

EXAMPLE #4

FIND THE BEST PERFORMING PRODUCT

FIND THE BEST PERFORMING PRODUCT

ERR.. PLEASE DEFINE 'BEST
PERFORMING'?

FIND THE BEST PERFORMING PRODUCT

ERR.. PLEASE DEFINE 'BEST
PERFORMING'?

EASY!

- FIND THE TOTAL SALES ACROSS ALL STORES FOR EACH PRODUCT.
- THE PRODUCT WITH THE HIGHEST TOTAL SALES IS THE BEST PERFORMING PRODUCT

FIND THE BEST PERFORMING PRODUCT

ERR.. PLEASE DEFINE 'BEST PERFORMING'?

ONCE WE HAVE THE TOTALS ON A PER-PRODUCT BASIS WE CAN VISUALLY SEE WHICH ONE IS THE BEST PERFORMING

EASY!

- FIND THE TOTAL SALES ACROSS ALL STORES FOR EACH PRODUCT.
- THE PRODUCT WITH THE HIGHEST TOTAL SALES IS THE BEST PERFORMING PRODUCT

**FIND THE BEST PERFORMING PRODUCT
ALL STORES FOR EACH PRODUCT**

FIND THE TOTAL SALES ACROSS ALL STORES FOR EACH PRODUCT

StoreLocation	Product	Date	Revenue
Bellandur	Bananas		
Bellandur	Nutella		
Bellandur	Peanut Butter		
Bellandur	Milk		
Koramangala	Bananas		
Koramangala	Nutella		
Koramangala	Peanut Butter		
Koramangala	Milk		
Bellandur	Bananas		
Bellandur	Nutella		
Bellandur	Peanut Butter		
Bellandur	Milk		
Koramangala	Bananas		
Koramangala	Nutella		
Koramangala	Peanut Butter		
Koramangala	Milk		

FIRST, LET'S GROUP THIS DATA BY PRODUCT

FIND THE TOTAL SALES ACROSS ALL STORES FOR EACH PRODUCT

NEXT, LET'S FIND THE SUM FOR EACH GROUP (PRODUCT)

Store location	Product	Date	Revenue
Koramangala	Bananas		
Koramangala	Milk		
Koramangala	Nutella		
Koramangala	Peanut Butter	January 18,2016	8,988.64
Koramangala	Peanut Butter	January 17,2016	5102.05

FIRST, LET'S GROUP THIS DATA BY PRODUCT

FIND THE TOTAL SALES ACROSS ALL STORES FOR EACH PRODUCT

NEXT, LET'S FIND THE SUM FOR EACH GROUP (PRODUCT)

Koramangala

Koramangala

Store location	Product	Date	Revenue
	Bananas	January 18,2016	8,236.33
	Bananas	January 18,2016	8,236.33
	Bananas	January 18,2016	8,236.33
	BANANAS		SUM = 28,937.32
	Milk	January 18,2016	8902.65
	Milk	January 18,2016	2,433.76
	MILK		SUM = 9898.77
	Nutella	January 18,2016	1299.45
	Nutella	January 18,2016	7,455.67
	NUTELLA		SUM = 26,559.77
	Peanut Butter	January 18,2016	9114.67
	Peanut Butter	January 17,2016	5,316.89
	Peanut Butter	January 18,2016	
	Peanut Butter	January 17,2016	
	PB		SUM = 25,080.59
			5102.05

FIND TIME AND DATE AND STORE ARE JUST
ALL STORES ALL, I.E. WE HAVE ALSO THINNED
THE TABLE (FEWER COLUMNS)

StoreLocation	Product	Date	TotalRevenue
ALL	THIS GROUPING AND SUMMING HAS FLATTENED THE TABLE (FEWER ROWS)	ALL	28,937.32
ALL	ALL	ALL	9898.77
ALL	ALL	ALL	26,559.77
ALL	ALL	ALL	25,080.59

FIND TIME AND DATE AND STORE ARE JUST
ALL STORED IN THE TABLE, I.E. WE HAVE ALSO THINNED
THE TABLE (FEWER COLUMNS)

Product	TotalRevenue
Bananas	28,937.32
Milk	9898.77
Nutella	26,559.77
Peanut Butter	25,080.59

FIND TIME AND DATE AND STORE ARE JUST
ALL STORED IN THE TABLE, I.E. WE HAVE ALSO THINNED
THE TABLE (FEWER COLUMNS)

Product	TotalRevenue
Bananas	28,937.32
Milk	9898.77
Nutella	26,559.77
Peanut Butter	25,080.59

FIND THE TOTAL SALES ACROSS ALL STORES FOR EACH PRODUCT

Product	TotalRevenue
Bananas	28,937.32
Milk	9898.77
Nutella	26,559.77
Peanut Butter	25,080.59

**FIND THE TOTAL SALES ACROSS
ALL STORES FOR EACH PRODUCT**

**WHICH
ROWS?**

**ALL STORES,
ALL DATES,
GROUPED BY
PRODUCT**

**WHICH
COLUMNS?**

**TOTAL
REVENUE**

**WHICH
TABLES?**

SALES_DATA

FIND THE TOTAL SALES ACROSS ALL STORES FOR EACH PRODUCT

SELECT

WHICH
COLUMNS?

TOTAL
REVENUE

FROM

WHICH
TABLES?

SALES_DATA

GROUP BY

WHICH
ROWS?

ALL STORES, ALL DATES,
GROUPED BY PRODUCT

FIND THE TOTAL SALES ACROSS ALL STORES FOR EACH PRODUCT

SELECT

Product,
SUM (REVENUE) TotalRevenue

FROM

Sales_Data

GROUP BY

Product;

FIND THE TOTAL SALES ACROSS ALL STORES FOR EACH PRODUCT

Product	TotalRevenue
Bananas	28,937.32
Milk	9898.77
Nutella	26,559.77
Peanut Butter	25,080.59

FIND THE TOTAL SALES ACROSS ALL STORES FOR EACH PRODUCT

SELECT

Product,
SUM (REVENUE) TotalRevenue

FROM

Sales_Data

GROUP BY

Product;

THERE IS A LOT GOING ON, LET'S BREAK IT DOWN

FIND THE TOTAL SALES ACROSS ALL STORES FOR EACH PRODUCT

SELECT

Product,
SUM (REVENUE) TotalRevenue

FROM

Sales_Data

GROUP BY

Product;

THE COLUMNS THAT YOU
GROUP BY DEFINE WHAT
GROUPS YOU WILL
SUBTOTAL

FIND THE TOTAL SALES ACROSS ALL STORES FOR EACH PRODUCT

StoreLocation	Product	Date	Revenue
Bellandur	Bananas		
Bellandur	Nutella		
Bellandur	Peanut Butter		
Bellandur	Milk		
Koramangala	Bananas		
Koramangala	Nutella		
Koramangala	Peanut Butter		
Koramangala	Milk		
Bellandur	Bananas		
Bellandur	Nutella		
Bellandur	Peanut Butter		
Bellandur	Milk		
Koramangala	Bananas		
Koramangala	Nutella		
Koramangala	Peanut Butter		
Koramangala	Milk		

FIRST, LET'S GROUP THIS DATA BY PRODUCT

SALES_DATA

FIND THE TOTAL SALES ACROSS ALL STORES FOR EACH PRODUCT

StoreLocation	Product	Date	Revenue
Bellandur	Bananas		
Bellandur	Bananas		
Koramangala	Bananas		
Koramangala	Bananas		
Bellandur	Milk		
Bellandur	Milk		
Koramangala	Milk		
Koramangala	Milk		
Bellandur	Nutella		
Bellandur	Nutella		
Koramangala	Nutella		
Koramangala	Nutella		
Bellandur	Peanut Butter		
Bellandur	Peanut Butter		
Koramangala	Peanut Butter	January 18,2016	8,988.64
Koramangala	Peanut Butter	January 17,2016	5102.05

FIRST, LET'S GROUP
THIS DATA BY
PRODUCT

FIND THE TOTAL SALES ACROSS ALL STORES FOR EACH PRODUCT

SELECT

Product,
SUM (REVENUE) TotalRevenue

FROM

Sales_Data

GROUP BY

Product;

WHAT COLUMN TO
SUM? REVENUE

FIND THE TOTAL SALES ACROSS ALL STORES FOR EACH PRODUCT

SELECT

Product,
SUM (REVENUE) TotalRevenue

FROM

Sales_Data

WHAT COLUMN TO SUM? REVENUE

GROUP BY

Product;

WHAT TO CALL THE FLATTENED RESULT? TotalRevenue

FIND THE TOTAL SALES ACROSS ALL STORES FOR EACH PRODUCT

NEXT, LET'S FIND THE SUM FOR EACH GROUP (PRODUCT)

Koramangala

Koramangala

Store location	Product	Date	Revenue
	Bananas	January 18,2016	8,236.33
	Bananas	January 18,2016	8,236.33
	Bananas	January 18,2016	8,236.33
	BANANAS		SUM = 28,937.32
	Milk	January 18,2016	8902.65
	Milk	January 18,2016	2,433.76
	MILK		SUM = 9898.77
	Nutella	January 18,2016	1299.45
	Nutella	January 18,2016	7,455.67
	NUTELLA		SUM = 26,559.77
	Peanut Butter	January 18,2016	9114.67
	Peanut Butter	January 17,2016	5,316.89
	Peanut Butter	January 18,2016	
	Peanut Butter	January 17,2016	
	PB		SUM = 25,080.59
			5102.05

THIS GROUPING AND SUMMING HAS FLATTENED THE TABLE (FEWER ROWS)

FIND TIME AND DATE AND STORE ARE JUST
ALL STORES ALL, I.E. WE HAVE ALSO THINNED
THE TABLE (FEWER COLUMNS)

StoreLocation	Product	Date	TotalRevenue
ALL	THIS GROUPING AND SUMMING HAS FLATTENED THE TABLE (FEWER ROWS)	ALL	28,937.32
ALL	ALL	ALL	9898.77
ALL	ALL	ALL	26,559.77
ALL	ALL	ALL	25,080.59

FIND THE TOTAL SALES ACROSS ALL STORES FOR EACH PRODUCT

SELECT

Product,
SUM (REVENUE) TotalRevenue

FROM

Sales_Data

WHAT COLUMN TO SUM? REVENUE

GROUP BY

Product;

WHAT TO CALL THE FLATTENED RESULT? TotalRevenue

FIND THE TOTAL SALES ACROSS ALL STORES FOR EACH PRODUCT

SELECT

```
Product,  
SUM(REVENUE) TotalRevenue
```

FROM

```
Sales_Data
```

GROUP BY

```
Product;
```

WHAT COLUMN TO KEEP AFTER THE THINNING? Product

FIND TIME AND DATE AND STORE ARE JUST
ALL STORES ALL, I.E. WE HAVE ALSO THINNED
THE TABLE (FEWER COLUMNS)

StoreLocation	Product	Date	TotalRevenue
ALL	THIS GROUPING AND SUMMING HAS FLATTENED THE TABLE (FEWER ROWS)	ALL	28,937.32
ALL	ALL	ALL	9898.77
ALL	ALL	ALL	26,559.77
ALL	ALL	ALL	25,080.59

FIND TIME AND DATE AND STORE ARE JUST
ALL STORED IN THE TABLE, I.E. WE HAVE ALSO THINNED
THE TABLE (FEWER COLUMNS)

Product	TotalRevenue
Bananas	28,937.32
Milk	9898.77
Nutella	26,559.77
Peanut Butter	25,080.59

FIND TIME AND DATE AND STORE ARE JUST
ALL STORED IN THE TABLE, I.E. WE HAVE ALSO THINNED
THE TABLE (FEWER COLUMNS)

Product	TotalRevenue
Bananas	28,937.32
Milk	9898.77
Nutella	26,559.77
Peanut Butter	25,080.59

FIND THE TOTAL SALES ACROSS ALL STORES FOR EACH PRODUCT

SELECT

Product,
SUM (REVENUE) TotalRevenue

FROM

Sales_Data

GROUP BY

Product;

FIND THE TOTAL SALES ACROSS ALL STORES FOR EACH PRODUCT

Product	TotalRevenue
Bananas	28,937.32
Milk	9898.77
Nutella	26,559.77
Peanut Butter	25,080.59

FIND THIS FROM THIS, BANANAS ARE
ALL STORED IN BAGS. OUR BEST PRODUCT!

Product	Total Revenue
Bananas	28,937.32
Milk	9898.77
Nutella	26,559.77
Peanut Butter	25,080.59

EXAMPLE #5

**FIND THE WORST PERFORMING PRODUCT,STORE
COMBINATION**

FIND THE WORST PERFORMING PRODUCT,STORE
COMBINATION

ERR..PLEASE DEFINE 'WORST
PERFORMING'?

FIND THE WORST PERFORMING PRODUCT,STORE
COMBINATION

ERR.. PLEASE DEFINE 'WORST
PERFORMING'?

EASY!

- FIND THE AVERAGE DAILY SALES FOR EACH PRODUCT AT EACH STORE
- THE COMBINATION WITH THE LOWEST AVERAGE IS THE WORST PERFORMING

FIND THE WORST PERFORMING PRODUCT,STORE COMBINATION

ERR..PLEASE DEFINE 'WORST PERFORMING'?

ONCE WE HAVE THE AVERAGE DAILY SALES FOR EACH PRODUCT IN EACH STORE WE CAN SEE WHICH COMBO IS THE WORST
EASY!

- FIND THE AVERAGE DAILY SALES FOR EACH PRODUCT AT EACH STORE
- THE COMBINATION WITH THE LOWEST AVERAGE IS THE WORST PERFORMING

**FIND THE WORST PERFORMING
PRODUCT, STORE COMBINATION
STORE**

FIND THE AVERAGE DAILY SALES FOR EACH PRODUCT AT EACH STORE

SELECT

Product, StoreLocation

AVG (REVENUE) AvgDailyRevenue

FROM

Sales_Data

GROUP BY

Product, StoreLocation ;

FIND THE AVERAGE DAILY SALES FOR EACH PRODUCT AT EACH STORE

Store location	Product	Date	Revenue
Bellandur	Bananas		
Bellandur	Nutella		
Bellandur	Peanut Butter		
Bellandur	Milk		
Bellandur	Bananas		
Bellandur	Nutella		
Bellandur	Peanut Butter		
Bellandur	Milk		
Koramangala	Bananas		
Koramangala	Nutella		
Koramangala	Peanut Butter		
Koramangala	Milk		
Koramangala	Bananas		
Koramangala	Nutella		
Koramangala	Peanut Butter		
Koramangala	Milk		
		January 17, 2016	5102.05
		January 17, 2016	1299.45

FIRST, LET'S GROUP
THIS DATA BY
PRODUCT, STORE

FIND THE AVERAGE DAILY SALES FOR EACH PRODUCT AT EACH STORE

Store location	Product	Date	Revenue
Bellandur	Bananas		
Bellandur	Bananas		
Bellandur	Milk		
Bellandur	Milk		
Bellandur	Nutella		
Bellandur	Nutella		
Bellandur	Peanut Butter		
Bellandur	Peanut Butter		
Koramangala	Bananas		
Koramangala	Bananas		
Koramangala	Milk		
Koramangala	Milk		
Koramangala	Nutella		
Koramangala	Nutella		
Koramangala	Peanut Butter	January 18,2016	8,988.64
Koramangala	Peanut Butter	January 17,2016	5102.05

FIRST, LET'S GROUP
THIS DATA BY
PRODUCT, STORE

FIND THE AVERAGE DAILY SALES FOR EACH PRODUCT AT EACH STORE

Store location	Product	Date	Revenue
Bellandur	Bananas		
Bellandur	Bananas		
Bellandur	Milk		
Bellandur	Milk		
Bellandur	Nutella		
Bellandur	Nutella		
Bellandur	Peanut Butter		
Bellandur	Peanut Butter		
Koramangala	Bananas		
Koramangala	Bananas		
Koramangala	Milk		
Koramangala	Milk		
Koramangala	Nutella		
Koramangala	Nutella		
Koramangala	Peanut Butter	January 18,2016	8,988.64
Koramangala	Peanut Butter	January 17,2016	5102.05

FIRST, LET'S GROUP
THIS DATA BY
PRODUCT, STORE

FIND THE AVERAGE DAILY SALES FOR EACH PRODUCT AT EACH STORE

NEXT, LET'S FIND THE AVG FOR EACH GROUP (STORE, PRODUCT)

Koramangala	Peanut Butter
Koramangala	Peanut Butter

Date	Revenue
January 18,2016	8,236.33
January 17,2016	2342.33
January 18,2016	2,433.76
January 17,2016	4543.98
January 18,2016	7,455.67
January 17,2016	6345.1
January 18,2016	5,316.89
January 17,2016	5673.01
January 18,2016	9,456.01
January 17,2016	8902.65
January 18,2016	1,621.58
January 17,2016	1299.45
January 18,2016	3,644.33
January 17,2016	9114.67
January 18,2016	8,988.64
January 17,2016	5102.05

FIND THE AVERAGE DAILY SALES FOR EACH PRODUCT AT EACH STORE

NEXT, LET'S FIND THE AVG FOR EACH GROUP (STORE, PRODUCT)

Koramangala
Koramangala

Peanut Butter
Peanut Butter

Date	Revenue
January 18,2019	AVG = 5,289.33
January 17,2019	
January 18,2019	AVG = 3,488.87
January 17,2019	
January 18,2019	AVG = 6,900.39
January 17,2019	
January 18,2019	AVG = 5,494.95
January 17,2019	
January 18,2019	AVG = 9,179.33
January 17,2019	
January 18,2019	AVG = 1,460.52
January 17,2019	
January 18,2019	AVG = 6,379.50
January 17,2019	
January 18,2019	AVG = 7,045.35
January 17,2019	

FIND THE AVERAGE DAILY SALES FOR EACH PRODUCT AT EACH STORE

Store location	Product	Date	Revenue
		January 18,2010	AVG = 5,289.33
		January 17,2010	
		January 18,2010	AVG = 3,488.87
		January 17,2010	
		January 18,2010	AVG = 6,900.39
		January 17,2010	
		January 18,2010	AVG = 5,494.95
		January 17,2010	
		January 18,2010	AVG = 9,179.33
		January 17,2010	
		January 18,2010	AVG = 1,460.52
		January 17,2010	
		January 18,2010	AVG = 6,379.50
		January 17,2010	
		January 18,2010	AVG = 7,045.35
		January 17,2010	

**FLATTEN THE TABLE
(ELIMINATE EXCESS
ROWS!)**

FIND THE AVERAGE DAILY SALES FOR EACH PRODUCT AT EACH STORE

FLATTEN THE TABLE
(ELIMINATE EXCESS ROWS!)

Karamangala

Peanut Butter

Date	AvgDailyRevenue
ALL	5,289.33
ALL	3,488.87
ALL	6,900.39
ALL	5,494.95
ALL	9,179.33
ALL	1,460.52
ALL	6,379.50
ALL	7,045.35

FIND THE AVERAGE DAILY SALES FOR EACH PRODUCT AT EACH STORE

THIN THE TABLE
(ELIMINATE EXCESS COLUMNS!)

Karamangala

Peanut Butter

Date	AvgDailyRevenue
ALL	5,289.33
ALL	3,488.87
ALL	6,900.39
ALL	5,494.95
ALL	9,179.33
ALL	1,460.52
ALL	6,379.50
ALL	7,045.35

FIND THE AVERAGE DAILY SALES FOR EACH PRODUCT AT EACH STORE

THIN THE TABLE
(ELIMINATE EXCESS COLUMNS!)

Koramangala

Product	AvgDailyRevenue
Bananas	5,289.33
Milk	3,488.87
Nutella	6,900.39
Peanut Butter	5,494.95
Bananas	9,179.33
Milk	1,460.52
Nutella	6,379.50
Peanut Butter	7,045.35

Peanut Butter

FIND THE AVERAGE DAILY SALES FOR EACH PRODUCT AT EACH STORE

StoreLocation	Product	AvgDailyRevenue
Bellandur	Bananas	5,289.33
Bellandur	Milk	3,488.87
Bellandur	Nutella	6,900.39
Bellandur	Peanut Butter	5,494.95
Koramangala	Bananas	9,179.33
Koramangala	Milk	1,460.52
Koramangala	Nutella	6,379.50
Koramangala	Peanut Butter	7,045.35

FIND THE AVERAGE DAILY SALES FOR EACH PRODUCT AT EACH STORE

SELECT

Product, StoreLocation

AVG (REVENUE) AvgDailyRevenue

FROM

Sales_Data

GROUP BY

Product, StoreLocation ;

HOPEFULLY YOU CAN SEE WHY THIS IS
THE QUERY THAT DOES THIS NOW!

FIND THE AVERAGE DAILY SALES FOR EACH PRODUCT AT EACH STORE

StoreLocation	Product	AvgDailyRevenue
Bellandur	Bananas	5,289.33
Bellandur	Milk	3,488.87
Bellandur	Nutella	6,900.39
Bellandur	Peanut Butter	5,494.95
Koramangala	Bananas	9,179.33
Koramangala	Milk	1,460.52
Koramangala	Nutella	6,379.50
Koramangala	Peanut Butter	7,045.35

**FIND THE AVERAGE D
PRODUCT AT EACH ST**

FROM THIS, THE
WORST PERFORMING
STORE, PRODUCT IS
**MILK AT
KORAMANGALA**

Store	Location	Product	Avg Sales
Bellandur		Bananas	6,900.39
Bellandur		Milk	5,494.95
Bellandur		Nutella	9,179.33
Bellandur		Peanut Butter	1,460.52
Koramangala		Bananas	6,379.50
Koramangala		Milk	7,045.35
Koramangala		Nutella	
Koramangala		Peanut Butter	