
Before you begin: Access Library in the Education sandbox

The Education sandbox is a shared, cloud-based environment to help you learn about and experiment with MicroStrategy Web and Library.

Use the Education sandbox to complete various report and dossier exercises. Complete the steps below to access the sandbox.

- 1 In your browser, navigate to **education.microstrategy.com/MicroStrategy/servlet/mstrWeb**.
- 2 Log in to the sandbox with your **MicroStrategy Account** credentials.

Open the Tutorial project

- 3 The MicroStrategy landing page opens. Click the **MicroStrategy Tutorial** project.



MicroStrategy Tutorial

MicroStrategy Tutorial project and application set designed to illustrate the platform's rich functionality. The theme is an Electronics, Books, Movies and Music store. Employees, Inventory, Finance, Product Sales and Suppliers are analyzed.

Server name

The MicroStrategy Tutorial home page opens.

- 4 Click **Go to MicroStrategy Library**.
- 5 If prompted, enter your **MicroStrategy Account** credentials, and then click **Log in with Identity**.

Your Library home page displays.

Exercise: Display subtotals to summarize revenue and cost values

To better understand and summarize revenue and cost data, you decide to display various subtotals for the Revenue and Cost metrics. Your Enterprise Analyst has defined your organization's revenue and cost metrics (named Cost Subtotals and Revenue Subtotals for demonstration purposes) so that the following subtotals are available for each:

- Cost Subtotals metric:
 - Average
 - Maximum
 - Standard Deviation
 - Revenue Subtotals metric:
 - Total
 - Minimum
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In this exercise, you explore how to display different totals and subtotals by creating a report that contains the:

- Category attribute
- Item attribute
- Revenue Subtotals metric
- Cost Subtotals metric

On the report, you display Average, Maximum, Minimum, and Standard Deviation subtotals. The first few rows of the report look like the following.

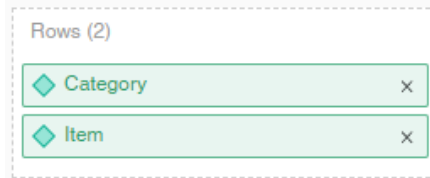
Subtotals sample report			
Category	Item	Revenue Subtotals	Cost Subtotals
Minimum		\$10,902	--
Maximum		--	\$729,681
Average		--	\$82,584
Standard Deviation		--	\$116,440
	Minimum	\$10,902	--
	Maximum	--	\$94,402
	Average	--	\$23,009
	Standard Deviation	--	\$15,033
	100 Places to Go While Still Young at Heart	\$67,993	\$50,216
	Art As Experience	\$23,733	\$18,248
	The Painted Word	\$22,323	\$19,698
	Hirschfeld on Line	\$50,442	\$38,153

Add the subtotal metrics to a report

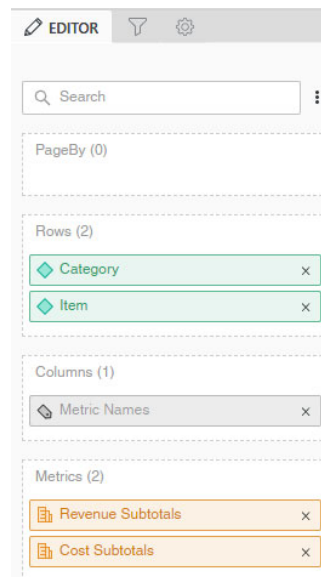
- 1 Access Library. For a reminder on how to do this, see *Exercise: Access Library in the Education sandbox*.
- 2 In the Library toolbar, click the **Create New** icon , and then select **Report**.
- 3 If prompted, in the Select Project window, select **MicroStrategy Tutorial**, and then select the check box for **Remember Selected Project**.


A blank report displays in Edit mode, with data retrieval paused.

- 4 In the Objects panel, click **Schema Objects**, then **Attributes**, and then **Products**.
- 5 Double-click **Category** to add it to the report rows, and then **Item**.



- 6 From the drop-down list in the Objects panel, select **MicroStrategy Tutorial**.
- 7 Click the **Public Objects** folder, and then the **Reports** folder.
- 8 Click the **Departmental Analyst** folder, and then the **Metrics** folder.
- 9 Double-click the **Revenue Subtotals** metric and then the **Cost Subtotals** metric to add them to the Metrics drop zone.

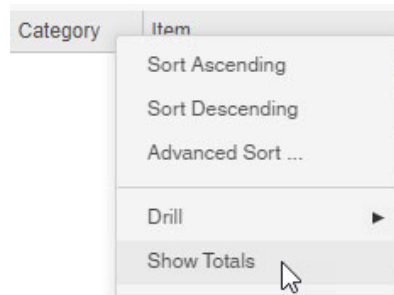


- 10 To see the report results, in the toolbar, click the **Resume Data Retrieval** icon . A portion of the results are shown below.

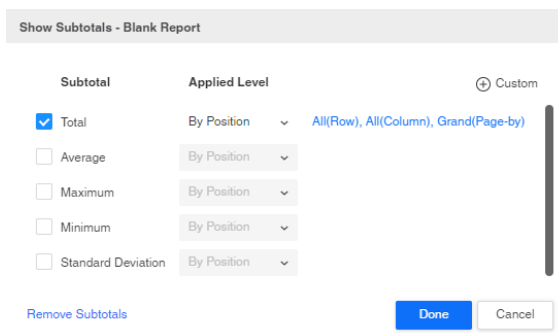
Category	Item	Revenue Subtotals	Cost Subtotals
	100 Places to Go While Still Young at Heart	\$67,993	\$50,216
	Art As Experience	\$23,733	\$18,248
	The Painted Word	\$22,323	\$19,698
	Hirschfeld on Line	\$50,442	\$38,153
	Adirondack Style	\$39,101	\$29,094
	Architecture : Form, Space, & Order	\$41,378	\$31,303
	50 Favorite Rooms	\$26,502	\$20,253

Display totals and subtotals

- 1 On the report, right-click **Category** (or any of the other row or column headers) and select **Show Totals**.

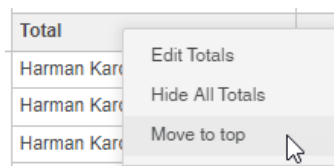


- 2 In the Show Subtotals - Blank Report window, select the check box for **Total**. Click **Done**.



You cannot see the totals and subtotals because by default they display at the end of the report. You can instead display totals at the top of the report, as you do in the next steps.

- a Scroll down in the report until you see a **Total** row.
- b Right-click the **Total** row, and then select **Move to Top**.



Scroll up to the top of the report. Now the totals display at the top of the report so that you can easily view them. Because your Enterprise Analyst disabled the default subtotal (total) for the Cost Subtotals metric, the Cost

Subtotals totals are not calculated for Category and Item. The Revenue Subtotals totals are calculated using the sum function.

Category	Item	Revenue Subtotals	Cost Subtotals
Total		\$35,023,708	--
	Total	\$2,640,094	--
	100 Places to Go While Still Young at Heart	\$67,993	\$50,216
	Art As Experience	\$23,733	\$18,248
	The Painted Word	\$22,323	\$19,698
	Hirschfeld on Line	\$50,442	\$38,153

Select the subtotals to display

For both the Cost Subtotals metric and Revenue Subtotals metric, your Enterprise Analyst enabled subtotals other than Total to be available for users to display. Display these subtotals on the report.

- 3 Right-click **Category** (or any of the other row or column headers) and select **Edit Totals**.
- 4 You do not want the totals for revenue to display. In the Show Subtotals - Blank Report window, clear the **Total** check box.

Remember that totals for cost already do not display because your Enterprise Analyst disabled the default subtotal function (total) for the Cost Subtotals metric.

- 5 Select the check boxes for **Average**, **Maximum**, **Minimum**, and **Standard Deviation**. Then, click **Done**.

Show Subtotals - Blank Report

Subtotal	Applied Level	
<input type="checkbox"/> Total	By Position	
<input checked="" type="checkbox"/> Average	By Position	All(Row), All(Column), Grand(Page-by)
<input checked="" type="checkbox"/> Maximum	By Position	All(Row), All(Column), Grand(Page-by)
<input checked="" type="checkbox"/> Minimum	By Position	All(Row), All(Column), Grand(Page-by)
<input checked="" type="checkbox"/> Standard Deviation	By Position	All(Row), All(Column), Grand(Page-by)

[Remove Subtotals](#)

DoneCancel

- 6 Compare your results to the sample at the beginning of this exercise, *Subtotals sample report*. Subtotals are calculated on the report based on which subtotals you made available for each metric.
 - The Cost Subtotals metric can be subtotaled using the Average, Maximum, and Standard Deviation functions because they are the same subtotals that the Enterprise Analyst enabled for the metric.

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- The Revenue Subtotals metric can be subtotaled using the Minimum function because it is the same subtotal that the Enterprise Analyst enabled for the metric.

7 Save the report in the **My Reports** folder as **Category, Item, Cost, and Revenue with Subtotals**.