

Business Functions Queries and Results

Insight1: Number of Products per Brand:

MySQL Workbench

MySQL Model (project_database...) EER Diagram Connection 1

File Edit View Query Database Server Tools Scripting Help

Navigator

SCHEMAS

Filter objects

- employees record
- employees schedule
- inventory product de
- order record
- product category
- product details
- product rating
- social media presen
- store table
- Views
- Stored Procedures
- Functions

Administration Schemas

Information

Table: brands

Columns:

- BrandID int AI PK
- BrandName varchar(45)

Query 1 x bestbuy_order record bestbuy_brands

Limit to 1000 rows

```
1 use bestbuy;
2 SELECT BrandName, COUNT(ProductID) AS NumberOfProducts
3 FROM brands
4 LEFT JOIN `product details` ON brands.BrandID = `product details`.BrandID
5 GROUP BY BrandName;
```

Result Grid

BrandName	NumberOfProducts
Apple	2
Dell	1
HP	1
Lenovo	1
Samsung	3
LG	2
Whirlpool	1
GE	1
Dyson	1
Shark	1
Robot	1
Bissell	1
Bosch	1
KitchenAid	1
ASUS	1
Acer	1
Sony	0
Microsoft	0
Toshiba	0

Result 1 x

Read Only

Insight 2: Total sales per brand:

```
1 use bestbuy;
2 SELECT b.BrandID, b.BrandName, SUM(`order record`.TotalAmount) AS TotalSales
3 FROM brands b
4 JOIN `product details` pd ON b.BrandID = pd.BrandID
5 JOIN `order record` ON pd.ProductID = `order record`.ProductID
6 GROUP BY b.BrandID, b.BrandName
7 ORDER BY TotalSales DESC;
```

Result Grid

BrandID	BrandName	TotalSales
5	Samsung	4994
6	LG	3297
1	Apple	2797
12	Bissell	2547
4	Lenovo	2198
14	KitchenAid	1798
15	ASUS	1798
9	Dyson	1797
13	Bosch	1598
8	GE	1245
2	Dell	1199
7	Whirlpool	999
10	Shark	916
3	HP	899
11	iRobot	799
16	Acer	579

Insight 3: Average Price of Products by Brand

MySQL Workbench

MySQL Model* (project_database..x) EER Diagram x Connection 1 x

File Edit View Query Database Server Tools Scripting Help

Navigator: bestbuy order record bestbuy brands

SCHEMAS

Filter objects

- employees record
- employees schedule
- inventory product de
- order record
- product category
- product details
- product rating
- social media presenc
- store table
- Views
- Stored Procedures
- Functions

Administration Schemas

Information

Table: brands

Columns: BrandID int AI PK, BrandName varchar(45)

Query 1 x bestbuy order record bestbuy brands

```
1 • use bestbuy;
2 • SELECT BrandName, AVG(Price) AS AveragePrice
3 FROM brands
4 JOIN `product details` ON brands.BrandID = `product details`.BrandID
5 GROUP BY BrandName;
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content: IA

BrandName	AveragePrice
Apple	949.0000
Dell	1199.0000
HP	899.0000
Lenovo	1099.0000
Samsung	1065.6667
LG	1199.0000
Whirlpool	1199.0000
GE	999.0000
Dyson	599.0000
Shark	249.0000
iRobot	799.0000
Bissell	229.0000
Bosch	799.0000
KitchenAid	849.0000
Acer	579.0000
ASUS	899.0000

Result 2 x

Insight 4: Top-selling products

```
1 • use bestbuy;
2 • SELECT pd.ProductID, pd.ProductName, b.BrandName,
3 SUM(`order record`.Quantity) AS TotalQuantitySold
4 FROM `product details` pd
5 JOIN `order record` ON pd.ProductID = `order record`.ProductID
6 JOIN brands b ON pd.BrandID = b.BrandID
7 GROUP BY pd.ProductID, pd.ProductName, b.BrandName
8 ORDER BY TotalQuantitySold DESC;
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content: IA

ProductID	ProductName	BrandName	TotalQuantitySold
10	GE Side-by-Side	GE	5
12	Shark Navigator Lift-Away	Shark	4
11	Dyson V11	Dyson	3
9	Samsung Family Hub	Samsung	3
14	Bissell CrossWave	Bissell	3
1	Iphone 14	Apple	2
15	Bosch 800 Series	Bosch	2
5	Lenovo ThinkPad X1	Lenovo	2
16	LG QuadWash	LG	2
17	KitchenAid Dishwasher	KitchenAid	2
18	Samsung StormWash	Samsung	2
20	ASUS ZenBook 14	ASUS	2
3	Dell XPS 13	Dell	1
7	LG InstaView	LG	1
2	Iphone 15	Apple	1
8	Whirlpool French Door	Whirlpool	1
4	HP Spectre x360	HP	1

Insight 5: Most Expensive Product and its Brand:

MySQL Workbench

MySQL Model* (project_database..x) EER Diagram x Connection 1 x

File Edit View Query Database Server Tools Scripting Help

Navigator

Query 1 x bestbuy order record bestbuy brands

Limit to 1000 rows

```
1 use bestbuy;
2 SELECT ProductName, Price, BrandName
3 FROM `product details`
4 JOIN brands ON `product details`.BrandID = brands.BrandID
5 ORDER BY Price DESC
6 LIMIT 1;
7
```

Result Grid

ProductName	Price	BrandName
Samsung Family Hub	1699	Samsung

Table: brands

Columns:

- BrandID int AI PK
- BrandName varchar(45)

Insight 6: Ranking Products within Each Brand by Price:

MySQL Workbench

MySQL Model* (project_database..x) EER Diagram x Connection 1 x

File Edit View Query Database Server Tools Scripting Help

Navigator

Query 1 x bestbuy order record bestbuy brands

Limit to 1000 rows

```
1 use bestbuy;
2 SELECT BrandName, ProductName, Price,
3 RANK() OVER (PARTITION BY brands.BrandID ORDER BY Price DESC) AS PriceRank
4 FROM `product details`
5 JOIN brands ON `product details`.BrandID = brands.BrandID;
6
```

Result Grid

BrandName	ProductName	Price	PriceRank
Apple	Iphone 15	999	1
Apple	Iphone 14	899	2
Dell	Dell XPS 13	1199	1
HP	HP Spectre x360	899	1
Lenovo	Lenovo ThinkPad X1	1099	1
Samsung	Samsung Family Hub	1699	1
Samsung	Samsung Galaxy Book	799	2
Samsung	Samsung StormWash	699	3
LG	LG InstaView	1499	1
LG	LG QuadWash	899	2
Whirlpool	Whirlpool French Door	1199	1
GE	GE Side-by-Side	999	1
Dyson	Dyson V11	599	1
Shark	Shark Navigator Lift...	249	1
Robot	Roomba i7+	799	1
Bissell	Bissell CrossWave	229	1
Bosch	Bosch 800 Series	799	1
KitchenAid	KitchenAid Dishwasher	849	1
ASUS	ASUS ZenBook 14	899	1
Acer	Acer Aspire 5	579	1

Insight 7: Products with the Highest Ratings

MySQL Workbench

MySQL Model "project_database.x" EER Diagram x Connection 1 x

File Edit View Query Database Server Tools Scripting Help

Navigator: Query 1 x bestbuy order record bestbuy brands

Limit to 1000 rows

1 • use bestbuy;

2 • SELECT 'product details'.ProductName, brands.BrandName, MAX('product rating'.RatingValue) AS HighestRating

3 FROM 'product details'

4 JOIN brands ON 'product details'.BrandID = brands.BrandID

5 JOIN 'product rating' ON 'product details'.ProductID = 'product rating'.ProductID

6 GROUP BY 'product details'.ProductName, brands.BrandName;

Result Grid

ProductName	BrandName	HighestRating
Iphone 14	Apple	5
Iphone 15	Apple	5
Dell XPS 13	Dell	4
HP Spectre x360	HP	4
Lenovo ThinkPad X1	Lenovo	4
Samsung Galaxy Book	Samsung	5
Samsung Family Hub	Samsung	4
Dyson V11	Dyson	4
LG InstaView	LG	5
Shark Navigator Lift-Away	Shark	4
Roomba i7+	Robot	5
Bissell CrossWave	Bissell	3
Bosch 800 Series	Bosch	5
LG QuadWash	LG	4
KitchenAid Dishwasher	KitchenAid	4
GE Side-by-Side	GE	4
Samsung StormWash	Samsung	4
Whirlpool French Door	Whirlpool	4
Acer Aspire 5	Acer	4
ASUS ZenBook 14	ASUS	5

Result 5 x

Table: product rating

Columns:

- RatingID PK
- ProductID FK
- RatingValue decimal(1,0)
- TransactionID FK

Insight 8: Average Rating by Brand

MySQL Workbench

MySQL Model "project_database.x" EER Diagram x Connection 1 x

File Edit View Query Database Server Tools Scripting Help

Navigator: Query 1 x bestbuy order record bestbuy brands

Limit to 1000 rows

1 • use bestbuy;

2 • SELECT brands.BrandName, AVG('product rating'.RatingValue) AS AverageRating

3 FROM brands

4 JOIN 'product details' ON brands.BrandID = 'product details'.BrandID

5 LEFT JOIN 'product rating' ON 'product details'.ProductID = 'product rating'.ProductID

6 GROUP BY brands.BrandName;

Result Grid

BrandName	AverageRating
Apple	5.0000
Dell	4.0000
HP	4.0000
Lenovo	4.0000
Samsung	4.3333
LG	4.5000
Whirlpool	4.0000
GE	4.0000
Dyson	4.0000
Shark	4.0000
Robot	5.0000
Bissell	3.0000
Bosch	5.0000
KitchenAid	4.0000
ASUS	5.0000
Acer	4.0000

Result 6 x

Table: product rating

Columns:

- RatingID PK
- ProductID FK
- RatingValue decimal(1,0)
- TransactionID FK

Insight 9: Total Purchases per Location

MySQL Workbench

MySQL Model* (project_database...x) EER Diagram x Connection 1 x

File Edit View Query Database Server Tools Scripting Help

Navigator: bestbuy.order record bestbuy.brands

SCHEMAS

Filter objects

bestbuy

- Tables
 - brands
 - customer details
 - employees location
 - employees record
 - employees schedule
 - inventory product de
 - order record
 - product category
 - product details
 - product rating

Administration Schemas

Information

Table: customer details

Columns:

- TransactionID int AI PK
- CustomerID int
- PurchasePrice int
- CustomerName varchar(45)
- LocationName varchar(45)

Query 1 x bestbuy.order record bestbuy.brands

Limit to 1000 rows

```
1 use bestbuy;
2 SELECT cd.LocationName, COUNT(cd.TransactionID) AS TotalPurchases
3 FROM `customer details` cd
4 GROUP BY cd.LocationName;
```

Result Grid

LocationName	TotalPurchases
New York	10
New Jersey	10

Result 7 x

Insight 10: Product Popularity by Brand

Query 1 x bestbuy.order record bestbuy.brands

Limit to 1000 rows

```
1 use bestbuy;
2 SELECT b.BrandName, COUNT(pd.ProductID) AS ProductCount
3 FROM brands b
4 JOIN `product details` pd ON b.BrandID = pd.BrandID
5 GROUP BY b.BrandName
6 ORDER BY ProductCount DESC;
```

Result Grid

BrandName	ProductCount
Samsung	3
Apple	2
LG	2
Dell	1
HP	1
Lenovo	1
Whirlpool	1
GE	1
Dyson	1
Shark	1
iRobot	1
Bissell	1
Bosch	1
KitchenAid	1
ASUS	1
Acer	1

Result 8 x

Insight 11: Average Salary by Position

Query 1 x bestbuy.order record bestbuy.brands

Limit to 1000 rows

```
1 • use bestbuy;
2 • SELECT Position, AVG(Salary) AS AvgSalary
3 FROM `employees record`
4 GROUP BY Position;
5
6
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content: |

Position	AvgSalary
Manager	4750.0000
Software Eng	4775.0000
Marketing Spec	4350.0000
HR Manager	4950.0000
Senior Analyst	4750.0000
Analyst	4100.0000
Sales Rep	3533.3333
Marketing Coord	3850.0000

Insight 12: Most Common Shift Type

Query 1 x bestbuy.order record bestbuy.brands

Limit to 1000 rows

```
1 • use bestbuy;
2 • SELECT ShiftType, COUNT(ScheduleID) AS ShiftCount
3 FROM `employees schedule`
4 GROUP BY ShiftType
5 ORDER BY ShiftCount DESC
6 LIMIT 1;
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content: |

ShiftType	ShiftCount
Day	12

Insight 13: Employees distribution by Location

Query 1 x bestbuy.order record bestbuy.brands

Limit to 1000 rows

```
1 • use bestbuy;
2 • SELECT el.Location, COUNT(er.EmployeeID) AS EmployeeCount
3 FROM `employees location` el
4 JOIN `employees record` er ON el.LocationID = er.LocationID
5 GROUP BY el.Location;
6
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content: IA

	Location	EmployeeCount
▶	NY	7
	NJ	13

Insight14: Top salaried person in each location

Query 1 x bestbuy.order record bestbuy.brands

Limit to 1000 rows

```
1 • use bestbuy;
2 • SELECT Location, FirstName, LastName, Salary
3 FROM ( SELECT el.Location, FirstName, LastName, Salary,
4 ROW_NUMBER() OVER (PARTITION BY el.Location ORDER BY Salary DESC) AS SalaryRow
5 FROM `employees location` el
6 JOIN `employees record` er ON el.LocationID = er.LocationID
7 ) AS RankedData
8 WHERE SalaryRow = 1;
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content: IA

	Location	FirstName	LastName	Salary
▶	NJ	Emily	Davis	5000
	NY	Sophia	Smith	5000

Insight 15: Salary Comparison based on Gender

Query 1 x bestbuy.order record bestbuy.brands

Limit to 1000 rows

```
1 • use bestbuy;
2 • SELECT Gender, AVG(Salary) AS AverageSalary, MAX(Salary) AS MaxSalary, MIN(Salary) AS MinSalary
3   FROM `employees record`
4   GROUP BY Gender;
5
```

Result Grid

	Gender	AverageSalary	MaxSalary	MinSalary
▶	Male	4120.0000	4800	3500
	Female	4610.0000	5000	4000

Insight 16: Store-wise Inventory Count

Query 1 x bestbuy.order record bestbuy.brands

Limit to 1000 rows

```
1 • use bestbuy;
2 • SELECT st.StoreName, COUNT(ipd.InventoryID) AS ProductCount
3   FROM `store table` st
4  LEFT JOIN `inventory product details` ipd ON st.StoreID = ipd.StoreID
5  GROUP BY st.StoreName;
```

Result Grid

	StoreName	ProductCount
▶	Best Buy NYC1	2
	Best Buy NYC2	2
	Best Buy NYC3	2
	Best Buy NYC4	1
	Best Buy NYC5	1
	Best Buy NYC6	1
	Best Buy NYC7	1
	Best Buy NYC8	1
	Best Buy NYC9	1
	Best Buy NYC10	1
	Best Buy NJ1	1
	Best Buy NJ2	1
	Best Buy NJ3	1
	Best Buy NJ4	1
	Best Buy NJ5	1
	Best Buy NJ6	1
	Best Buy NJ7	1
	Best Buy NJ8	0
	Best Buy NJ9	0
	Best Buy NJ10	0

Insight 17: Stores with Low Inventory (QuantityInStock < 50):

Query 1 × bestbuy.order record bestbuy.brands bestbuy.store table bestbuy.inventory product details

Limit to 1000 rows

```
1 • use bestbuy;
2 • SELECT st.StoreName, ipd.ProductName, ipd.QuantityInStock
3 FROM `store table` st
4 JOIN `inventory product details` ipd ON st.StoreID = ipd.StoreID
5 WHERE ipd.QuantityInStock < 50;
6
7
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content: |

	StoreName	ProductName	QuantityInStock
▶	Best Buy NYC3	Lenovo ThinkPad X1	30
	Best Buy NYC6	Samsung Family Hub	40
	Best Buy NYC7	Dyson V11	20
	Best Buy NYC9	Roomba i7+	45
	Best Buy NJ1	Bosch 800 Series	40
	Best Buy NJ4	Iphone 15	30
	Best Buy NJ6	HP Spectre x360	25
	Best Buy NJ7	Lenovo ThinkPad X1	35

Insight 18: Highest Spender

Query 1 ×

Limit to 1000 rows

```
1 • use bestbuy;
2 • SELECT CustomerID, SUM(TotalAmount) AS TotalSpending
3 FROM `order record`
4 GROUP BY CustomerID
5 ORDER BY TotalSpending DESC
6 LIMIT 1;
7
8
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content: | Fetch rows:

	CustomerID	TotalSpending
▶	117	2547

Insight 19: Rank Products Based on Quantity in Stock Within Each Store

Query 1 x bestbuy.order record bestbuy.brands bestbuy.store table bestbuy.inventory product details

```

1 • use bestbuy;
2 • SELECT st.StoreName, ipd.ProductName, ipd.QuantityInStock, RANK() OVER (PARTITION BY st.StoreID ORDER BY ipd.QuantityInStock DESC)
3   AS StockRank
4   FROM `store table` st
5  JOIN `inventory product details` ipd ON st.StoreID = ipd.StoreID;

```

Result Grid Filter Rows: Exports Wrap Cell Contents

	StoreName	ProductName	QuantityInStock	StockRank
▶	Best Buy NYC1	Iphone 15	100	1
	Best Buy NYC1	Iphone 14	50	2
	Best Buy NYC2	Dell XPS 13	75	1
	Best Buy NYC2	HP Spectre x360	60	2
	Best Buy NYC3	Samsung Galaxy Book	50	1
	Best Buy NYC3	Lenovo ThinkPad X1	30	2
	Best Buy NYC4	LG InstaView	80	1
	Best Buy NYC5	Whirlpool French Door	60	1
	Best Buy NYC6	Samsung Family Hub	40	1
	Best Buy NYC7	Dyson V11	20	1
	Best Buy NYC8	Shark Navigator Lift...	90	1
	Best Buy NYC9	Roomba i7+	45	1
	Best Buy NYC10	Bissell CrossWave	70	1
	Best Buy NJ1	Bosch 800 Series	40	1
	Best Buy NJ2	LG QuadWash	55	1
	Best Buy NJ3	Iphone 14	75	1
	Best Buy NJ4	Iphone 15	30	1
	Best Buy NJ5	Dell XPS 13	60	1
	Best Buy NJ6	HP Spectre x360	25	1
	Best Buy NJ7	Lenovo ThinkPad X1	35	1

Result 21 x

Insight 20: Running Total Quantity in Stock for Each Product Across All Stores

Query 1 x bestbuy.order record bestbuy.brands bestbuy.store table bestbuy.inventory product details

```

1 • use bestbuy;
2 • SELECT ipd.ProductName, st.StoreName, ipd.QuantityInStock, SUM(ipd.QuantityInStock)
3   OVER (PARTITION BY ipd.ProductName ORDER BY st.StoreID) AS RunningTotal
4   FROM `store table` st
5  JOIN `inventory product details` ipd ON st.StoreID = ipd.StoreID;
6
7

```

Result Grid Filter Rows: Exports Wrap Cell Contents

	ProductName	StoreName	QuantityInStock	RunningTotal
▶	Bissell CrossWave	Best Buy NYC10	70	70
	Bosch 800 Series	Best Buy NJ1	40	40
	Dell XPS 13	Best Buy NYC2	75	75
	Dell XPS 13	Best Buy NJ5	60	135
	Dyson V11	Best Buy NYC7	20	20
	HP Spectre x360	Best Buy NYC2	60	60
	HP Spectre x360	Best Buy NJ6	25	85
	Iphone 14	Best Buy NYC1	50	50
	Iphone 14	Best Buy NJ3	75	125
	Iphone 15	Best Buy NYC1	100	100
	Iphone 15	Best Buy NJ4	30	130
	Lenovo ThinkPad...	Best Buy NYC3	30	30
	Lenovo ThinkPad...	Best Buy NJ7	35	65
	LG InstaView	Best Buy NYC4	80	80
	LG QuadWash	Best Buy NJ2	55	55
	Roomba i7+	Best Buy NYC9	45	45
	Samsung Family ...	Best Buy NYC6	40	40
	Samsung Galaxy ...	Best Buy NYC3	50	50
	Shark Navigator ...	Best Buy NYC8	90	90
	Whirlpool French ...	Best Buy NYC5	60	60

Result 23 x