

1.

```
SELECT table_name, table_rows
FROM INFORMATION_SCHEMA.TABLES
WHERE TABLE_SCHEMA = 'aw';
```

TABLE_NAME	TABLE_ROWS
DimAccount	99
DimCurrency	0
DimCustomer	18304
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

2,

```
SELECT table_name, column_name
FROM INFORMATION_SCHEMA.COLUMNS
WHERE column_key = 'PRI';
```

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

3,

Dim represent all dimension table names. Fact represent all fact table name.

4. we use recursion relationship in table because. It can help us find the superior of any employee and we can get the hierarchal structure of the entire company.

5, Mountain, road, touring bikes

6, use aw;

```
SELECT SUM(a.UnitPrice) AS 'Total Money', b.CalendarYear,  
c.EnglishProductSubcategoryName
```

```
FROM FactInternetSales a, DimTime b, DimProductSubcategory c, DimProduct d
```

```
WHERE a.ProductKey = d.ProductKey AND c.ProductSubcategoryKey =  
d.ProductSubcategoryKey AND a.OrderDateKey = b.TimeKey
```

```
AND (c.EnglishProductSubcategoryName = 'Mountain Bikes' OR  
c.EnglishProductSubcategoryName = 'Road Bikes' OR c.EnglishProductSubcategoryName =  
'Touring Bikes')
```

```
GROUP BY b.CalendarYear, c.EnglishProductSubcategoryName;
```

Total Money	CalendarYear	EnglishProductSubcategoryNa...
585975.00	2001	Mountain Bikes
1562362.00	2002	Mountain Bikes
3989373.00	2003	Mountain Bikes
3814544.00	2004	Mountain Bikes
2680193.00	2001	Road Bikes
4967698.00	2002	Road Bikes
3951673.00	2003	Road Bikes
2919874.00	2004	Road Bikes
1417351.00	2003	Touring Bikes
2427229.00	2004	Touring Bikes

From table, we know that Mountain bike model had the highest sales (in dollar volume) in 2003 .

7,

use aw;

```
SELECT c.EnglishProductSubcategoryName
```

```
from DimProductSubcategory c
```

```
where c.EnglishProductSubcategoryName NOT IN( 'Mountain Bikes' , 'Road Bikes' , 'Touring  
Bikes')
```

limit 5;

EnglishProductSubcategoryName

Handlebars

Bottom Brackets

Brakes

Chains

Cranksets

8,

use aw;

```
SELECT SUM(a.OrderQuantity) AS 'Total number ', b.CalendarYear, d.Color
FROM FactInternetSales a, DimTime b, DimProductSubcategory c, DimProduct d
WHERE a.ProductKey = d.ProductKey AND c.ProductSubcategoryKey =
d.ProductSubcategoryKey AND a.OrderDateKey = b.TimeKey
AND (c.EnglishProductSubcategoryName = 'Mountain Bikes' OR
c.EnglishProductSubcategoryName = 'Road Bikes' OR c.EnglishProductSubcategoryName =
'Touring Bikes')
GROUP BY b.CalendarYear, d.Color;
```

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

So red bike is most popular in 2001,

red bike is most popular in 2002,
black bike is most popular in 2003
black bike is most popular in 2004

9,

```
SELECT SUM(a.OrderQuantity) AS 'Total number ', c.EnglishProductSubcategoryName
FROM FactInternetSales a, DimTime b, DimProductSubcategory c, DimProduct d ,
DimCustomer u
WHERE u.EnglishEducation='Graduate Degree' AND u.CustomerKey=a.CustomerKey AND
a.ProductKey = d.ProductKey AND c.ProductSubcategoryKey = d.ProductSubcategoryKey
AND (c.EnglishProductSubcategoryName = 'Mountain Bikes' OR
c.EnglishProductSubcategoryName = 'Road Bikes' OR c.EnglishProductSubcategoryName =
'Touring Bikes')
GROUP BY c.EnglishProductSubcategoryName ;
```

Total number	EnglishProductSubcategoryName
501414	Touring Bikes
1544772	Road Bikes
1103574	Mountain Bikes

So, Road Bikes have highest sales.

10,

```
SELECT (SUM(a.UnitPrice)-SUM(ProductStandardCost)) AS 'Profit Margin', b.CalendarYear,
g.StateProvinceName
FROM FactInternetSales a, DimTime b, DimProductSubcategory c, DimProduct d ,
DimCustomer u, DimGeography g
WHERE u.GeographyKey=g.GeographyKey and u.CustomerKey=a.CustomerKey AND
a.ProductKey = d.ProductKey AND c.ProductSubcategoryKey = d.ProductSubcategoryKey AND
a.OrderDateKey = b.TimeKey AND b.CalendarYear='2004'
AND (c.EnglishProductSubcategoryName = 'Mountain Bikes' OR
c.EnglishProductSubcategoryName = 'Road Bikes' OR c.EnglishProductSubcategoryName =
'Touring Bikes')
GROUP BY g.StateProvinceName;
```

Result Grid



Filter Rows:

Export:



	Profit Margin	CalendarYear	StateProvinceName
►	86287.00	2004	Nordrhein-Westfalen
	466029.00	2004	England
	153021.00	2004	Oregon
	775647.00	2004	California
	230136.00	2004	Victoria
	216173.00	2004	Queensland
	435214.00	2004	New South Wales
	66324.00	2004	Seine (Paris)
	108457.00	2004	Saarland
	97697.00	2004	Hessen
	336111.00	2004	Washington
	35867.00	2004	Essonne
	47493.00	2004	Nord
	55559.00	2004	Bayern
	236479.00	2004	British Columbia
	63060.00	2004	South Australia
	15685.00	2004	Seine et Marne
	37007.00	2004	Hauts de Seine
	4864.00	2004	Charente-Maritime
	50595.00	2004	Seine Saint Denis
	64193.00	2004	Hamburg
	4290.00	2004	Val de Marne
	7724.00	2004	Garonne (Haute)
	19291.00	2004	Tasmania
	44102.00	2004	Yveline
	14299.00	2004	Moselle
	9613.00	2004	Loiret
	4388.00	2004	Somme
	2281.00	2004	Alberta
	2041.00	2004	Pas de Calais
	1956.00	2004	Florida
	8246.00	2004	Brandenburg
	7153.00	2004	Val d'Oise
	349.00	2004	Georgia
	407.00	2004	Wyoming
	2006.00	2004	Loir et Cher
	1043.00	2004	New York
	349.00	2004	Texas
	1043.00	2004	South Carolina