In [84]:
```
import pandas as pd
```

In [85]:
```
df=pd.read_csv(r"D:\Amazon Sales data (1).csv")
df
```

Out[85]:

	Region	Country	Item Type	Sales Channel	Order Priority	Order Date	Order ID	Ship Da
0	Australia and Oceania	Tuvalu	Baby Food	Offline	H	5/28/2010	669165933	6/27/20
1	Central America and the Caribbean	Grenada	Cereal	Online	C	8/22/2012	963881480	9/15/20
2	Europe	Russia	Office Supplies	Offline	L	05-02-2014	341417157	05-08-20
3	Sub-Saharan Africa	Sao Tome and Principe	Fruits	Online	C	6/20/2014	514321792	07-05-20
4	Sub-Saharan Africa	Rwanda	Office Supplies	Offline	L	02-01-2013	115456712	02-06-20
...	...	...	...	...	...	...	...	
95	Sub-Saharan Africa	Mali	Clothes	Online	M	7/26/2011	512878119	09-03-20
96	Asia	Malaysia	Fruits	Offline	L	11-11-2011	810711038	12/28/20
97	Sub-Saharan Africa	Sierra Leone	Vegetables	Offline	C	06-01-2016	728815257	6/29/20
98	North America	Mexico	Personal Care	Offline	M	7/30/2015	559427106	08-08-20
99	Sub-Saharan Africa	Mozambique	Household	Offline	L	02-10-2012	665095412	2/15/20

100 rows × 14 columns

In [86]:
```
#the different product types      أنواع المنتجات المختلفة
df["Item Type"].value_counts()
```

Out[86]:
```
Item Type
Clothes            13
Cosmetics          13
Office Supplies    12
Fruits             10
Personal Care      10
Household           9
Beverages           8
Baby Food           7
Cereal              7
Vegetables          6
Snacks              3
Meat                2
Name: count, dtype: int64
```

In [87]:
```
# كم عدد الطلبات حسب قناة البيع - How many orders are there per sales channel (Online vs Off
df.groupby("Sales Channel")["Order ID"].count()
```

Out[87]:
```
Sales Channel
Offline    50
Online     50
Name: Order ID, dtype: int64
```

In [88]:
```
# Which order priorities (Order Priority) are most common - أكثر أنواع الطلبات من حيث الأولوية

df.groupby("Order Priority")["Order ID"].count().sort_values(ascending=False)
```

Out[88]:
```
Order Priority
H    30
L    27
C    22
M    21
Name: Order ID, dtype: int64
```

In [89]:
```
#💰********** التحليل المالي | Financial Analysis **********

# ما هو إجمالي الربح-- (Total Profit)  --What is the total profit

df["Total Profit"].sum()
```

Out[89]:
```
44168198.39999999
```

In [90]:
```
# ما هو إجمالي الإيرادات (Total Revenue)---What is the total revenue (Total Revenue)?
df["Total Revenue"].sum()
```

Out[90]:
```
137348768.31
```

In [91]:
```
# ما هو إجمالي التكاليف (Total Cost)--What is the total cost
df["Total Cost"].sum()
```

Out[91]:
```
93180569.91000001
```

In [92]:
```
# ما هو متوسط الربح لكل طلب--What is the average profit per order
df.groupby("Order ID")["Total Profit"].sum().mean()
```

Out[92]: 441681.984

In [93]:
```
# ما هو متوسط الربح لكل منتج؟---What is the average profit per product?
df["Total Profit"].mean()
```

Out[93]: 441681.98399999994

In [94]:
```
# ********** تحليل حسب المنتج | Product-Based Analysis**********


# ما هو أكثر نوع منتج مبيعًا (حسب Units Sold)؟
# Which product type has the most units sold (Units Sold)
df.groupby("Item Type")["Units Sold"].sum().idxmax()
```

Out[94]: 'Cosmetics'

In [95]:
```
# ما هي المنتجات الأعلى ربحًا؟--Which products generate the most profit
df.groupby("Item Type")["Total Profit"].sum().idxmax()
```

Out[95]: 'Cosmetics'

In [96]:
```
# ما هي المنتجات الأقل ربحًا؟--Which products generate the least profit
df.groupby("Item Type")["Total Profit"].sum().idxmin()
```

Out[96]: 'Fruits'

In [97]:
```
# ما هو الفرق بين Unit Price و Unit Cost لكل منتج؟--What is the difference between Unit Pr
df.insert(10,"Profit margin",df["Unit Price"]-df["Unit Cost"])
```

In [98]:
```
# ********** التحليل الجغرافي | Geographic Analysis**********

# ما هي أكثر الدول تحقيقًا للربح؟
# Which countries generate the most profit?
df.groupby("Country")["Total Profit"].sum().idxmax()
```

Out[98]: 'Djibouti'

In [99]:
```
# ما هي أقل الدول تحقيقًا للربح؟ --Which countries generate the least profit
df.groupby("Country")["Total Profit"].sum().idxmin()
```

Out[99]: 'Kuwait'

In [100…
```
# ما هو إجمالي الربح حسب المنطقة (Region)؟__What is the total profit by region (Region)
df.groupby("Region")["Total Profit"].sum()
```

Out[100…
```
Region
Asia                                 6113845.87
Australia and Oceania                4722160.03
Central America and the Caribbean    2846907.85
Europe                              11082938.63
Middle East and North Africa         5761191.86
North America                        1457942.76
Sub-Saharan Africa                  12183211.40
Name: Total Profit, dtype: float64
```

In [101…

```
# ما هي المناطق التي يتم فيها البيع أكثر عبر Online أو Offline؟---Which regions have more sales vi

df.groupby(["Region","Sales Channel"])["Units Sold"].sum().idxmax()
```

Out[101…

```
('Sub-Saharan Africa', 'Offline')
```

In [ ]: