# GASE PROBLEMS

## 

By Nawazish Khan

#### Creating Table

```
-- Creating Schema
create schema market_star_schema;
-- create table
use market_star_schema;
```

#### Creating Customer Table

```
CREATE TABLE `cust_dimen` (
    `Cust_id` varchar(12) NOT NULL,
    `Customer_Name` varchar(25) DEFAULT NULL,
    `City` varchar(12) DEFAULT NULL,
    `State` varchar(12) DEFAULT NULL,
    `Customer_Segment` varchar(25) DEFAULT
NULL,
    PRIMARY KEY (`Cust_id`)
);
```

#### Creating Shipping Table

```
CREATE TABLE `shipping_dimen` (
    `Ship_id` varchar(12) NOT NULL,
    `Order_Number` int(11) NOT NULL,
    `Ship_Mode` varchar(25) DEFAULT NULL,
    `Ship_Date` date DEFAULT NULL,
    PRIMARY KEY (`Ship_id`)
);
```

#### Creating Orders Table

```
CREATE TABLE `orders_dimen` (
   `Ord_id` varchar(12) NOT NULL,
   `Order_Number` int(11) NOT NULL,
   `Order_Date` date DEFAULT NULL,
   `Order_Priority` varchar(25) DEFAULT NULL,
   PRIMARY KEY (`Ord_id`),
   KEY `Order_Number_index` (`Order_Number`)
);
```

#### Creating Market fact table

```
CREATE TABLE `market_fact_full` (
  `Market_fact_id` int(11) NOT NULL,
  `Ord_id` varchar(12) DEFAULT NULL,
  `Prod_id` varchar(12) DEFAULT NULL,
  `Ship_id` varchar(12) DEFAULT NULL,
  `Cust_id` varchar(12) DEFAULT NULL,
  `Sales` decimal(65,30) DEFAULT NULL,
  `Discount` decimal(12,2) DEFAULT NULL,
  `Order_Quantity` int(11) NOT NULL,
  `Profit` decimal(12,2) DEFAULT NULL,
  `Shipping_Cost` decimal(12,2) DEFAULT NULL,
  `Product_Base_Margin` decimal(12,2) DEFAULT NULL,
  PRIMARY KEY (`Market_fact_id`),
  KEY `Order_Quantity_index` (`Order_Quantity`),
  KEY `Ship_Id_idx` (`Ship_id`),
  CONSTRAINT `Cust_Id` FOREIGN KEY (`Cust_id`)
REFERENCES `cust_dimen` (`Cust_id`)
);
```

#### Inserting records.

```
INSERT INTO `cust_dimen` VALUES
('Cust_1','MUHAMMED
MACINTYRE', 'Kolkata', 'West Bengal', 'SMALL
BUSINESS')....
INSERT INTO `market_fact_full` VALUES
(1,'0rd_5446','Prod_16','SHP_76Ø9',
'Cust_1818',136.810, Ø.Ø1, 23, -3Ø.51, 3.6Ø,
Ø.56) ....
INSERT INTO `orders_dimen` VALUES
('Ord_1',3,'2010-10-13','LOW'),...
```

Print the product categories and subcategories along with the profits made for each order.

select product\_category,
product\_sub\_category, profit from
prod\_dimen p inner join market\_fact\_full
m on p.Prod\_id = m.Prod\_id;

	product_category	product_sub_category	profit
•	OFFICE SUPPLIES	SCISSORS, RULERS AND TRIMMERS	-30.51
	OFFICE SUPPLIES	PENS & ART SUPPLIES	4.56
	TECHNOLOGY	TELEPHONES AND COMMUNICATION	1148.90
	OFFICE SUPPLIES	PAPER	729.34
	TECHNOLOGY	OFFICE MACHINES	1219.87
	OFFICE SUPPLIES	PAPER	-47.64
	OFFICE SUPPLIES	LABELS	1.32
	TECHNOLOGY	TELEPHONES AND COMMUNICATION	1137.91

Find the shipment date, mode and profit made for every single order.

select ord\_id, ship\_date, ship\_mode,
profit from market\_fact\_full m inner join
shipping\_dimen s on m.Ship\_id =
s.Ship\_id;

	ord_id	ship_date	ship_mode	profit
•	Ord_5446	2010-07-28	REGULAR AIR	-30.51
	Ord_5406	2009-08-07	EXPRESS AIR	4.56
	Ord_5446	2010-07-27	EXPRESS AIR	1148.90
	Ord_5456	2010-11-11	EXPRESS AIR	729.34
	Ord_5485	2009-08-07	DELIVERY TRUCK	1219.87
	Ord_5446	2010-07-28	EXPRESS AIR	-47.64
	Ord_31	2011-05-30	REGULAR AIR	1.32
	Ord_4725	2011-12-31	REGULAR AIR	1137.91

Print the shipment mode, profit made and product category for each product.

```
select p.prod_id, ship_mode, profit,
product_category from
prod_dimen p inner join market_fact_full
m on m.prod_id = p.prod_id
inner join shipping_dimen s on m.ship_id
= s.ship_id;
```

Print the shipment mode, profit made and product category for each product.

	prod_id	ship_mode	profit	product_category
<b>&gt;</b>	Prod_16	REGULAR AIR	-30.51	OFFICE SUPPLIES
	Prod_13	EXPRESS AIR	4.56	OFFICE SUPPLIES
	Prod_4	EXPRESS AIR	1148.90	TECHNOLOGY
	Prod_6	EXPRESS AIR	729.34	OFFICE SUPPLIES
	Prod_17	DELIVERY TRUCK	1219.87	TECHNOLOGY
	Prod_6	EXPRESS AIR	-47.64	OFFICE SUPPLIES
	Prod_12	REGULAR AIR	1.32	OFFICE SUPPLIES
	Prod_4	REGULAR AIR	1137.91	TECHNOLOGY

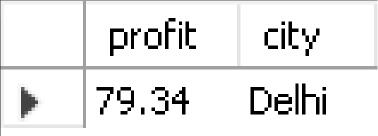


Which customer ordered the most number of products?

```
select c.cust_id , customer_name,
count(prod_id) from market_fact_full
m inner join cust_dimen c on
m.Cust_id = c.Cust_id
group by c.Cust_id order by
count(prod_id) desc limit 1;
```

	cust_id	customer_name	count(prod_id)
•	Cust_1818	AARON BERGMAN	6

```
Selling office supplies was more
profitable in Delhi as compared to Patna.
True or false?
select profit, city from
market_fact_full m inner join
prod_dimen p on m.Prod_id = p.Prod_id
inner join cust_dimen c on c.Cust_id
= m.Cust_id where Product_Category =
'Office SUpplies' and city in
('Delhi', 'Patna');
```



Print the three most common products.

```
select product_sub_category,
sum(order_quantity) from
market_fact_full m inner join
prod_dimen p on m.Prod_id = p.Prod_id
group by Product_Sub_Category order
by sum(order_quantity) desc limit 3;
```

	product_sub_category	sum(order_quantity)
•	PAPER	112
	TELEPHONES AND COMMUNICATION	74
	SCISSORS, RULERS AND TRIMMERS	50



View and joins together: Which year generated the highest profit?

create view profit\_year as select
sum(profit), year(order\_date) from
market\_fact\_full m inner join
orders\_dimen o on m.Ord\_id = o.Ord\_id
 group by year(Order\_date) order by
sum(profit) desc;

```
select * from profit_year;
```

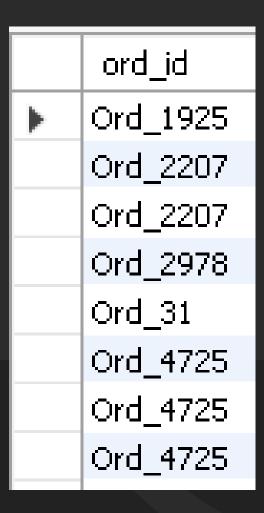
View and joins together: Which year generated the highest profit?

	sum(profit)	year(order_date)
•	3476.07	2010
	1224.43	2009
	249.10	2011



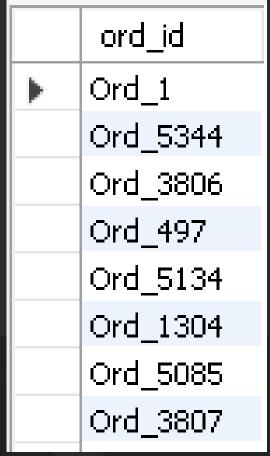
Return the order ids which are present in the market facts table.

select m.ord\_id from orders\_dimen o
right join market\_fact\_full m on
m.Ord\_id = o.Ord\_id;



Combine the order numbers for orders and order ids for all shipments in a single column.

(select ord\_id from orders\_dimen)
union all (select Order\_Number from
shipping\_dimen);



What are the two most and the two least profitable products?

(select sum(profit), prod\_id from

```
market_fact_full group by prod_id order
by sum(profit) desc limit 2)
union
  (select sum(profit), prod_id from
market_fact_full group by prod_id order
by sum(profit) asc limit 2);
```

What are the two most and the two least profitable products?

	sum(profit)	prod_id
•	2286.81	Prod_4
	1675.98	Prod_2
	-693.23	Prod_11
	-317.48	Prod_10

In the next post we will bring new case study with more compleixities, it that'll help us with more advanced queries.

### THANK YOU