending order. The 'Sales State' column has a downward arrow icon, and a hand cursor is pointing at it, indicating it is the target for sorting. The table shows data for 29 states, with California having the highest total sales and North Carolina having the lowest.

Sales State	Sales Total Sales	Sales Average Sales
1 Alabama	\$804,502	\$67,042
2 Arizona	\$720,750	\$90,094
3 Arkansas	\$116,800	\$116,800
4 California	\$4,243,391	\$98,684
5 Colorado	\$967,191	\$96,719
6 Connecticut	\$104,096	\$34,699
7 District of Columbia	\$647,886	\$58,899
8 Florida	\$2,659,290	\$85,784
9 Georgia	\$540,867	\$67,608
10 Idaho	\$172,977	\$86,489
11 Illinois	\$659,139	\$82,392
12 Indiana	\$475,165	\$95,033
13 Iowa	\$305,164	\$76,291
14 Kansas	\$274,439	\$137,220
15 Kentucky	\$279,704	\$69,926
16 Louisiana	\$385,283	\$77,057
17 Maryland	\$394,137	\$78,827
18 Massachusetts	\$482,218	\$80,370
19 Michigan	\$537,127	\$76,732
20 Minnesota	\$196,315	\$39,263
21 Mississippi	\$234,977	\$78,326
22 Missouri	\$1,263,844	\$78,990
23 Nebraska	\$573,466	\$81,924
24 Nevada	\$211,394	\$52,849
25 New Hampshire	\$179,058	\$89,529
26 New Jersey	\$106,145	\$106,145
27 New Mexico	\$94,992	\$94,992
28 New York	\$2,460,323	\$74,555
29 North Carolina	\$492,925	\$54,769

You can also sort the measure columns as well.

So beforehand we saw total sales, so we saw the most amount of sales coming from California and the least amount of sales coming from Oregon.

The average sales of something that you can also do as well.

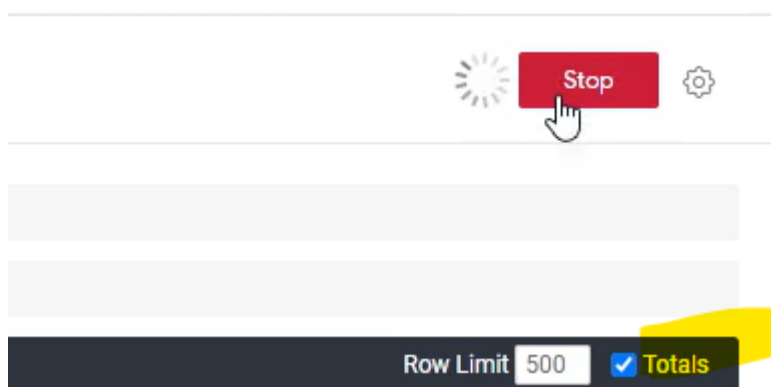
You can click `average sales` . And now this will sort of buy average sales. So sale tickets in `West Virginia` are much higher.

Sales State	Sales Total Sales	Sales Average Sales
1 West Virginia	\$133,531	\$133,531
2 South Dakota	\$139,304	\$139,304
3 Kansas	\$274,439	\$137,220
4 Arkansas	\$116,880	\$116,880
5 Rhode Island	\$111,300	\$111,300
6 New Jersey	\$106,145	\$106,145
7 South Carolina	\$509,146	\$101,829
8 Utah	\$693,914	\$99,131
9 California	\$4,243,391	\$98,684
10 Colorado	\$967,191	\$96,719
11 Indiana	\$475,165	\$95,033
12 New Mexico	\$94,992	\$94,992
13 Oklahoma	\$746,583	\$93,323
14 Ohio	\$2,310,269	\$92,411
15 Arizona	\$720,750	\$90,094
16 New Hampshire	\$179,058	\$89,529
17 Idaho	\$172,977	\$86,489
18 Florida	\$2,659,290	\$85,784
19 Virginia	\$1,166,172	\$83,298
20 Illinois	\$659,139	\$82,392
21 Nebraska	\$573,466	\$81,924
22 Massachusetts	\$482,218	\$80,370
23 Missouri	\$1,263,844	\$78,990
24 Maryland	\$394,137	\$78,827
25 Washington	\$785,089	\$78,509
26 Mississippi	\$234,977	\$78,326
27 Louisiana	\$385,283	\$77,057
28 Michigan	\$537,127	\$76,732
29 Iowa	\$101,142	\$76,741

Right, even though it doesn't have lots of sales, it does look like it, there's only actually one sale from West Virginia, which is the total amount of sales that we see over here.

Something else we can add in here to make our table more visually appealing is we can add **totals**.

If we click this, for example, let's click run over here.



We'll now see totals as well, so we can see our total sales for this time period that we're looking at is thirty two point four million.

And Looker is smart enough to know that this is technically an average, so it doesn't just take the total of an average, which would be wrong.

What it does instead is it takes the average of the entire dataset for sales.

So the average sale across all states or irrespective of any one state is eighty one thousand.

▼ Data	Results	SOL	Row Limit 500	Totals
Sales State	Sales Total Sales ↓	Sales Average Sales		
1 California		\$4,243,391		\$98,684
2 Texas		\$3,189,560		\$75,942
3 Florida		\$2,659,290		\$85,784
4 New York		\$2,460,323		\$74,555
5 Ohio		\$2,310,269		\$92,411
6 Missouri		\$1,263,844		\$78,990
7 Pennsylvania		\$1,217,238		\$76,077
8 Virginia		\$1,166,172		\$83,298
9 Colorado		\$967,191		\$96,719
10 Alabama		\$804,502		\$67,042
11 Washington		\$785,089		\$78,509
12 Oklahoma		\$746,583		\$93,323
13 Arizona		\$720,750		\$90,094
14 Utah		\$693,914		\$99,131
15 Illinois		\$659,139		\$82,392
16 District of Columbia		\$647,886		\$58,899
17 Nebraska		\$573,466		\$81,924
18 Georgia		\$540,867		\$67,608
19 Michigan		\$537,127		\$76,732
20 South Carolina		\$509,148		\$101,829
21 North Carolina		\$492,925		\$54,769
22 Massachusetts		\$482,218		\$80,370
23 Indiana		\$476,165		\$95,033
24 Tennessee		\$419,917		\$69,986
25 Maryland		\$394,137		\$78,827
26 Louisiana		\$385,283		\$77,057
27 Iowa		\$305,164		\$76,291
28 Kentucky		\$279,704		\$69,926
Total		\$32,403,767		\$81,009

Row Limit

By default, your tables will be limited to five rows because what you're doing here again is analysis.

So what you need to do over here is simply change this, to a thousand if you want.

44 rows · 2.2s · just now

Run



Row Limit 1000

Totals

Quick start analysis

In this section, we will go through the quick start option for explorers.

Let's go over here and instead now open up the Inventory Explorer, where we have set up the quick start guide.

← Explore

▶ E-Commerce Training

▼ Element Rental

Inventory

Sales

▶ FAA

▶ Looker Basics

Now again, this is done through the code that we added in lab 1.

qwiklabs-flights dev-developer-student-vvwh personal branch

File Browser

- general
 - flights
 - looker_basics.model**
 - looker_best_practices.md
 - z_tests

looker_basics.model

```

1204  measure: count {
1205      type: count
1206      value_format_name: decimal_0
1207  }
1208
1209  measure: average_condition {
1210      type: average
1211      sql: ${TABLE}.condition;;
1212      value_format_name: decimal_0
1213  }
1214
1215  measure: count_of_good_conditioned_inventory {
1216      type: count
1217      filters: [good_condition: "Yes"]
1218      value_format_name: decimal_0
1219  }
1220
1221  }
1222
1223
1224
1225  explore: inventory {
1226      group_label: "Element Rental"
1227      description: "All current inventory data"
1228      join: office {
1229          type: left_outer
1230          sql_on: ${inventory.office_id} = ${office.office_id};;
1231          relationship: many_to_one
1232      }
1233      join: product {
1234          type: left_outer
1235          sql_on: ${inventory.product_id} = ${product.product_id};;
1236          relationship: many_to_one
1237      }
1238      query: query_name {
1239          dimensions: [status]
1240          measures: [count]
1241          label: "Count by Status"
1242          description: "Count of Products by Status"
1243      }
1244  }

```

Over here, what this allows you to do is, well, we start from a current analysis that someone has already done.

For example, an inventory, an option that we see over here is the counter by status, which basically gives you the count of products by status.

Explore

Inventory ⓘ

Search

All Fields

In Use

Custom Fields + Add

Inventory

Office

Product

Quick Start

Explore from a prebuilt analysis in Inventory or select fields from the field list.

Count by Status

Count of Products by Status

We can click it.

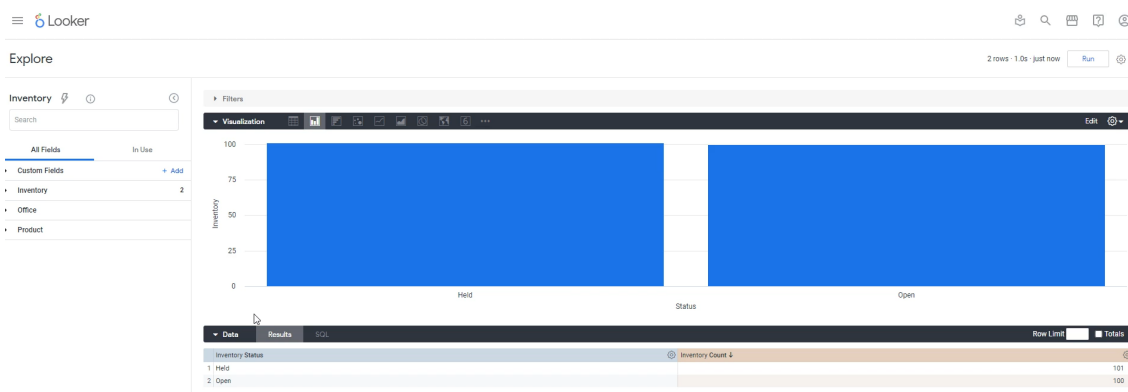
Quick Start

Explore from a prebuilt analysis in Inventory or select fields from the field list.

Count by Status

Count of Products by Status

And perfect as clicking, it gives us the information that we would want so we can see over here that in our inventory, we have one hundred and one products that are held and we have 100 products are open.



And I know we haven't gone through the visualization as much, but you can see the same thing in the data portion over here.

So a quick start is basically a query that someone has already made for you. You just have to click it and it comes up.

Now an explorer can have more than one. We go back in here, you can have more than one quick start. We only have one over here because that's what I've put in the code. But you can have multiple.

In addition to that, let's say, if I'm an inventory over here and I want to see the count of inventory by office.

▼ Inventory

1

DIMENSIONS

Condition Bins

Condition Type

Good Condition (Yes / No)

Inventory ID

Office ID

Product ID

Status

MEASURES

Average Condition

Count

Count of Good Conditioned Inventory

▼ Office

1

DIMENSIONS

Office ID

Office Name

Office Zip Code

Let's click run.

▼ Data Results SQL			Row Limit 500	Totals
Office Office Name		Inventory Count ↓		
1	Los Angeles			25
2	New York City			24
3	Dallas			23
4	Detroit			22
5	Orlando			20
6	Seattle			19
7	Miami			19
8	Houston			17
9	San Francisco			17
10	Austin			15

I can see over here that I have 25 products in Los Angeles, 20 for inventory pieces in New York City and so on and so forth.

But if I want to go back, I don't need to refresh the page or anything like that.

I can just click this lightning bolt over here.

Explore

Inventory ⚡ ⓘ ↶

Search

All Fields

In Use

Which pulls up this guy again, and I can just click it, and it populates the correct dimensions and measures for that specific analysis that someone has saved for me.

Inventory ⓘ ⓘ

Search

All Fields In Use

Custom Fields + Add

Inventory 1

DIMENSIONS

Condition Bins

Condition Type

Good Condition (Yes / No)

Inventory ID

Office ID

Product ID

Status

MEASURES

Average Condition

Count

Count of Good Conditioned Inventory

Office 1

DIMENSIONS

Office ID

Office Name

Office Zip Code

Filters

Visualization

▼ Data Results SQL

Office Office Name

1 Los Angeles

2 New York City

3 Dallas

4 Detroit

5 Orlando

6 Seattle

7 Miami

8 Houston

9 San Francisco

10 Austin

Quick Start

Explore from a prebuilt analysis in Inventory. ⓘ

Count by Status

Count of Products by Status

Close

▼ Data Results SQL			Row Limit	Totals
Inventory Status		Inventory Count ↓		
1	Held			101
2	Open			100

And that's how you use quick start with explorers now, most likely someone has set up Looker for you.

They have set up quick start queries, which are again queries that they've already been set up for you just as a starting point.