Transforming Tables

1. Append Table Task
2. Split Columns Task
3. Stack Columns Task

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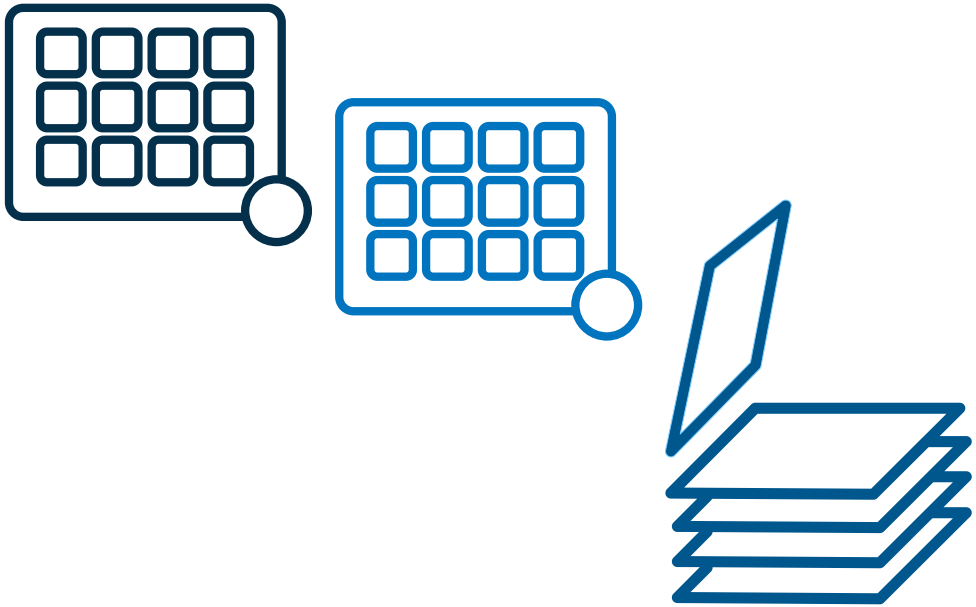
Appending Data



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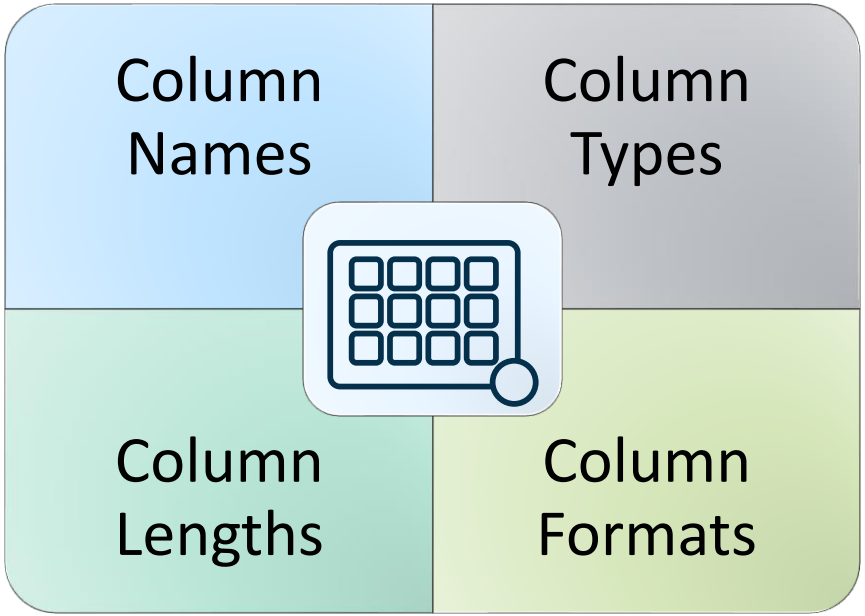
Appending Data: Table Structure



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2.01 Activity

Compare the table structure of three tables, including the column names, lengths, types, and formats.

1. Using the Servers pane, expand **Servers** ⇨ ***Local*** ⇨ **Libraries** ⇨ **ORION**.
2. Right-click **ORDERS07** and select **Properties**. Note the column details.
3. Right-click **ORDERS08** and select **Properties**. Note the column details.
4. Right-click **ORDERS09** and select **Properties**. Note the column details.

Can you append the **ORDERS07**, **ORDERS08**, and **ORDERS09** tables?

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2.01 Activity – Correct Answer

Can you append the **ORDERS07**, **ORDERS08**, and **ORDERS09** tables?

ORDERS07 Properties

General | Columns

Name	Type	Length	Format	Informat	Label
Customer_ID	Numeric	8	12.		Customer ID
Order_Date	Date	8	DATE9.		Order Placement Date
Order_ID	Numeric	8	12.		Order ID
Order_Type	Numeric	3	2.		Order Type

ORDERS09 Properties

General | Columns

Name	Type	Length	Format	Informat	Label
Customer_ID	Numeric	8	12.		Customer ID
Order_Date	Date	8	MMDDYY10.		Order Placement Date
Order_ID	Numeric	8	12.		Order ID
Order_Type	Numeric	3	2.		Order Type
Product_ID	Numeric	8	12.		Product ID

ORDERS08 Properties

General | Columns

Name	Type	Length	Format	Informat	Label
Customer_ID	Numeric	8	12.		Customer ID
Order_Date	Date	8	DATE9.		Order Placement Date
Order_ID	Numeric	8	12.		Order ID
Order_Type	Numeric	3	2.		Order Type

Yes, although **ORDERS09** has an additional column and the **Order_Date** format does not match.

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Appending Tables

Append EMPS_AU, EMPS_DE and EMPS_US.

This demonstration illustrates appending tables with different structures.

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2.02 Multiple Answer Question

Which properties of the output table might be affected by the order in which tables are listed in the Append Table task? (Select all that apply.)

a. the number of rows
b. the order of rows
c. the number of columns
d. the order of columns
e. the names of columns

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2.02 Multiple Answer Question – Correct Answers

Which properties of the output table might be affected by the order in which tables are listed in the Append Table task? (Select all that apply.)

a. the number of rows
b. the order of rows
c. the number of columns
d. the order of columns
e. the names of columns

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2.03 Activity

1. Add the **orders07**, **orders08**, and **orders09** tables from the **orion** library.
2. Use the Append Table task to concatenate the tables.
   - Select tables so that rows are ordered by descending months (**orders09**, **orders08**, and **orders07**).
   - Specify **SummerOrders** as the name of the output table.
3. Verify that there are 3,363 rows in the new table.
4. Answer the following question:

   Why do the **Order_Date** values appear in the MM/DD/YYYY format?

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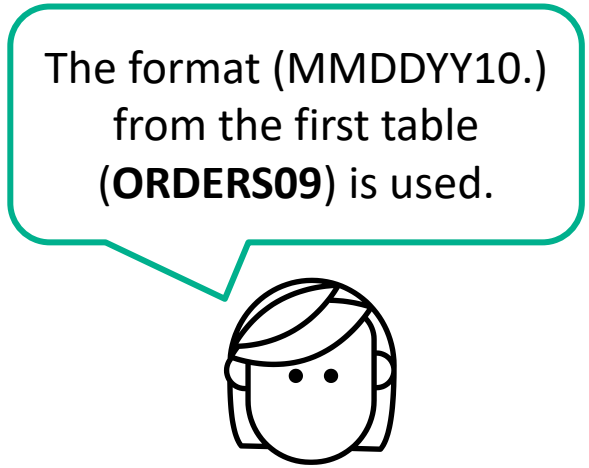
2.03 Activity – Correct Answer

Why do the **Order_Date** values appear in the MM/DD/YYYY format?

ORDERS09 Properties

General | Columns

Name	Type	Length	Format	Informat	Label
Customer_ID	Numeric	8	12.		Customer ID
Order_Date	Date	8	MMDDYY10.		Order Placement Date
Order_ID	Numeric	8	12.		Order ID
Order_Type	Numeric	3	2.		Order Type
Product_ID	Numeric	8	12.		Product ID



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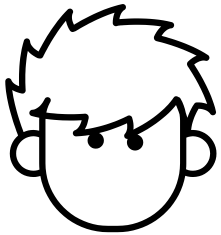
Corporate Training Report

In order to create the report, our data needs to be structured in a different way.



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Restructuring Data

Split Columns

Stack Columns

Transpose

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Splitting Columns

ID	Name	Course	Course_Date
120101	Lu, Patrick	Compliance Training	2-Mar-19
120101	Lu, Patrick	Corporate Security	1-Jun-19
120101	Lu, Patrick	On the Job Safety	7-Sep-19
120102	Zhou, Tom	Compliance Training	2-Mar-19
120102	Zhou, Tom	Corporate Security	1-Jun-19
120102	Zhou, Tom	On the Job Safety	7-Sep-19
120103	Dawes, Wilson	Corporate Security	1-Jun-19

ID	Name	Compliance Training	Corporate Security	On the Job Safety
120101	Lu, Patrick	2-Mar-19	1-Jun-19	7-Sep-19
120102	Zhou, Tom	2-Mar-19	1-Jun-19	7-Sep-19
120103	Dawes, Wilson	.	1-Jun-19	.

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2.04 Multiple Choice Question

Given the table shown here, which column contains the values to be split into the new column values?

a. **DayOfWeek**
b. **SaleType**
c. **TotalSales**

DayOfWeek	SaleType	TotalSales
Monday	Retail	$3,316.88
Monday	Internet	$361.40
Tuesday	Retail	$8,111.78
Tuesday	Internet	$745.50
Tuesday	Phone	$1,173.20
Wednesday	Retail	$4,501.56
Wednesday	Internet	$592.00
Wednesday	Phone	$246.60

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2.04 Multiple Choice Question – Correct Answer

Given the table shown here, which column contains the values to be split into the new column values?

a. **DayOfWeek**

b. **SaleType**

c. **TotalSales**

DayOfWeek	SaleType	TotalSales
Monday	Retail	$3,316.88
Monday	Internet	$361.40
Tuesday	Retail	$8,111.78
Tuesday	Internet	$745.50
Tuesday	Phone	$1,173.20
Wednesday	Retail	$4,501.56
Wednesday	Internet	$592.00
Wednesday	Phone	$246.60

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Split Columns Task

Use the Split Columns task to restructure the employee_training table.

This demonstration illustrates using the Split Columns task to restructure a table.

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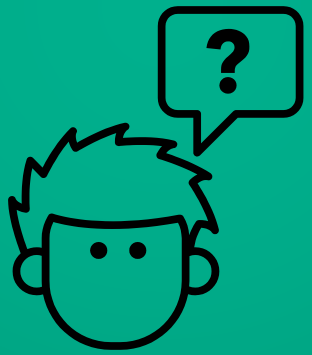
Questions?



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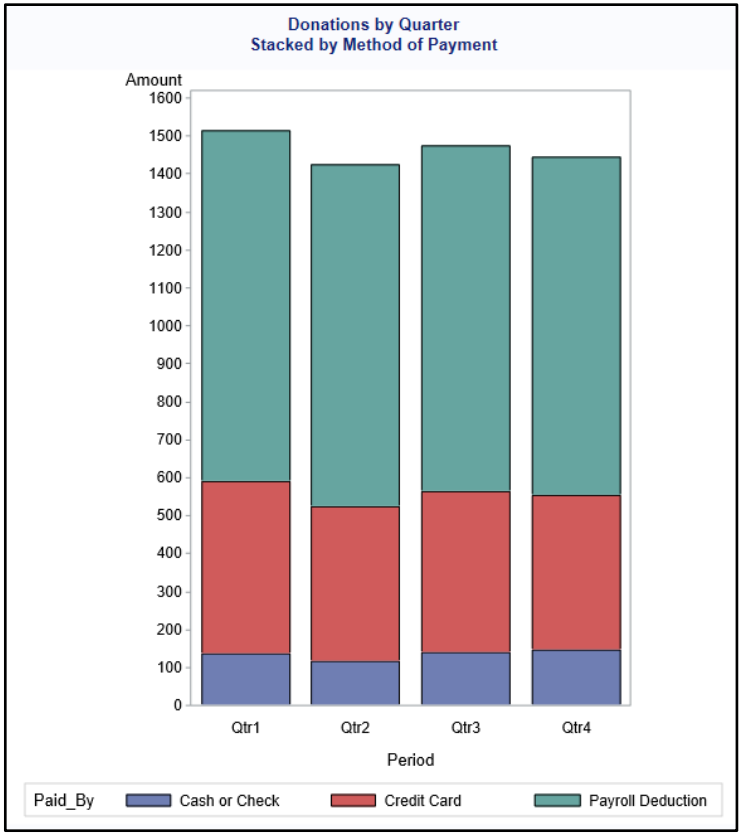
Total Employee Donations by Quarter

How do charitable donations break down by quarter?



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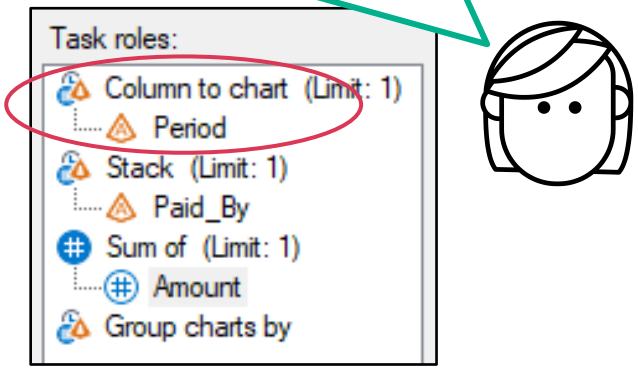
Total Employee Donations by Quarter

ID	Paid_By	Period	Amount
120265	Cash or Check	Qtr1	.
120265	Cash or Check	Qtr2	.
120265	Cash or Check	Qtr3	.
120265	Cash or Check	Qtr4	25
120267	Payroll Deduction	Qtr1	15
120267	Payroll Deduction	Qtr2	15
120267	Payroll Deduction	Qtr3	15
120267	Payroll Deduction	Qtr4	15
120269	Payroll Deduction	Qtr1	20
120269	Payroll Deduction	Qtr2	20

Many tasks require a single numeric column that contains measurement values and classification columns that identify groups.



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Stacking Columns

ID	Paid_By	Qtr1	Qtr2	Qtr3	Qtr4
120265	Cash or Check	.	.	.	25
120267	Payroll Deduction	15	15	15	15
120269	Payroll Deduction	20	20	20	20

Period	Amount	ID	Paid_By
Qtr1	.	120265	Cash or Check
Qtr2	.	120265	Cash or Check
Qtr3	.	120265	Cash or Check
Qtr4	25	120265	Cash or Check
Qtr1	15	120267	Payroll Deduction
Qtr2	15	120267	Payroll Deduction
Qtr3	15	120267	Payroll Deduction
Qtr4	15	120267	Payroll Deduction
Qtr1	20	120269	Payroll Deduction
Qtr2	20	120269	Payroll Deduction

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2.06 Multiple Choice Question

When stacking **Salary**, **Bonus**, and **Commissions**, how many rows are generated for each sales ID?

a. 1

b. 2

c. 3

d. 4

SalesID	Salary	Bonus	Commissions
1	$75,686	$52,980	$12,555
2	$64,567	$45,197	$14,534
3	$81,788	$57,252	$9,873
4	$69,877	$48,914	$15,778
5	$78,009	$54,606	$11,701

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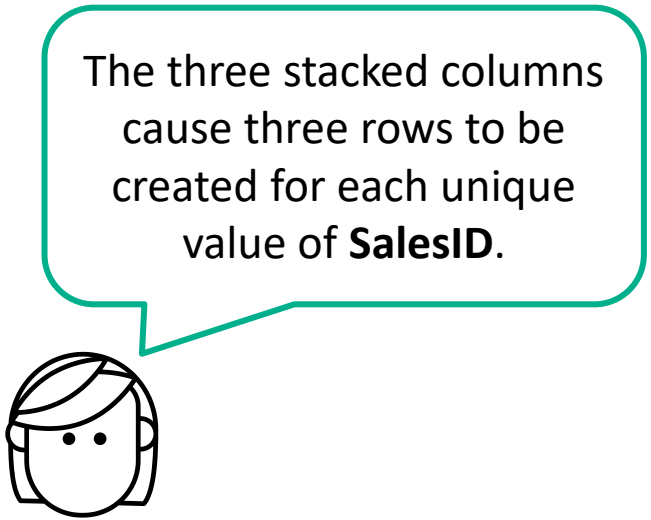
2.06 Multiple Choice Question – Correct Answer

When stacking **Salary**, **Bonus**, and **Commissions**, how many rows are generated for each sales ID?

a. 1
b. 2
c. 3
d. 4



SalesID	ValueSource	StackedValues
1	Salary	$75,686
1	Bonus	$52,980
1	Commissions	$12,555
2	Salary	$64,567
2	Bonus	$45,197
2	Commissions	$14,534
3	Salary	$81,788
3	Bonus	$57,252
3	Commissions	$9,873

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Stack Columns Task

Use the Stack Columns task to restructure the **employee_donations** table.

This demonstration illustrates using the Stack Columns task to restructure a table.

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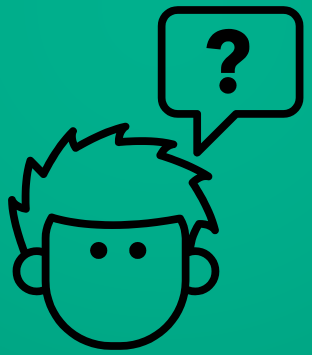
Questions?



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