

## Exploratory Data Analysis on International Breweries Sales Data Using SQL

*Getting every item in the table*

SELECT

\*

FROM

international\_breweries;

SALES_ID	SALES_REP	EMAILS	BRANDS	PLANT_COST	UNIT_PRICE	QUANTITY	COST	PROFIT	COUNTRIES	REGION	MONTHS	YEARS
10101	Jardine	jard@gmail.com	trophy	150	200	725	145000	36250	Ghana	Southeast	January	2019
10102	Gill	gillhell@uk.com	budweiser	250	500	815	407500	203750	Nigeria	west	February	2018
10103	Sorvino	sorvi2000@gmail.com	castle lite	180	450	937	421650	252990	Togo	southsouth	March	2018
10104	Jones	jone.ai@yahoo.com	eagle lager	170	250	765	191250	61200	Benin	northwest	April	2018
10105	Andrews	andy@gmail.com	hero	150	200	836	167200	41800	Senegal	northeast	May	2017
10106	Jardine	jard@gmail.com	beta malt	80	150	798	119700	55860	Ghana	northcentral	June	2019
10107	Thompson	thomp@uk.com	grand malt	90	150	954	143100	57240	Nigeria	Southeast	July	2017
10108	Jones	jone.ai@yahoo.com	trophy	150	200	812	162400	40600	Togo	west	August	2018
10109	Morgan	morganny@gmail.com	budweiser	250	500	700	350000	175000	Benin	southsouth	September	2019
10110	Howard	howard_freeman@yahoo.com	castle lite	180	450	745	335250	201150	Senegal	northwest	October	2017

### SESSION A (PROFIT ANALYSIS)

1. Within the space of the last three years, what was the profit worth of the breweries, inclusive of the anglophone and the francophone territories?

SELECT

SUM(profit) AS Total\_Profit

FROM

international\_breweries;

Total_Profit
105587420

The total profit made within these three years of operation was approximately 105 million.

2. Compare the total profit between these two territories for the territory manager, Mr. Stone, to make a strategic decision that will aid profit maximization in 2020.

SELECT

CASE

WHEN COUNTRIES in ('Ghana', 'Nigeria') THEN 'Anglophone'

WHEN COUNTRIES in ('Togo', 'Benin', 'Senegal') Then 'Francophone'

ELSE 'Unknown'

END AS Territory,

SUM(PROFIT) AS TotalProfit

FROM

international\_breweries

GROUP BY

Territory;

Territory	TotalProfit
Anglophone	42389260
Francophone	63198160

The Francophone region had the highest profit within the three years of operation.

- What country generated the highest profit in 2019?

```
SELECT
    countries, SUM(profit) AS total_profit
FROM
    international_breweries
GROUP BY countries
ORDER BY total_profit DESC;
```

countries	total_profit
Senegal	21485190
Nigeria	21376210
Ghana	21013050
Benin	20961970
Togo	20751000

Senegal generated the highest profit of about 21 million, Togo generated the lowest profit of about 20 million.

- Help him find the year with the highest profit.

```
SELECT
    YEARS, SUM(profit) AS total_profit
FROM
    international_breweries
GROUP BY YEARS
ORDER BY total_profit DESC;
```

YEARS	total_profit
2017	38503320
2018	37063850
2019	30020250

Among the three years 2017 outperformed 2018 and 2019 in terms of profit generation

- Which month in the three years was the least profit generated?

```
SELECT
    MONTHS, SUM(profit) AS total_profit
FROM
    international_breweries
GROUP BY MONTHS
ORDER BY total_profit ASC;
```

MONTHS	total_profit
April	8573830
September	8702660
January	8722990
August	8730940
October	8767100
May	8772250
July	8787010
December	8787290
November	8820330
June	8828440
February	9028450
March	9066130

The month of April generated the least profit across the three-year period.

6. What was the minimum profit in the month of December 2018?

```
SELECT
  MONTHS, MIN(PROFIT) AS minimum_profit
FROM
  international_breweries
WHERE
  YEARS = 2018 AND MONTHS = 'December'
GROUP BY MONTHS;
```

MONTHS	minimum_profit
December	38150

The minimum profit made in December 2018 was 38,150.

7. Compare the profit for each of the months in 2019.

```
SELECT
  MONTHS, SUM(PROFIT) AS total_profit
FROM
  international_breweries
WHERE
  YEARS = 2019
GROUP BY MONTHS
ORDER BY total_profit DESC;
```

MONTHS	total_profit
January	3263160
August	2982800
July	2945340
April	2851470
November	2675610
June	2669080
May	2573040
March	2530620
October	2220870
December	2048780
September	1892600
February	1366880

The month of July generated the highest profit in the year of 2019 while, February generated the least.

- Which brand generated the highest profit in Senegal?

```
SELECT
    brands, SUM(profit) AS total_profit
FROM
    international_breweries
WHERE
    countries = 'Senegal'
GROUP BY brands
ORDER BY total_profit DESC;
```

brands	total_profit
castle lite	7012980
budweiser	6480750
eagle lager	2061680
beta malt	1793750
grand malt	1525680
hero	1331600
trophy	1278750

Castle lite is the golden brand in Senegal and generated the highest profit.

#### SESSION B (BRAND ANALYSIS)

- Within the last two years, the brand manager wants to know the top three brands consumed in the francophone countries.

```
SELECT
    BRANDS,
    CASE COUNTRIES
        WHEN COUNTRIES in ('Ghana', 'Nigeria') THEN 'Anglophone'
        WHEN COUNTRIES in ('Togo', 'Benin', 'Senegal') Then 'Francophone'
```

```

        ELSE 'Unknown'
    END AS Territory,
    SUM(PROFIT) AS TotalProfit
FROM
    international_breweries
WHERE
    YEARS <> 2017
GROUP BY Territory , BRANDS
HAVING Territory = 'Francophone'
ORDER BY TotalProfit DESC
LIMIT 3;

```

BRANDS	Territory	TotalProfit
budweiser	Francophone	8247000
castle lite	Francophone	8242020
eagle lager	Francophone	2297120

In this order Budweiser, castle lite, and eagle lager were the top three brands in francophone countries.

- Find out the top two choice of consumer brands in Ghana.

```

SELECT
    BRANDS, SUM(QUANTITY) AS total_Quantity
FROM
    international_breweries
WHERE
    COUNTRIES = 'Ghana'
GROUP BY BRANDS
ORDER BY total_Quantity DESC
LIMIT 2;

```

BRANDS	total_Quantity
eagle lager	25829
castle lite	25806

In Ghana, the top two choices are eagle lager and castle lite.

- Find out the details of beer consumed in the past three years in the most oil reached country in West Africa.

```

SELECT
    *
FROM
    international_breweries
WHERE
    COUNTRIES = 'Nigeria';

```

SALES_ID	SALES_REP	EMAILS	BRANDS	PLANT_COST	UNIT_PRICE	QUANTITY	COST	PROFIT	COUNTRIES	REGION	MONTHS	YEARS
10102	Gill	gillhell@uk.com	budweiser	250	500	815	407500	203750	Nigeria	west	February	2018
10107	Thompson	thomp@uk.com	grand malt	90	150	954	143100	57240	Nigeria	Southeast	July	2017
10112	Jones	jone.ai@yahoo.com	hero	150	200	902	180400	45100	Nigeria	northcentral	December	2019
10117	Parent	parentty@uk.com	castle lite	180	450	837	376650	225990	Nigeria	northeast	May	2017
10122	Smith	smithMan@yahoo.com	trophy	150	200	860	172000	43000	Nigeria	northwest	October	2018
10127	Howard	howard_freeman@yahoo.com	beta malt	80	150	982	147300	68740	Nigeria	southsouth	March	2017
10132	Morgan	morganny@gmail.com	eagle lager	170	250	826	206500	66080	Nigeria	west	August	2017
10137	Thompson	thomp@uk.com	budweiser	250	500	821	410500	205250	Nigeria	Southeast	January	2017
10142	Jardine	jard@gmail.com	grand malt	90	150	827	124050	49620	Nigeria	northcentral	June	2017
10147	Jardine	jard@gmail.com	hero	150	200	952	190400	47600	Nigeria	northeast	November	2017
10152	Parent	parentty@uk.com	castle lite	180	450	878	395100	237060	Nigeria	northwest	April	2019
10157	Jones	jone.ai@yahoo.com	trophy	150	200	920	184000	46000	Nigeria	southsouth	September	2018
10162	Gill	gillhell@uk.com	beta malt	80	150	931	139650	65170	Nigeria	west	February	2018
10167	Andrews	andy@gmail.com	eagle lager	170	250	769	192250	61520	Nigeria	Southeast	July	2019

```

SELECT DISTINCT
    BRANDS, UNIT_PRICE, PLANT_COST
FROM
    international_breweries
GROUP BY BRANDS, UNIT_PRICE, PLANT_COST
ORDER BY PLANT_COST DESC;

```

BRANDS	UNIT_PRICE	PLANT_COST
budweiser	500	250
castle lite	450	180
eagle lager	250	170
trophy	200	150
hero	200	150
grand malt	150	90
beta malt	150	80

```

SELECT
    brands, SUM(profit) as total_profit, SUM(quantity) as total_quantity
FROM
    international_breweries
GROUP BY brands
ORDER BY SUM(profit) DESC;

```

brands	total_profit	total_quantity
castle lite	34606980	128174
budweiser	31568500	126274
eagle lager	10224240	127803
beta malt	8754410	125063
grand malt	7577340	126289
hero	6453000	129060
trophy	6402950	128059

There are 7 different brands in Nigeria, Budweiser had the highest UNIT\_PRICE and PLANT\_COST. Castle lite generated the highest profit, and consequently had the highest unit sold.

4. Favorites malt brand in Anglophone region between 2018 and 2019

```
SELECT
  BRANDS,
  CASE COUNTRIES
    WHEN COUNTRIES in ('Ghana', 'Nigeria') THEN 'Anglophone'
    WHEN COUNTRIES in ('Togo', 'Benin', 'Senegal') Then 'Francophone'
    ELSE 'Unknown'
  END AS Territory,
  SUM(PROFIT) AS TotalProfit
FROM
  international_breweries
WHERE
  BRANDS LIKE '%malt'
  AND YEARS BETWEEN 2018 AND 2019
GROUP BY Territory, BRANDS
HAVING Territory = 'Anglophone'
ORDER BY TotalProfit DESC;
```

BRANDS	Territory	TotalProfit
beta malt	Anglophone	3143210
grand malt	Anglophone	2829960

Beta malt is the favourite brand in Anglophone region.

5. Which brands sold the highest in 2019 in Nigeria?

```
SELECT
  BRANDS, SUM(QUANTITY) AS total_quantity
FROM
  international_breweries
WHERE
  COUNTRIES = 'Nigeria' AND YEARS = 2019
GROUP BY BRANDS
ORDER BY total_quantity DESC
LIMIT 1;
```

BRANDS	total_quantity
hero	9622

Hero sold the highest in 2019 in Nigeria.

6. Favorites brand in South\_South region in Nigeria

```
SELECT
  BRANDS, SUM(QUANTITY) AS total_quantity
FROM
  international_breweries
```

```

WHERE
    COUNTRIES = 'Nigeria'
    AND REGION = 'southsouth'
GROUP BY BRANDS
ORDER BY total_quantity DESC
LIMIT 1;

```

BRANDS	total_quantity
eagle lager	4551

In the south south region of Nigeria eagle lager is the favourite brand

#### 7. Beer consumption in Nigeria

```

SELECT
    SUM(QUANTITY) AS total_quantity_consumed
FROM
    international_breweries
WHERE
    COUNTRIES = 'Nigeria'
    AND BRANDS NOT LIKE '%malt';

```

total_quantity_consumed
129260

129,260 units of beer was consumed in Nigeria with these three years.

#### 8. Level of consumption of Budweiser in the regions in Nigeria

```

SELECT
    SUM(QUANTITY) AS total_quantity_consumed
FROM
    international_breweries
WHERE
    COUNTRIES = 'Nigeria'
    AND BRANDS = 'Budweiser';

```

total_quantity_consumed
26153

```

SELECT
    REGION, SUM(QUANTITY) AS total_quantity_consumed
FROM
    international_breweries
WHERE
    COUNTRIES = 'Nigeria'
    AND BRANDS = 'Budweiser'
GROUP BY REGION

```



ORDER BY total\_quantity\_consumed DESC;

REGION	total_quantity_consumed
west	4620
northcentral	4498
southsouth	4328
northeast	4320
northwest	4274
Southeast	4113

In Nigeria 26,153 units of Budweiser was consumed within 2017, 2018 and 2019.  
with western region accounting for the highest amount

9. Level of consumption of Budweiser in the regions in Nigeria in 2019 (Decision on Promo)

```
SELECT
    SUM(QUANTITY) AS total_quantity_consumed
FROM
    international_breweries
WHERE
    COUNTRIES = 'Nigeria' AND YEARS = 2019
    AND BRANDS = 'budweiser'
ORDER BY total_quantity_consumed DESC;
```

```
SELECT
    REGION, SUM(QUANTITY) AS total_quantity_consumed
FROM
    international_breweries
WHERE
    COUNTRIES = 'Nigeria' AND YEARS = 2019
    AND brands = 'Budweiser'
GROUP BY REGION
ORDER BY total_quantity_consumed DESC;
```

REGION	total_quantity_consumed
Southeast	1821
northeast	990
northwest	948
west	884
southsouth	847

5490 units of Budweiser was consumed in Nigeria in 2019 alone, southeastern region  
had the highest amount of 1,821.

## SESSION C (COUNTRIES ANALYSIS)

1. Country with the highest consumption of beer.

```
SELECT
    COUNTRIES, SUM(QUANTITY) AS total_quantity
FROM
    international_breweries
WHERE
    brands NOT LIKE '%malt'
GROUP BY COUNTRIES
ORDER BY total_quantity DESC;
```

COUNTRIES	total_quantity
Senegal	129875
Nigeria	129260
Benin	127455
Ghana	127232
Togo	125548

Senegal had the highest consumption of beer.

2. Highest sales personnel of Budweiser in Senegal

```
SELECT
    SALES_REP,
    SUM(QUANTITY) AS total_quantity,
    SUM(PROFIT) AS total_profit
FROM
    international_breweries
WHERE
    COUNTRIES = 'Senegal'
GROUP BY SALES_REP
ORDER BY total_quantity DESC;
```

SALES_REP	total_quantity	total_profit
Jones	30660	4638230
Jardine	23416	2811950
Gill	20529	2795870
Sorvino	19429	1913770
Andrews	18751	1944720
Morgan	13257	977800
Parent	12354	1137210
Smith	12143	1068040
Kivell	12036	1631650
Thompson	10011	1159000
Howard	8342	1406950

In Senegal, Jones sold the highest quantity and generated the highest profit.

3. Country with the highest profit of the fourth quarter in 2019

```
SELECT
    COUNTRIES,
    SUM(PROFIT) AS total_profit
FROM
    international_breweries
WHERE
    YEARS = 2019
    AND (MONTHS = 'October' OR MONTHS = 'November' OR MONTHS = 'December')
GROUP BY
    COUNTRIES
ORDER BY
    total_profit DESC;
```

COUNTRIES	total_profit
Ghana	2045230
Togo	1448360
Nigeria	1383280
Benin	1109130
Senegal	959260

In the fourth quarter of 2019, Ghana generated the highest profit while, Senegal generated the least profit