

CSCI3287-HW5

Queries

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-- Question One, show amount of rows in each table
use information_schema;
SELECT table_name AS 'TableName', table_rows as 'RowCount'
FROM TABLES
LIMIT 19;

-- Question Two
SELECT table_name AS 'tableName', column_name, column_key AS 'PrimaryKey'
FROM columns
WHERE column_key = 'PRI';

-- Question Three
-- They naming convention they used is by adding a prefix of having 'Fact' or 'Dim' before the actual table name.

-- Question Four
-- The defined relationship is useful for when an employee happens to be a manager and has employees under them
-- example, parent employee key would refer to an employees specific manager.

-- Question Five
-- What are the three types of models of bikes sold by AdventureWorks?
-- Mountain Bikes, Road Bikes, Touring Bikes

-- Question Six
-- Compare and rank the total counts of the bikes sold by AdventureWorks for each of the years 2001 – 2004 by color.
-- What was the most popular in these four years?
-- In 2001, Red was the most popular
-- In 2002, Red was also the most popular
-- In 2003, Black was the most popular
-- In 2004, Black was also the most popular
SELECT DT.CalendarYear AS 'SaleYear', DP.color AS 'Color', COUNT(DP.color) AS 'CountForColor'
FROM DimProduct DP JOIN DimProductSubcategory DPS JOIN DimTime DT JOIN FactInternetSales FIS
ON DP.ProductSubcategoryKey = DPS.ProductSubcategoryKey
AND DPS.EnglishProductSubcategoryName LIKE '%bikes%'
AND FIS.orderDateKey = DT.Timekey
AND FIS.productkey = DP.productkey
GROUP BY 1,2 |
ORDER BY 1,3 DESC;

-- Question Seven
-- List and compare the total sales volume (in dollars) of bikes sold (all model types) by customer state/province by year.
-- Which 4 states/provinces showed the highest sales volume for each of the years from 2001 – 2004?
-- In 2001 (DESC) : California, NewSouthWales, Victoria, England
-- In 2002 (DESC) : California, NewSouthWales, British Columbia, England
-- In 2003 (DESC) : California, England, NewSouthWales, Victoria
-- In 2004 (DESC) : California, England, NewSouthWales, Washington
SELECT DT.CalendarYear AS 'Year', DG.StateProvinceName AS 'Location', SUM(FIS.SalesAmount) AS 'SumOfSalesInProvince'
FROM FactInternetSales FIS JOIN DimCustomer DC JOIN DimGeography DG JOIN DimProductSubcategory DPS JOIN DimProduct DP JOIN DimTime DT
ON FIS.CustomerKey = DC.CustomerKey
AND DC.GeographyKey = DG.GeographyKey
AND DP.ProductSubcategoryKey = DPS.ProductSubcategoryKey
AND FIS.ProductKey = DP.ProductKey
AND DPS.EnglishProductSubcategoryName LIKE '%bikes%'
AND DT.TimeKey = FIS.OrderDateKey
GROUP BY 1,2
ORDER BY 1,3 DESC;
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-- Question Eight
-- For the year 2002, which model of bike yielded the highest margin for AdventureWorks?
-- Provide your SQL query, and your answer set along with your answer to the question.
SELECT DT.CalendarYear AS 'In 2002', MAX(FIS.UnitPrice - FIS.ProductStandardCost) AS 'MARGIN' , DP.ModelName AS 'ModelName'
FROM FactInternetSales FIS JOIN DimTime DT JOIN DimProduct DP
ON DP.ProductKey = FIS.ProductKey
AND FIS.OrderDateKey = DT.TimeKey
AND DP.ModelName in ('Road-150', 'Road-650', 'Mountain-100', 'Road-550-w', 'Road-250', 'Mountain-200')
AND DT.CalendarYear = 2002
GROUP BY 3
ORDER BY 2 DESC;
```

AnswerToNumberEight: Mountain-100

Answer Sets

Question 1 Answer Set:

TableName	RowCount
DimAccount	99
DimCurrency	0
DimCustomer	18356
DimDepartmentGroup	7
DimEmployee	296
DimGeography	655
DimOrganization	14
DimProduct	158
DimProductCategory	4
DimProductSubcategory	37
DimPromotion	16
DimReseller	701
DimSalesReason	10
DimSalesTerritory	11
DimScenario	3
DimTime	1158
FactCurrencyRate	0
FactFinance	38480
FactInternetSales	59800

Question 2 Answer Set:

tableName	COLUMN_NAME	PrimaryKey
DimAccount	AccountKey	PRI
DimCustomer	CustomerKey	PRI
DimDepartmentGroup	DepartmentGroupKey	PRI
DimEmployee	EmployeeKey	PRI
DimGeography	GeographyKey	PRI
DimOrganization	OrganizationKey	PRI
DimProductSubcategory	ProductSubcategoryKey	PRI
DimReseller	ResellerKey	PRI
DimProduct	ProductKey	PRI
FactInternetSales	SalesOrderLineNumber	PRI
DimCurrency	CurrencyKey	PRI
DimProductCategory	ProductCategoryKey	PRI
DimPromotion	PromotionKey	PRI
DimSalesReason	SalesReasonKey	PRI
DimSalesTerritory	SalesTerritoryKey	PRI
DimScenario	ScenarioKey	PRI
DimTime	TimeKey	PRI
FactInternetSales	SalesOrderNumber	PRI

Question Six Answer Set:

SaleYear	Color	CountForColor
2001	Red	775
2001	Black	154
2001	Silver	84
2002	Red	1380
2002	Black	868
2002	Silver	283
2002	Yellow	146
2003	Black	2321
2003	Yellow	1268
2003	Silver	1119
2003	Red	501
2003	Blue	501
2004	Black	1966
2004	Yellow	1789
2004	Silver	1205
2004	Blue	782
2004	Red	63

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Question Eight Answer Set:

In 2002	MARGIN	ModelName
2002	1488.00	Mountain-100
2002	1407.00	Road-150
2002	953.00	Mountain-200
2002	924.00	Road-250
2002	394.00	Road-550-W
2002	296.00	Road-650