

1) MPD présenté



Nombre de clients total

```
# mycursor.execute("SELECT COUNT(DISTINCT customer_id) AS TOT_CUSTOMER  
FROM Customer")
```

```
# myresult = mycursor.fetchall()
```

```
# print(myresult)
```

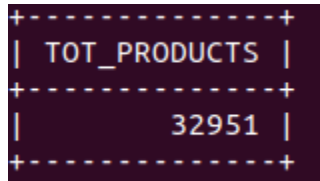
```
+-----+  
| TOT_CUSTOMER |  
+-----+  
|      99441  |  
+-----+
```

Nombre de produits total

```
# mycursor.execute("SELECT COUNT(DISTINCT product_id) AS TOT_PRODUCTS  
FROM Products")
```

```
# myresult = mycursor.fetchall()
```

```
# print(myresult)
```



```
+-----+  
| TOT_PRODUCTS |  
+-----+  
|          32951 |  
+-----+
```

Nombre de produits par catégorie

```
# mycursor.execute("SELECT product_category_name, COUNT(product_id) as  
Total_Product
```

```
FROM products
```

```
GROUP BY product_category_name
```

```
ORDER BY total_product DESC")
```

```
# myresult = mycursor.fetchall()
```

```
# print(myresult)
```

Categories	Total_Product
cama_mesa_banho	3029
esporte_lazer	2867
moveis_decoracao	2657
beleza_saude	2444
utilidades_domesticas	2335
automotivo	1900
informatica_acessorios	1639
brinquedos	1411
relogios_presentes	1329
telefonica	1134

Nombre de commandes total

```
# mycursor.execute("SELECT COUNT(DISTINCT order_id)
FROM Orders")
```

```
# myresult = mycursor.fetchall()
```

```
# print(myresult)
```

TOT_ORDERS
99441

Nombre de commandes selon leurs états (en cours de livraison etc...)

```
# mycursor.execute("SELECT order_status AS STATUS, COUNT(order_id) AS
ORDERS
```

```
FROM orders
```

```
GROUP BY STATUS
```

```
ORDER BY ORDERS DESC")
```

```
# myresult = mycursor.fetchall()
```

```
# print(myresult)
```

STATUS	ORDERS
delivered	96478
shipped	1107
canceled	625
unavailable	609
invoiced	314
processing	301
created	5
approved	2

Nombre de commandes par mois

```
# mycursor.execute("SELECT EXTRACT(YEAR FROM order_purchase_timestamp) AS
YEAR, EXTRACT(MONTH FROM order_purchase_timestamp) AS MONTH,
COUNT(DISTINCT order_id)
```

```
FROM orders
```

```
GROUP BY YEAR, MONTH")
```

```
# myresult = mycursor.fetchall()
```

```
# print(myresult)
```

YEAR	MONTH	COUNT(DISTINCT order_id)
2016	9	4
2016	10	324
2016	12	1
2017	1	800
2017	2	1780
2017	3	2682
2017	4	2404
2017	5	3700
2017	6	3245
2017	7	4026
2017	8	4331
2017	9	4285
2017	10	4631
2017	11	7544
2017	12	5673
2018	1	7269
2018	2	6728
2018	3	7211
2018	4	6939
2018	5	6873
2018	6	6167
2018	7	6292
2018	8	6512
2018	9	16
2018	10	4

Prix moyen d'une commande (panier moyen)

```
# mycursor.execute("SELECT avg(payment_value) AS AVERAGE_PRICE
```

```
FROM orders_payment")
```

```
# # myresult = mycursor.fetchall()
```

```
# # print(myresult)
```

AVERAGE_PRICE
154.10038041752344

Score de satisfaction moyen (notation sur la commande)

```
# mycursor.execute("SELECT avg(review_score) as AVERAGE_SCORE  
  
FROM orders_reviews  
  
ORDER BY AVERAGE_SCORE")  
  
# myresult = mycursor.fetchall()  
  
# print(myresult)
```

```
+-----+  
| AVERAGE_SCORE |  
+-----+  
|         4.0709 |  
+-----+
```

Nombre de vendeurs

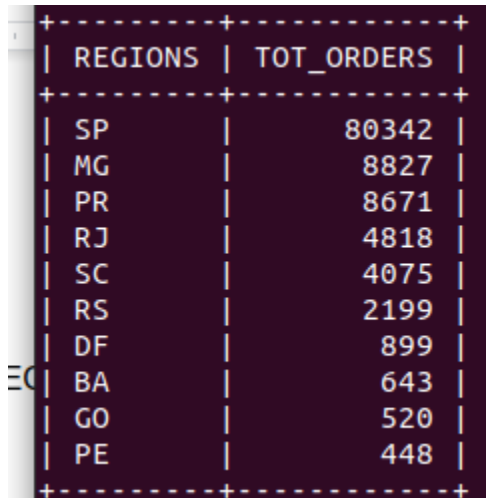
```
# mycursor.execute("SELECT COUNT(DISTINCT seller_id) AS TOT_SELLERS  
  
FROM seller")  
  
# myresult = mycursor.fetchall()  
  
# print(myresult)
```

```
+-----+  
| TOT_SELLERS |  
+-----+  
|         3095 |  
+-----+
```

Nombre de vendeurs par région

```
# mycursor.execute("SELECT s.seller_state AS REGIONS, count(i.order_id) AS  
TOT_ORDERS  
  
FROM orders_items i  
  
LEFT JOIN sellers s ON i.seller_id = s.seller_id  
  
GROUP BY REGIONS  
  
ORDER BY TOT_ORDERS DESC")  
  
# myresult = mycursor.fetchall()
```

```
# print(myresult)
```

A terminal window with a dark background and light green text. It displays a table with two columns: 'REGIONS' and 'TOT_ORDERS'. The table is enclosed in a box with dashed lines and '+' characters at the corners. The data rows are as follows:

REGIONS	TOT_ORDERS
SP	80342
MG	8827
PR	8671
RJ	4818
SC	4075
RS	2199
DF	899
BA	643
GO	520
PE	448

#Quantité de produit vendu par catégorie

```
# mycursor.execute("SELECT p.product_category_name AS CATEGORIES,  
count(i.product_id) AS TOT_PRODUCTS
```

```
FROM orders_items i
```

```
LEFT JOIN products p ON i.product_id = p.product_id
```

```
GROUP BY CATEGORIES
```

```
ORDER BY TOT_PRODUCTS DESC")
```

```
# myresult = mycursor.fetchall()
```

```
# print(myresult)
```

CATEGORIES	TOT_PRODUCTS
cama_mesa_banho	11115
beleza_saude	9670
esporte_lazer	8641
moveis_decoracao	8334
informatica_acessorios	7827
utilidades_domesticas	6964
relogios_presentes	5991
telefonica	4545
ferramentas_jardim	4347
automotivo	4235

Nombre de commandes par jours

(Year = 2017 , Month = Jan)

```
# mycursor.execute("SELECT EXTRACT(YEAR FROM order_purchase_timestamp) AS YEAR,
```

```
    EXTRACT(MONTH FROM order_purchase_timestamp) AS MONTH,
```

```
    EXTRACT(DAY FROM order_purchase_timestamp) AS DAY,
```

```
    COUNT(DISTINCT order_id) AS ORDERS
```

```
FROM orders
```

```
WHERE EXTRACT(YEAR FROM order_purchase_timestamp) = '2017' AND
```

```
    EXTRACT(MONTH FROM order_purchase_timestamp) = '1'
```

```
GROUP BY YEAR,MONTH,DAY")
```

```
# myresult = mycursor.fetchall()
```

```
# print(myresult)
```


YEAR	MONTH	DAY	ORDERS
2017	1	5	32
2017	1	6	4
2017	1	7	4
2017	1	8	6
2017	1	9	5
2017	1	10	6
2017	1	11	12
2017	1	12	13
2017	1	13	12
2017	1	14	18
2017	1	15	14
2017	1	16	19
2017	1	17	32
2017	1	18	33
2017	1	19	29
2017	1	20	29
2017	1	21	24
2017	1	22	31
2017	1	23	39
2017	1	24	40
2017	1	25	63
2017	1	26	86
2017	1	27	62
2017	1	28	29
2017	1	29	35
2017	1	30	53
2017	1	31	70

Durée moyenne entre la commande et la livraison

```
# mycursor.execute("SELECT
avg(datediff(order_delivered_customer_date,order_purchase_timestamp)) AS
AVERAGE_DAYS
```

```
FROM orders
```

```
ORDER BY AVERAGE_DAYS DESC")
```

```
# myresult = mycursor.fetchall()
```

```
# print(myresult)
```

AVERAGE_DAYS
12.4973

Nombre de commande par ville (ville du vendeur)

```
# mycursor.execute("SELECT s.seller_city AS CITIES, count(i.order_id) AS
TOT_ORDERS
```

```
FROM orders_items i
```

```
LEFT JOIN sellers s ON i.seller_id = s.seller_id
```

```
GROUP BY CITIES
```

```
ORDER BY TOT_ORDERS DESC")
```

```
# myresult = mycursor.fetchall()
```

```
# print(myresult)
```

CITIES	TOT_ORDERS
sao paulo	27985
ibitinga	7750
curitiba	3016
santo andre	2964
belo horizonte	2593
sao jose do rio preto	2579
rio de janeiro	2442
guarulhos	2362
ribeirao preto	2269
maringa	2220

Prix minimum des commandes

```
# mycursor.execute("SELECT min(price) AS MIN_PRICE
```

```
FROM orders_items")
```

```
# myresult = mycursor.fetchall()

# print(myresult)
```

```
+-----+
| MIN_PRICE |
+-----+
|      0.85 |
+-----+
```

Prix minimum des commandes

```
# mycursor.execute("SELECT min(price) AS MAX_PRICE
                    FROM orders_items")

# myresult = mycursor.fetchall()

# print(myresult)
```

```
+-----+
| MAX_PRICE |
+-----+
|      6735 |
+-----+
```

Le temps moyen d'une livraison par mois

```
# mycursor.execute("SELECT EXTRACT(YEAR FROM order_purchase_timestamp) AS
YEAR,

                    EXTRACT(MONTH FROM order_purchase_timestamp) AS MONTH,

                    EXTRACT(DAY FROM order_purchase_timestamp) AS DAY,

                    avg(datediff(order_delivered_customer_date,order_purchase_timestamp)) AS
AVERAGE_DAYS

FROM orders

WHERE EXTRACT(YEAR FROM order_purchase_timestamp) = '2017' AND

      EXTRACT(MONTH FROM order_purchase_timestamp) = '1'
```

GROUP BY YEAR,MONTH,DAY

ORDER BY YEAR,MONTH,DAY")

```
# myresult = mycursor.fetchall()
```

```
# print(myresult)
```

YEAR	MONTH	DAY	AVERAGE_DAYS
2017	1	5	10.8125
2017	1	6	7.7500
2017	1	7	24.2500
2017	1	8	8.2500
2017	1	9	23.6000
2017	1	10	12.6667
2017	1	11	7.4000
2017	1	12	24.5000
2017	1	13	9.6000
2017	1	14	15.4375
2017	1	15	12.9286
2017	1	16	12.2222
2017	1	17	11.1250
2017	1	18	13.2667
2017	1	19	12.4828
2017	1	20	12.0714
2017	1	21	13.0455
2017	1	22	9.4667
2017	1	23	13.1389
2017	1	24	11.7895
2017	1	25	12.1053
2017	1	26	13.7317
2017	1	27	12.9661
2017	1	28	13.0714
2017	1	29	13.9375
2017	1	30	11.2917
2017	1	31	13.6094