SMARTPHONES SALES ANALYSIS PROJECT

Overview:

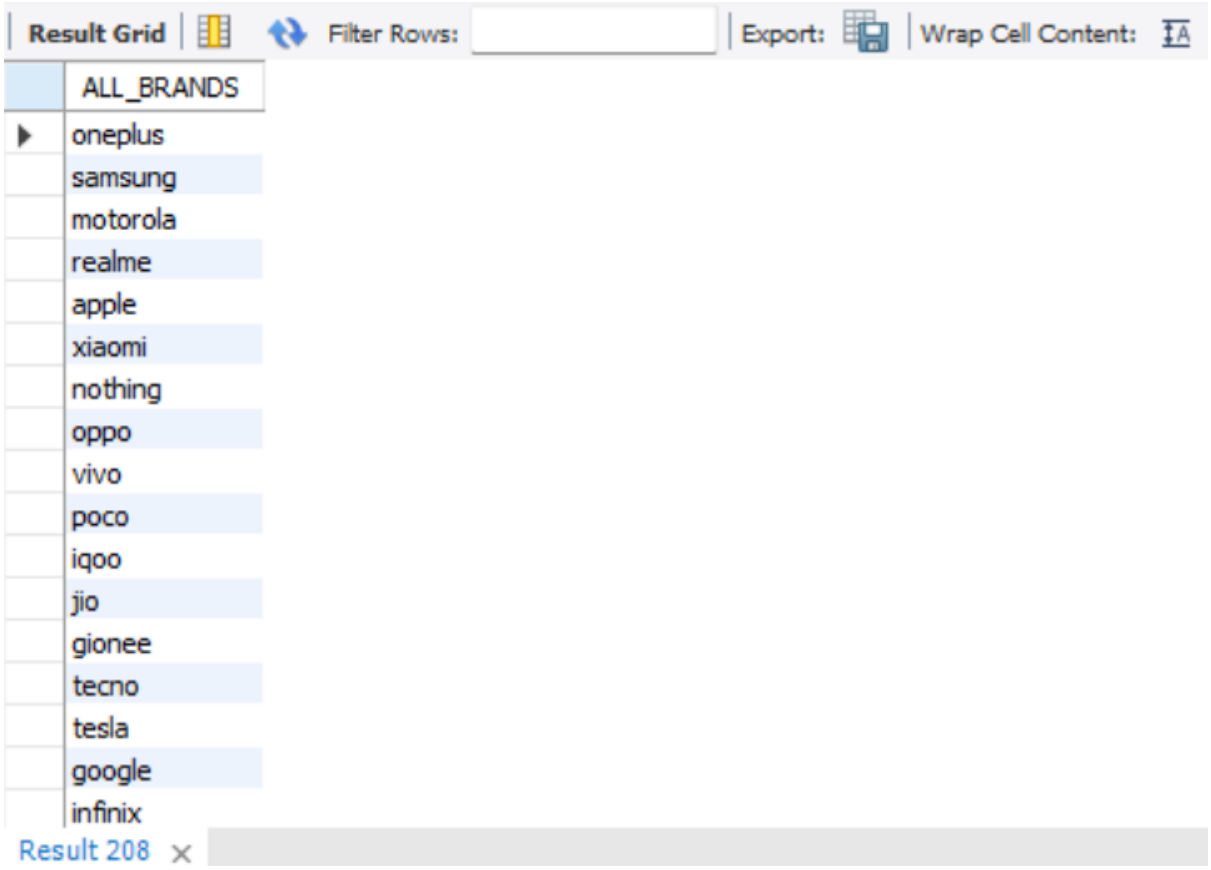
This project analyzes a comprehensive dataset containing detailed specifications and pricing information for a wide range of smartphones. Using SQL queries, the project aims to extract valuable insights about smartphone market trends, brand performance, hardware configurations, and price segmentation. The dataset supports various analytical tasks such as identifying popular features, segmenting products by price category, and evaluating technology adoption like 5G and fast charging.

1.TOTAL SMARTPHONES

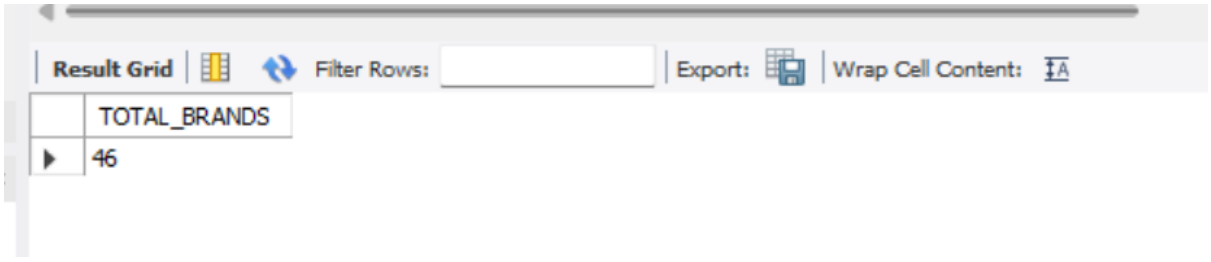
```
SELECT
   COUNT(DISTINCT (MODEL)) AS TOTAL_SMARTPHONES
FROM
   SMARTPHONES;
```

2.TOTAL BRAND

```
SELECT DISTINCT
   (BRAND_NAME) AS ALL_BRANDS
FROM
   SMARTPHONES;
```

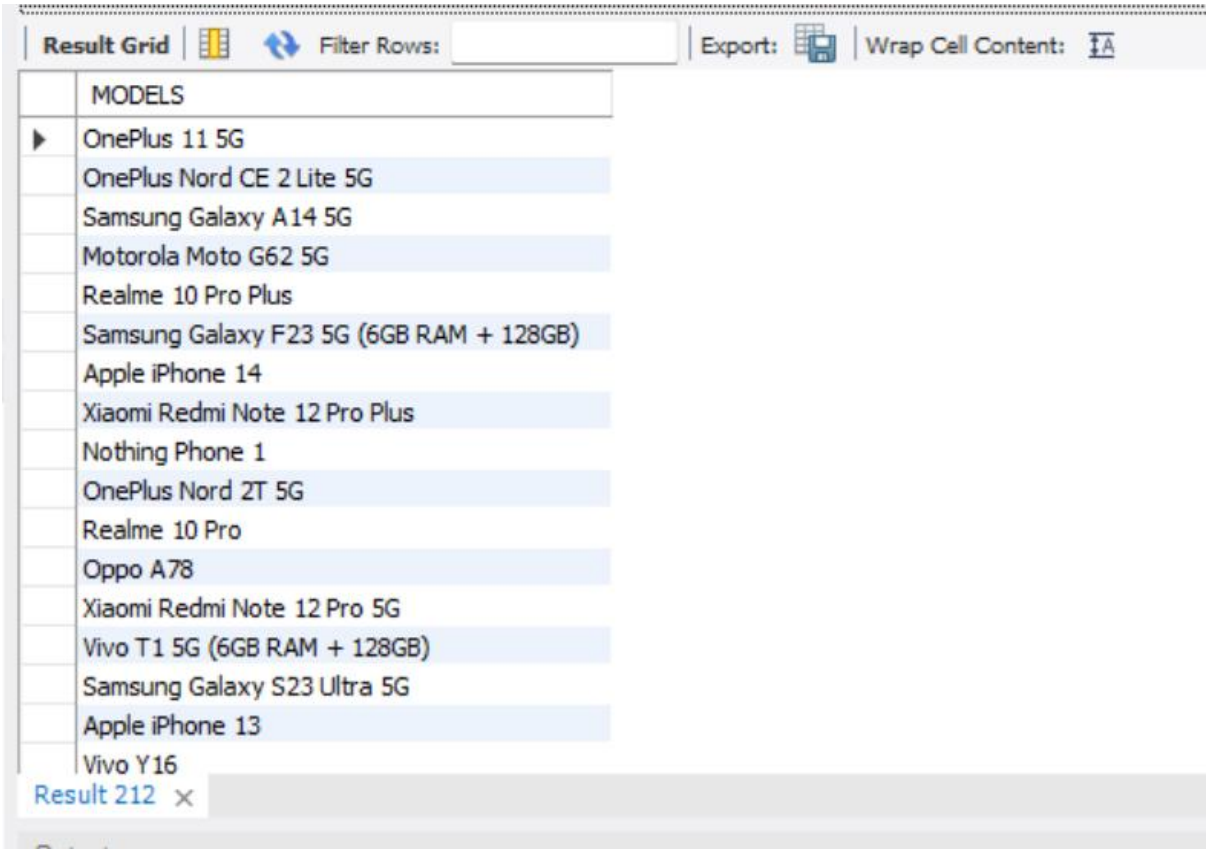



```
    SELECT
  COUNT(DISTINCT (BRAND_NAME)) AS TOTAL_BRANDS
FROM
  SMARTPHONES;
```



3.TOTAL MODELS

```
SELECT DISTINCT
  (MODEL) AS MODELS
FROM
  SMARTPHONES;
```



MODELS
OnePlus 11 5G
OnePlus Nord CE 2 Lite 5G
Samsung Galaxy A14 5G
Motorola Moto G62 5G
Realme 10 Pro Plus
Samsung Galaxy F23 5G (6GB RAM + 128GB)
Apple iPhone 14
Xiaomi Redmi Note 12 Pro Plus
Nothing Phone 1
OnePlus Nord 2T 5G
Realme 10 Pro
Oppo A78
Xiaomi Redmi Note 12 Pro 5G
Vivo T1 5G (6GB RAM + 128GB)
Samsung Galaxy S23 Ultra 5G
Apple iPhone 13
Vivo Y16

Result 212

```
SELECT
   COUNT(DISTINCT (MODEL)) AS TOTAL_MODELS
FROM
   SMARTPHONES;
```

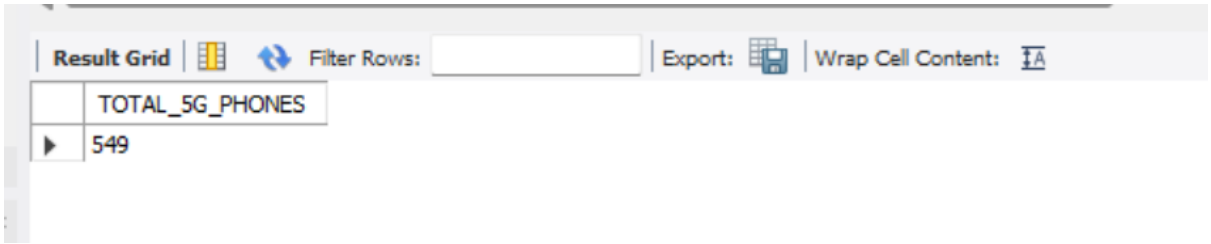
TOTAL_MODELS
980

4.TOTAL_SALE

```
SELECT
   SUM(PRICE) AS TOTAL_SALES
FROM
   SMARTPHONES;
```

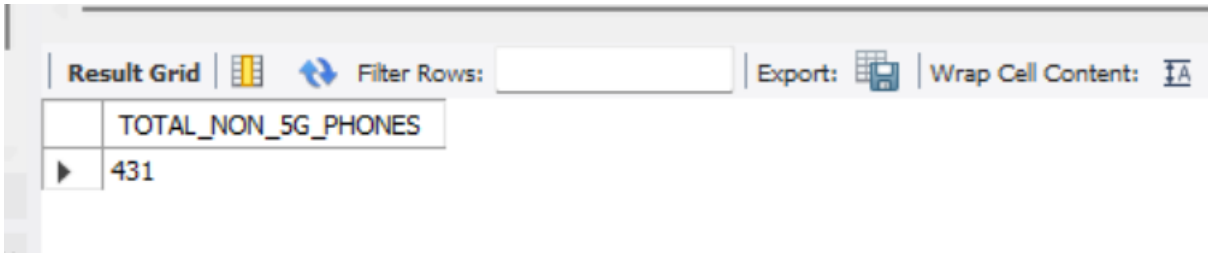
5.TOTAL 5G PHONES

```
SELECT
   COUNT(*) AS TOTAL_5G_PHONES
FROM
   SMARTPHONES
WHERE
   HAS_5G = 'TRUE';
```



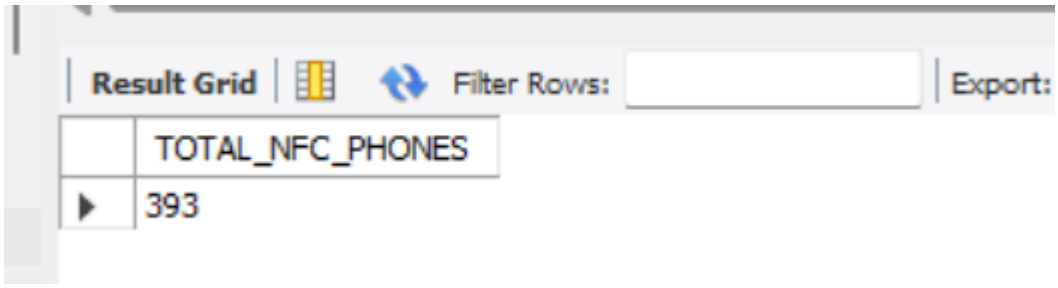
6.TOTAL NON 5G PHONES

```
SELECT
   COUNT(*) AS TOTAL_NON_5G_PHONES
FROM
   SMARTPHONES
WHERE
   HAS_5G = 'FALSE';
```



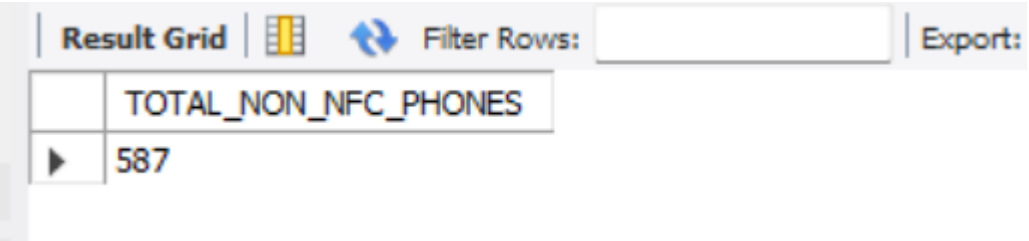
7.TOTAL NFC PHONES

```
SELECT
   COUNT(*) AS TOTAL_NFC_PHONES
FROM
   SMARTPHONES
WHERE
   HAS_NFC = 'TRUE';
```



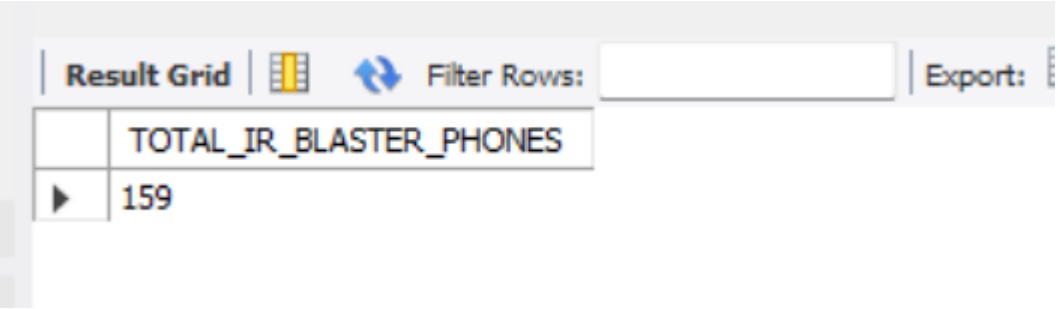
8.TOTAL NON NFC PHONES

```
SELECT
   COUNT(*) AS TOTAL_NON_NFC_PHONES
FROM
   SMARTPHONES
WHERE
   HAS_NFC = 'FALSE';
```



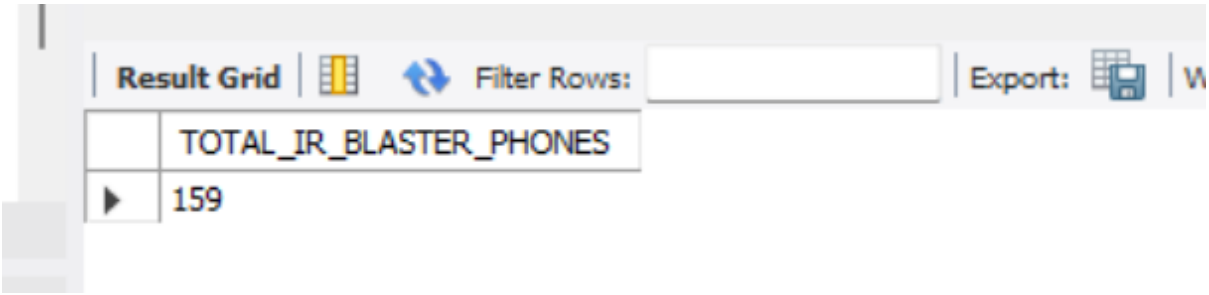
9.TOTAL IR_BLASTER PHONES

```
SELECT
   COUNT(*) AS TOTAL_IR_BLASTER_PHONES
FROM
   SMARTPHONES
WHERE
   HAS_IR_BLASTER = 'TRUE';
```



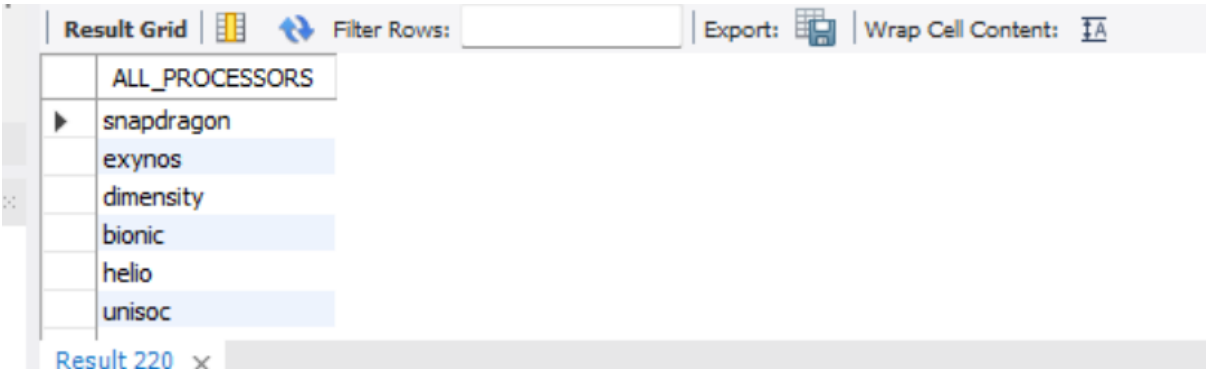
10.TOTAL NON IR_BLASTER PHONES

```
SELECT
   COUNT(*) AS TOTAL_NON_IR_BLASTER_PHONES
FROM
   SMARTPHONES
WHERE
   HAS_IR_BLASTER = 'FALSE';
```



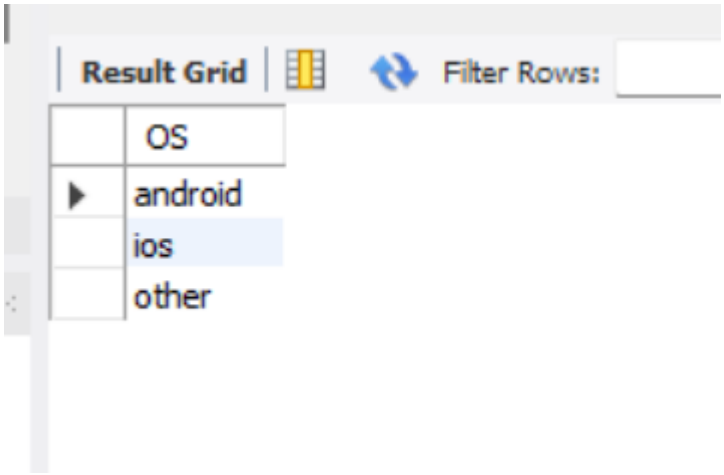
11.TOTAL PROCESSOR BRAND

```
SELECT DISTINCT
   (PROCESSOR_BRAND) AS ALL_PROCESSORS
FROM
   SMARTPHONES;
```



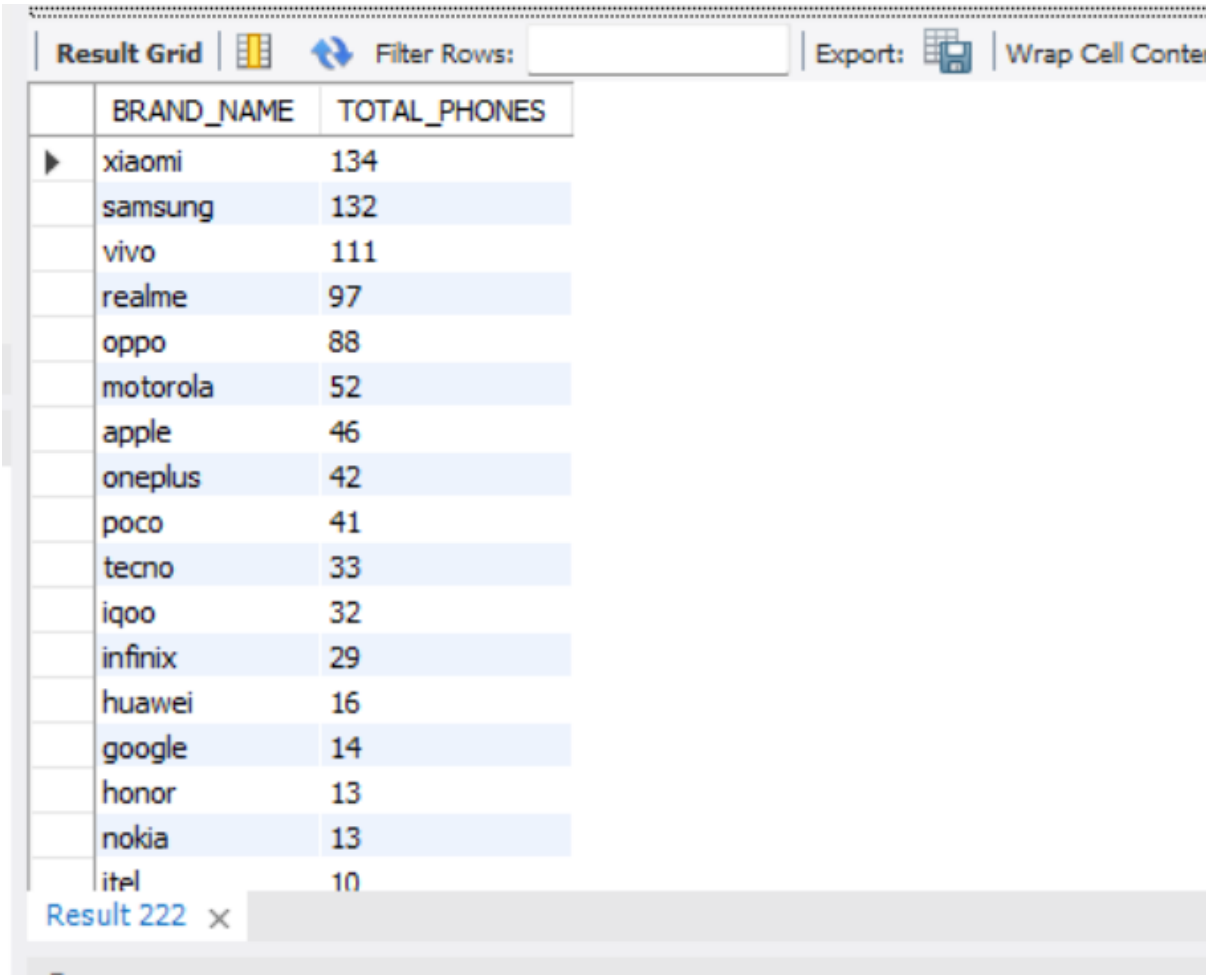
12.TOTAL OS

```
SELECT DISTINCT
   (OS)
FROM
   SMARTPHONES;
```



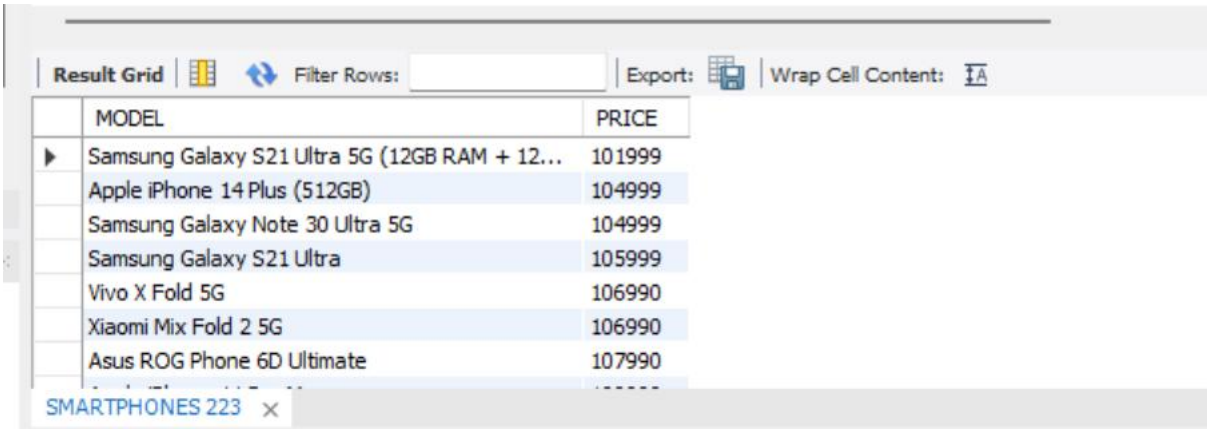
13.count all brands smartphones

```
SELECT
   BRAND_NAME, COUNT(*) TOTAL_PHONES
FROM
   SMARTPHONES
GROUP BY BRAND_NAME
ORDER BY TOTAL_PHONES DESC;
```



14.SMARTPHONES WITH PRICE GREATER THAN 1 LAKH

```
SELECT
   MODEL, PRICE
FROM
   SMARTPHONES
WHERE
   PRICE > 100000
ORDER BY PRICE;
```



Result Grid | Filter Rows: | Export: | Wrap Cell Content:

MODEL	PRICE
Samsung Galaxy S21 Ultra 5G (12GB RAM + 12...	101999
Apple iPhone 14 Plus (512GB)	104999
Samsung Galaxy Note 30 Ultra 5G	104999
Samsung Galaxy S21 Ultra	105999
Vivo X Fold 5G	106990
Xiaomi Mix Fold 2 5G	106990
Asus ROG Phone 6D Ultimate	107990

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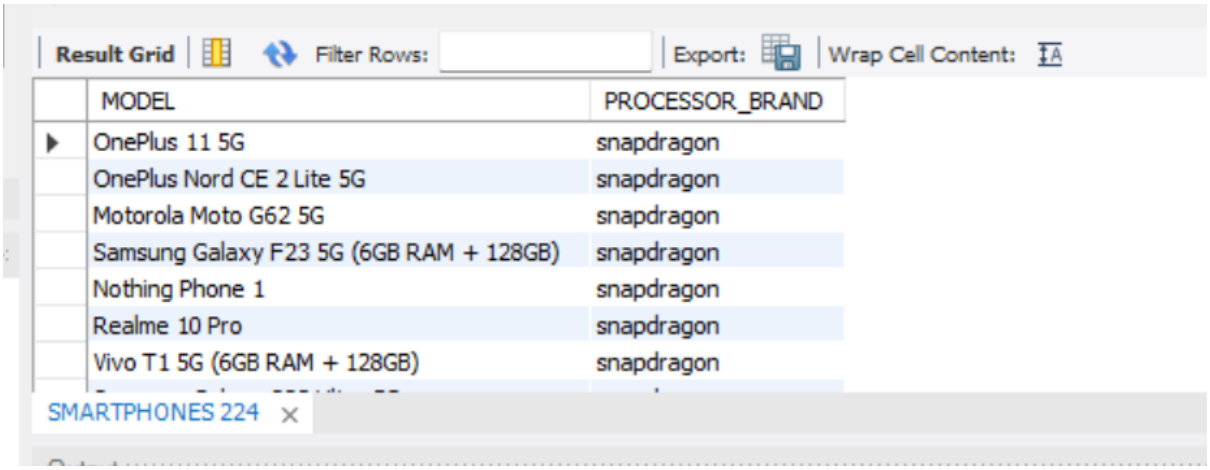
15.SMARTPHONES WITH SNAPDRAGON PROCESSOR

```
SELECT
   MODEL, PROCESSOR_BRAND
FROM
   SMARTPHONES
WHERE
   PROCESSOR_BRAND = 'SNAPDRAGON';
```



Result Grid | Filter Rows: | Export: | Wrap Cell Content:

MODEL	PROCESSOR_BRAND
OnePlus 11 5G	snapdragon
OnePlus Nord CE 2 Lite 5G	snapdragon
Motorola Moto G62 5G	snapdragon
Samsung Galaxy F23 5G (6GB RAM + 128GB)	snapdragon
Nothing Phone 1	snapdragon
Realme 10 Pro	snapdragon
Vivo T1 5G (6GB RAM + 128GB)	snapdragon

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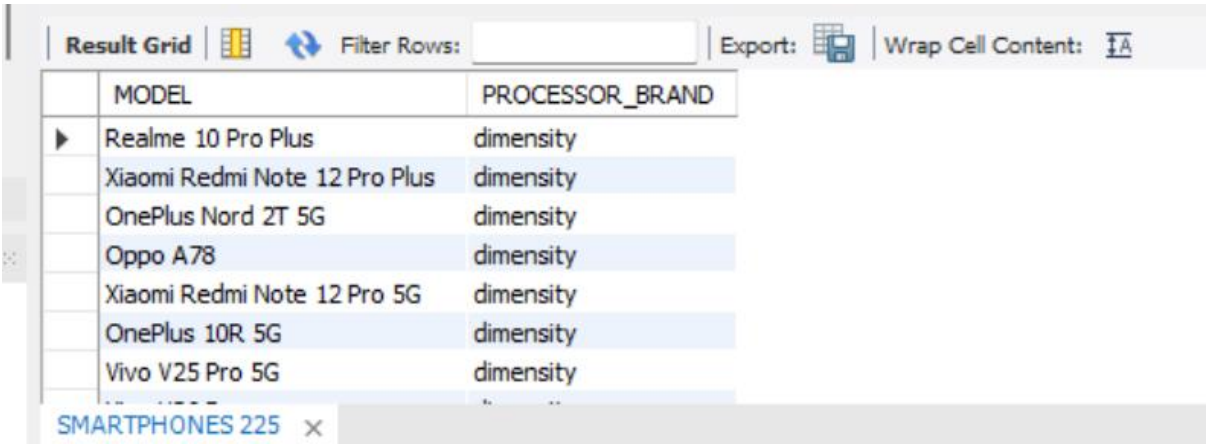
16.SMARTPHONES WITH DIMENSITY PROCESSOR

```
SELECT
   MODEL, PROCESSOR_BRAND
```

```
FROM
   SMARTPHONES
WHERE
   PROCESSOR_BRAND = 'DIMENSITY';
```



Result Grid | Filter Rows: | Export: | Wrap Cell Content:

MODEL	PROCESSOR_BRAND
Realme 10 Pro Plus	dimensity
Xiaomi Redmi Note 12 Pro Plus	dimensity
OnePlus Nord 2T 5G	dimensity
Oppo A78	dimensity
Xiaomi Redmi Note 12 Pro 5G	dimensity
OnePlus 10R 5G	dimensity
Vivo V25 Pro 5G	dimensity

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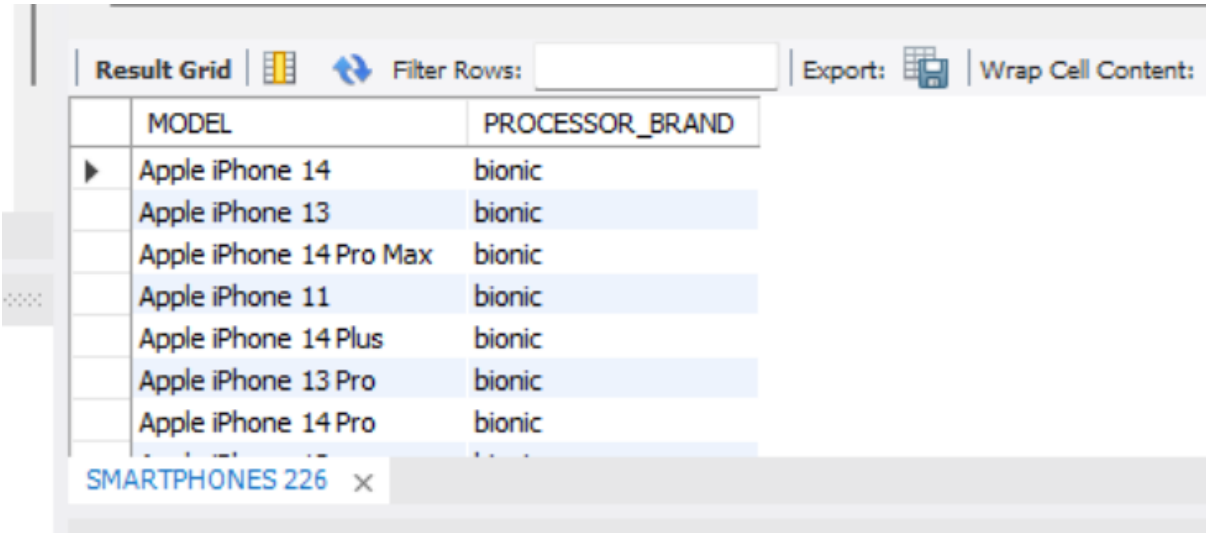
17.SMARTPHONES WITH BIONIC PROCESSOR

```
SELECT
   MODEL, PROCESSOR_BRAND
FROM
   SMARTPHONES
WHERE
   PROCESSOR_BRAND = 'BIONIC';
```



Result Grid | Filter Rows: | Export: | Wrap Cell Content:

MODEL	PROCESSOR_BRAND
Apple iPhone 14	bionic
Apple iPhone 13	bionic
Apple iPhone 14 Pro Max	bionic
Apple iPhone 11	bionic
Apple iPhone 14 Plus	bionic
Apple iPhone 13 Pro	bionic
Apple iPhone 14 Pro	bionic

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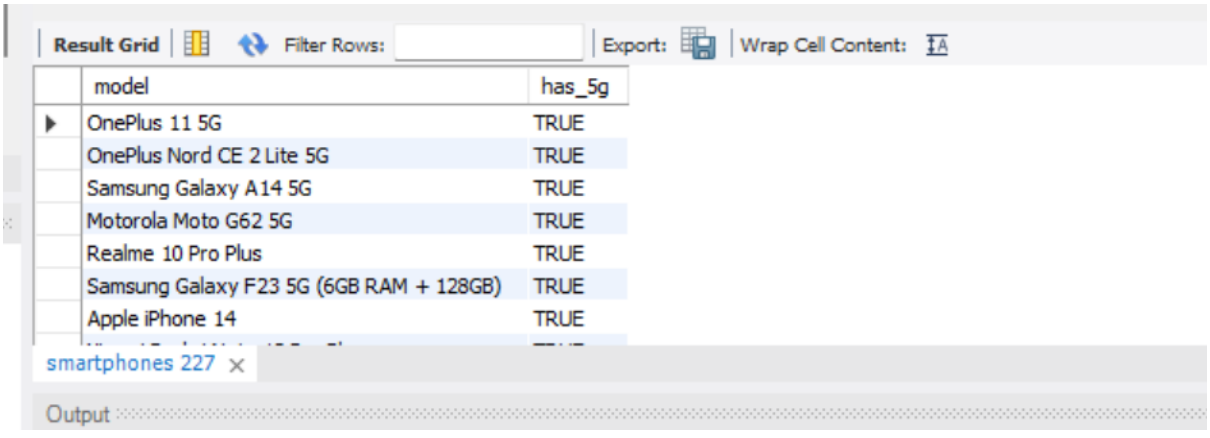
18.List all smartphones that support 5G

```
SELECT
   model, has_5g
FROM
   smartphones
WHERE
   has_5g = 'true';
```



Result Grid | Filter Rows: | Export: | Wrap Cell Content:

model	has_5g
OnePlus 11 5G	TRUE
OnePlus Nord CE 2 Lite 5G	TRUE
Samsung Galaxy A14 5G	TRUE
Motorola Moto G62 5G	TRUE
Realme 10 Pro Plus	TRUE
Samsung Galaxy F23 5G (6GB RAM + 128GB)	TRUE
Apple iPhone 14	TRUE

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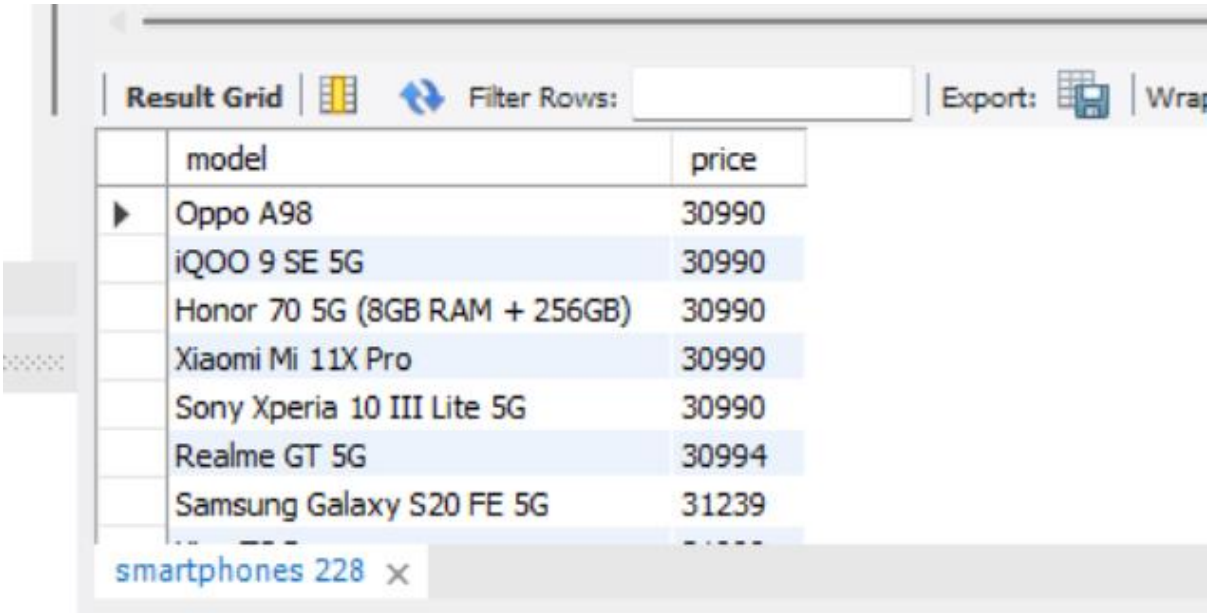
Output

19.Find smartphones with a price greater than ₹30,000

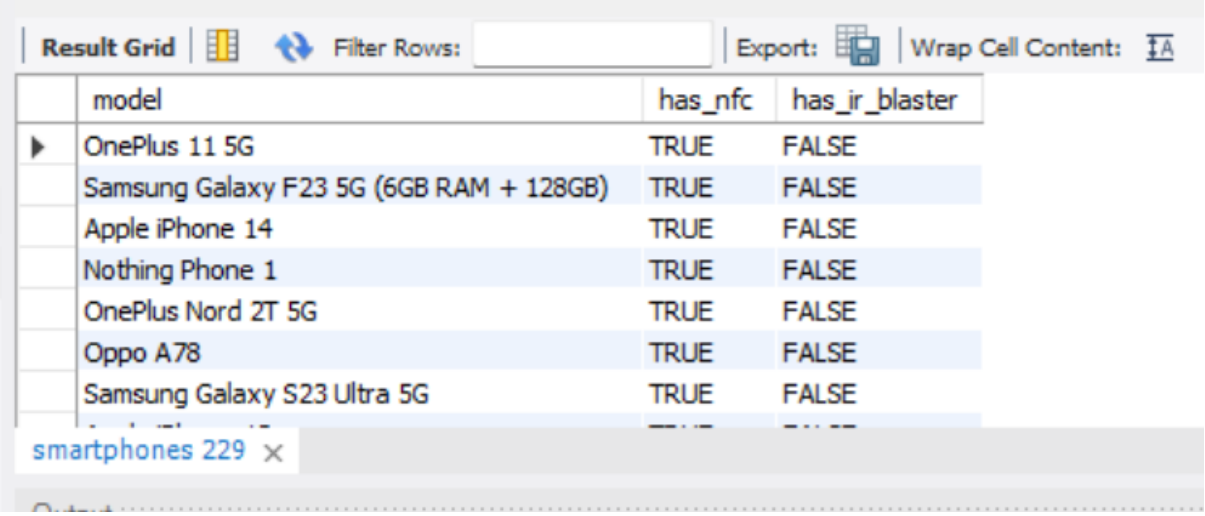
```
SELECT
```

```
    model, price
FROM
    smartphones
WHERE
    price > 30000
ORDER BY price;
```



20.Display smartphones that have NFC but do not have an IR blaster

```
SELECT
    model, has_nfc, has_ir_blaster
FROM
    smartphones
WHERE
    has_nfc = 'true'
        AND has_ir_blaster = 'false';
```



Result Grid | Filter Rows: | Export: | Wrap Cell Content:

model	has_nfc	has_ir_blaster
OnePlus 11 5G	TRUE	FALSE
Samsung Galaxy F23 5G (6GB RAM + 128GB)	TRUE	FALSE
Apple iPhone 14	TRUE	FALSE
Nothing Phone 1	TRUE	FALSE
OnePlus Nord 2T 5G	TRUE	FALSE
Oppo A78	TRUE	FALSE
Samsung Galaxy S23 Ultra 5G	TRUE	FALSE

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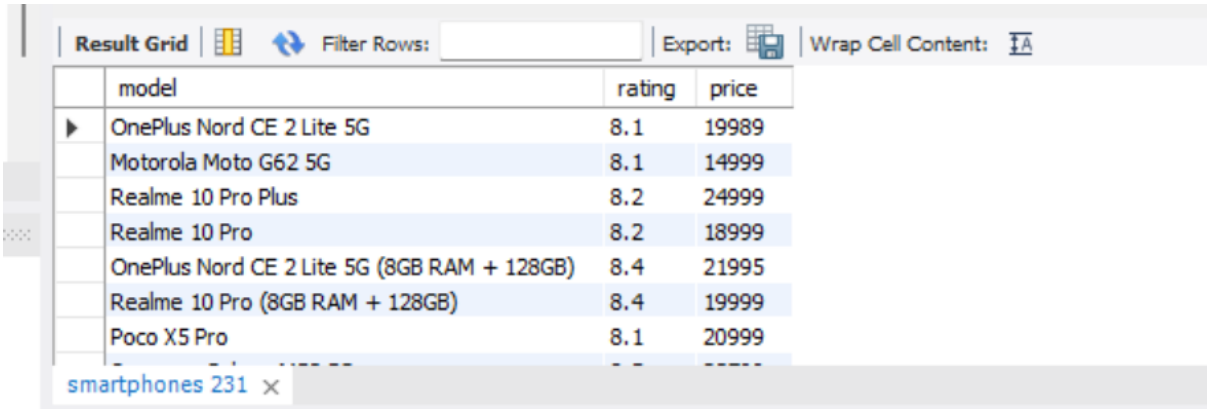
21.Get all models with a rating above 8 and a price below ₹25,000

```
SELECT
   model, rating, price
FROM
   smartphones
WHERE
   rating > 8 AND price < 25000;
```



Result Grid | Filter Rows: | Export: | Wrap Cell Content:

model	rating	price
OnePlus Nord CE 2 Lite 5G	8.1	19989
Motorola Moto G62 5G	8.1	14999
Realme 10 Pro Plus	8.2	24999
Realme 10 Pro	8.2	18999
OnePlus Nord CE 2 Lite 5G (8GB RAM + 128GB)	8.4	21995
Realme 10 Pro (8GB RAM + 128GB)	8.4	19999
Poco X5 Pro	8.1	20999

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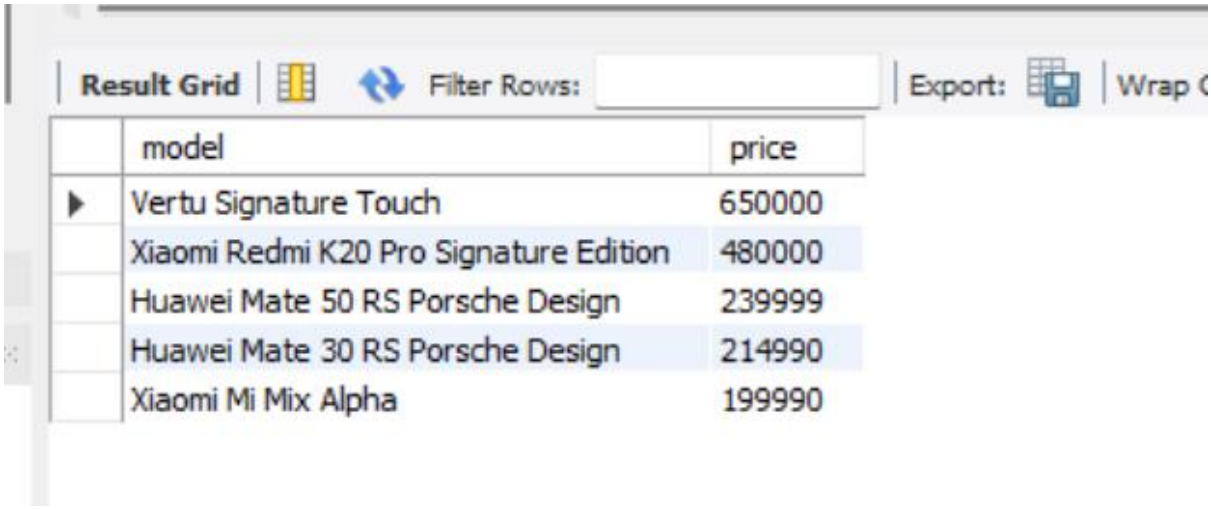
22.List the top 5 most expensive smartphones

```
SELECT
   model, SUM(price) AS price
```

```
FROM
   smartphones
GROUP BY model
ORDER BY price DESC
LIMIT 5;
```

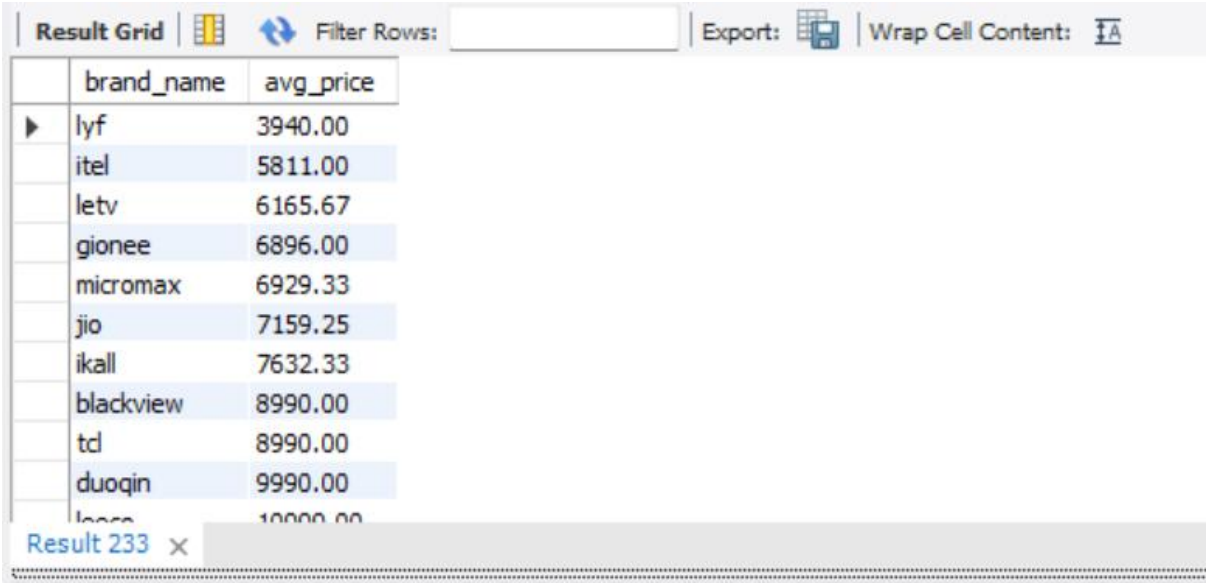


Result Grid | Filter Rows: | Export: | Wrap

model	price
Vertu Signature Touch	650000
Xiaomi Redmi K20 Pro Signature Edition	480000
Huawei Mate 50 RS Porsche Design	239999
Huawei Mate 30 RS Porsche Design	214990
Xiaomi Mi Mix Alpha	199990

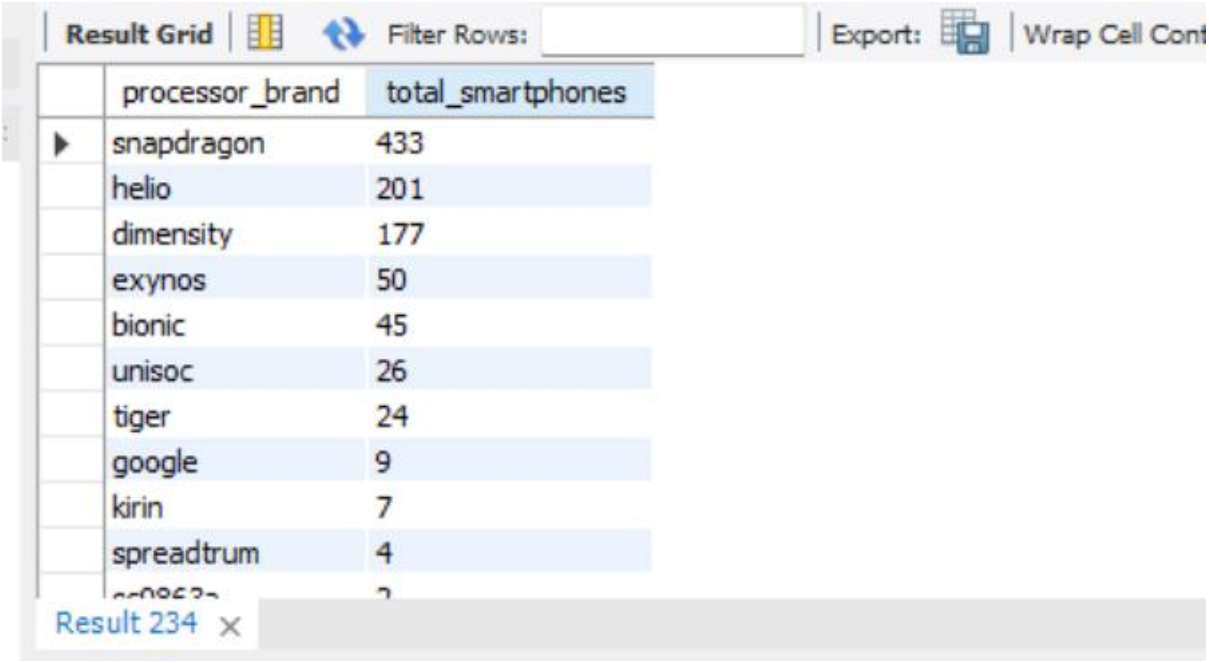
23.Find the average price of smartphones by each brand

```
SELECT
   brand_name, ROUND(AVG(price), 2) AS avg_price
FROM
   smartphones
GROUP BY brand_name
ORDER BY avg_price;
```



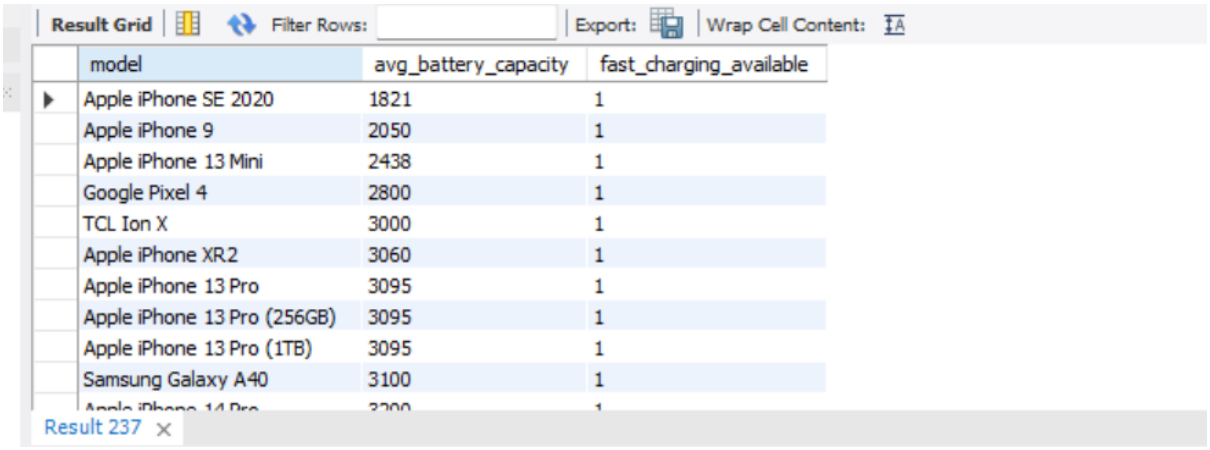
24.How many smartphone models are available for each processor brand?

```
SELECT
   processor_brand, COUNT(*) AS total_smartphones
FROM
   smartphones
GROUP BY processor_brand
ORDER BY total_smartphones DESC;
```



24.What is the average battery capacity of smartphones with fast charging available?

```
SELECT
   model,
   ROUND(AVG(battery_capacity), 0) AS avg_battery_capacity,
   fast_charging_available
FROM
   smartphones
WHERE
   fast_charging_available = '1'
GROUP BY model
ORDER BY avg_battery_capacity;
```



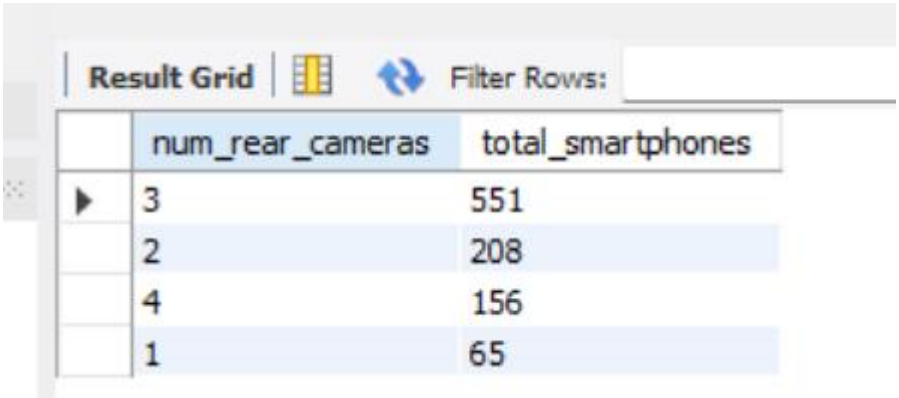
Result Grid | Filter Rows: | Export: | Wrap Cell Content:

model	avg_battery_capacity	fast_charging_available
Apple iPhone SE 2020	1821	1
Apple iPhone 9	2050	1
Apple iPhone 13 Mini	2438	1
Google Pixel 4	2800	1
TCL Ion X	3000	1
Apple iPhone XR2	3060	1
Apple iPhone 13 Pro	3095	1
Apple iPhone 13 Pro (256GB)	3095	1
Apple iPhone 13 Pro (1TB)	3095	1
Samsung Galaxy A40	3100	1

Result 237

26.count of smartphones grouped by number of rear cameras

```
SELECT
   num_rear_cameras, COUNT(*) AS total_smartphones
FROM
   smartphones
GROUP BY num_rear_cameras;
```



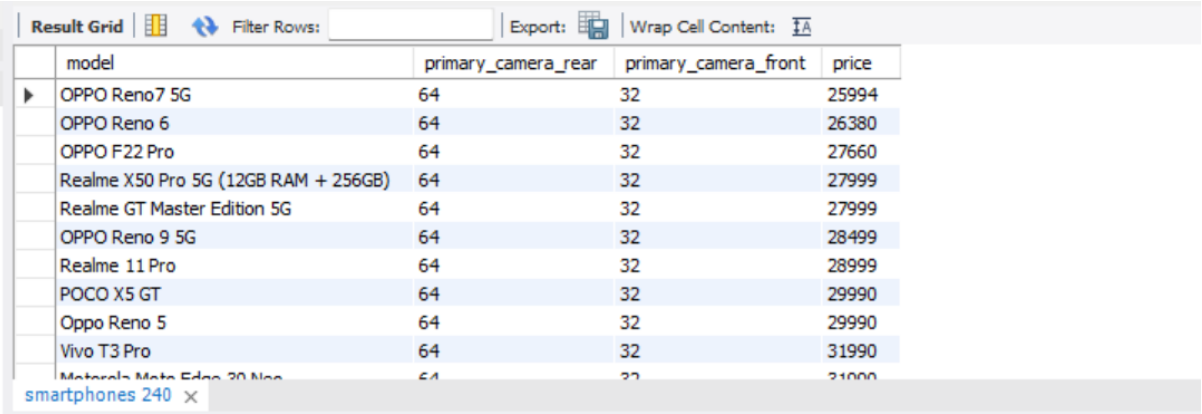
Result Grid | Filter Rows:

num_rear_cameras	total_smartphones
3	551
2	208
4	156
1	65

27.smartphones with rear camera with 64 mp and front camera with 32 mp and price > 25000

```
SELECT
   model, primary_camera_rear, primary_camera_front, price
FROM
```

```
    smartphones
WHERE
    primary_camera_rear = 64
        AND primary_camera_front = 32
        AND price > 25000
ORDER BY price;
```



Result Grid | Filter Rows: | Export: | Wrap Cell Content:

model	primary_camera_rear	primary_camera_front	price
OPPO Reno7 5G	64	32	25994
OPPO Reno 6	64	32	26380
OPPO F22 Pro	64	32	27660
Realme X50 Pro 5G (12GB RAM + 256GB)	64	32	27999
Realme GT Master Edition 5G	64	32	27999
OPPO Reno 9 5G	64	32	28499
Realme 11 Pro	64	32	28999
POCO X5 GT	64	32	29990
Oppo Reno 5	64	32	29990
Vivo T3 Pro	64	32	31990

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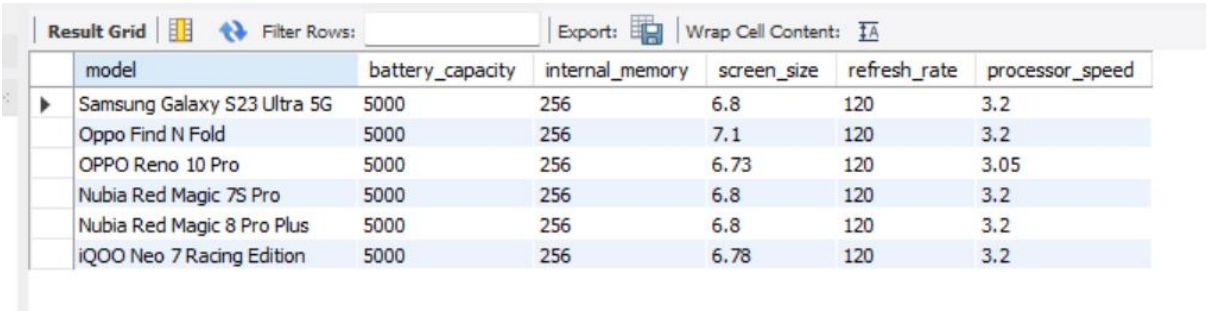
28.find the smartphones with battery capacity 5000,

storage 256, screen size greter than 6.7,

refresh rate with 120 and processor speed > 3?

```
SELECT
    model,
    battery_capacity,
    internal_memory,
    screen_size,
    refresh_rate,
    processor_speed
FROM
    smartphones
```

```
WHERE
    battery_capacity = 5000
        AND internal_memory = 256
        AND screen_size > 6.7
        AND refresh_rate = 120
        AND processor_speed > 3;
```

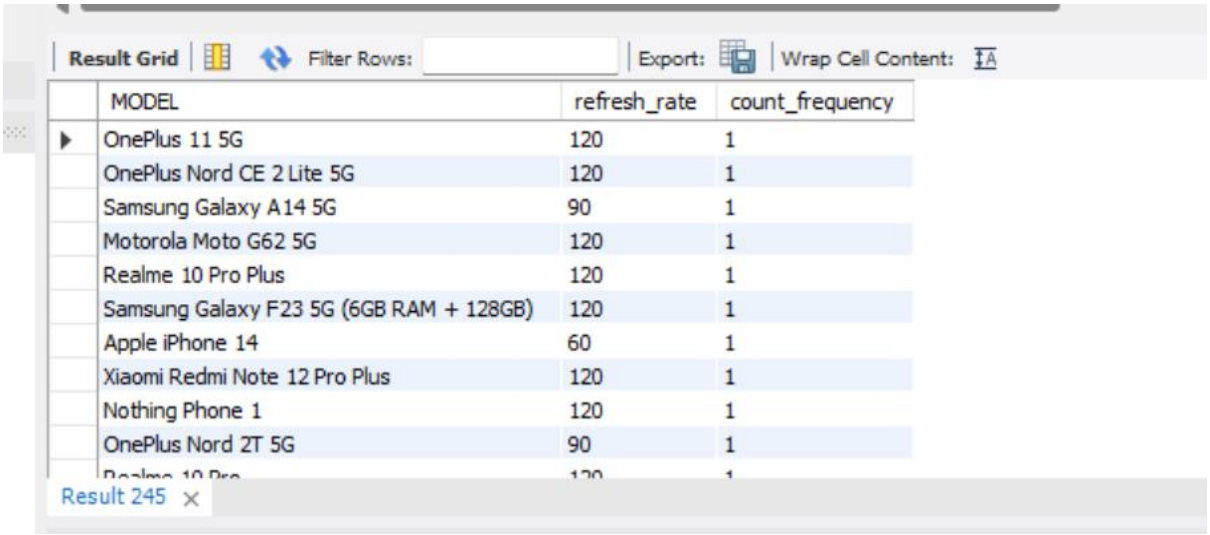


Result Grid | Filter Rows: | Export: | Wrap Cell Content:

model	battery_capacity	internal_memory	screen_size	refresh_rate	processor_speed
Samsung Galaxy S23 Ultra 5G	5000	256	6.8	120	3.2
Oppo Find N Fold	5000	256	7.1	120	3.2
OPPO Reno 10 Pro	5000	256	6.73	120	3.05
Nubia Red Magic 7S Pro	5000	256	6.8	120	3.2
Nubia Red Magic 8 Pro Plus	5000	256	6.8	120	3.2
iQOO Neo 7 Racing Edition	5000	256	6.78	120	3.2

29.Which screen refresh rate is most common among the smartphones?

```
SELECT
    MODEL, refresh_rate, COUNT(*) count_frequency
FROM
    smartphones
GROUP BY MODEL , refresh_rate
ORDER BY count_frequency DESC;
```



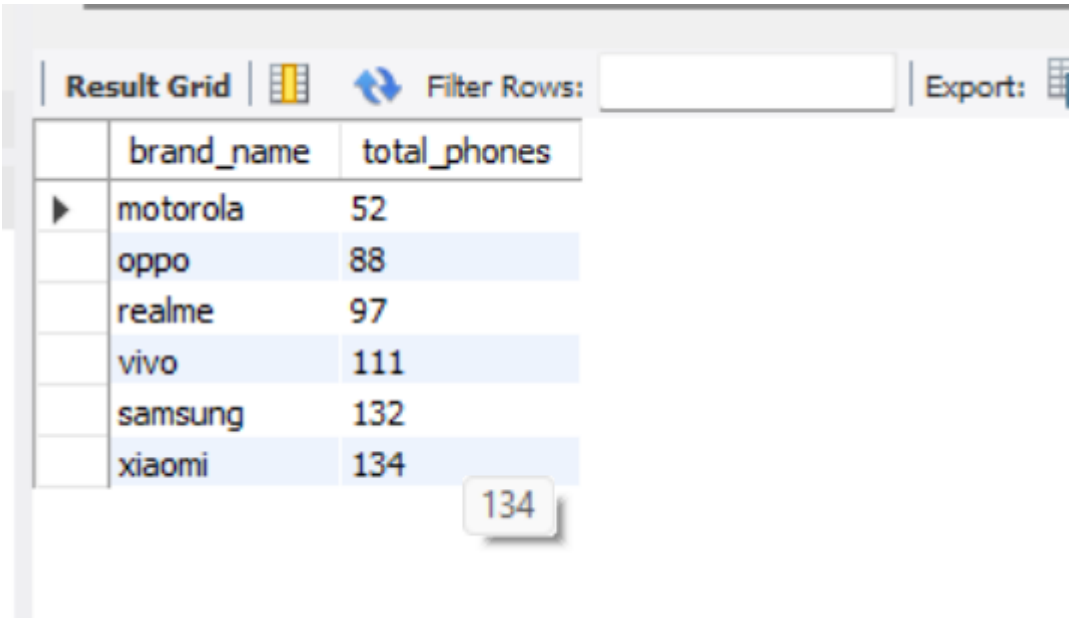
Result Grid | Filter Rows: | Export: | Wrap Cell Content:

MODEL	refresh_rate	count_frequency
OnePlus 11 5G	120	1
OnePlus Nord CE 2 Lite 5G	120	1
Samsung Galaxy A14 5G	90	1
Motorola Moto G62 5G	120	1
Realme 10 Pro Plus	120	1
Samsung Galaxy F23 5G (6GB RAM + 128GB)	120	1
Apple iPhone 14	60	1
Xiaomi Redmi Note 12 Pro Plus	120	1
Nothing Phone 1	120	1
OnePlus Nord 2T 5G	90	1

Result 245

30.List all brands that have more than 50 models

```
SELECT
   brand_name, COUNT(*) AS total_phones
FROM
   smartphones
GROUP BY brand_name
HAVING COUNT(MODEL) >= 50
ORDER BY total_phones;
```



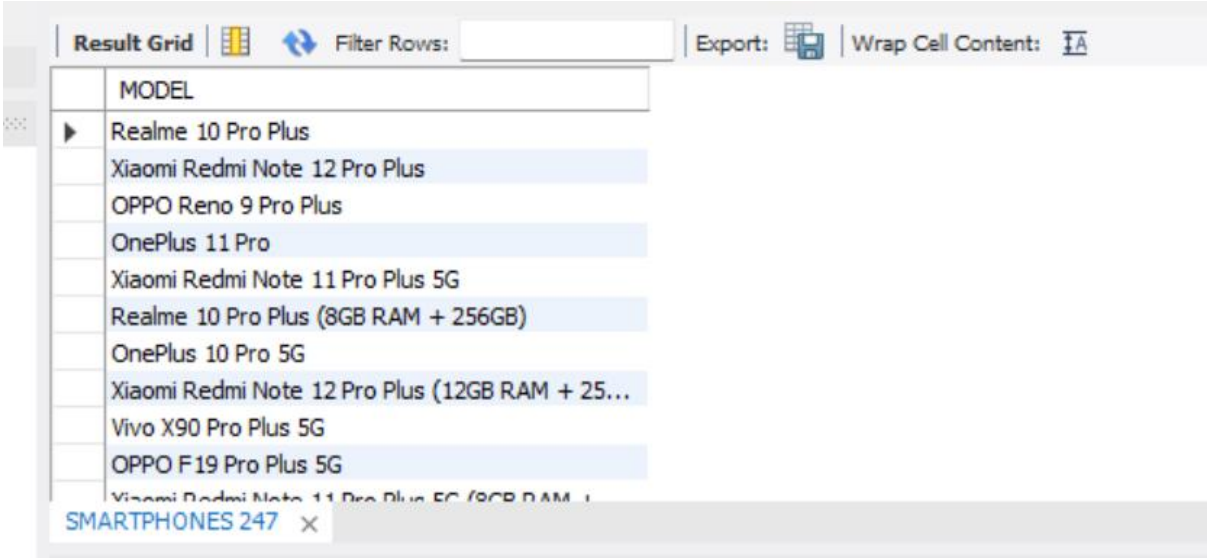
Result Grid | Filter Rows: | Export:

brand_name	total_phones
motorola	52
oppo	88
realme	97
vivo	111
samsung	132
xiaomi	134

134

31.Find all smartphones with 'Pro' or 'Plus' in the model name

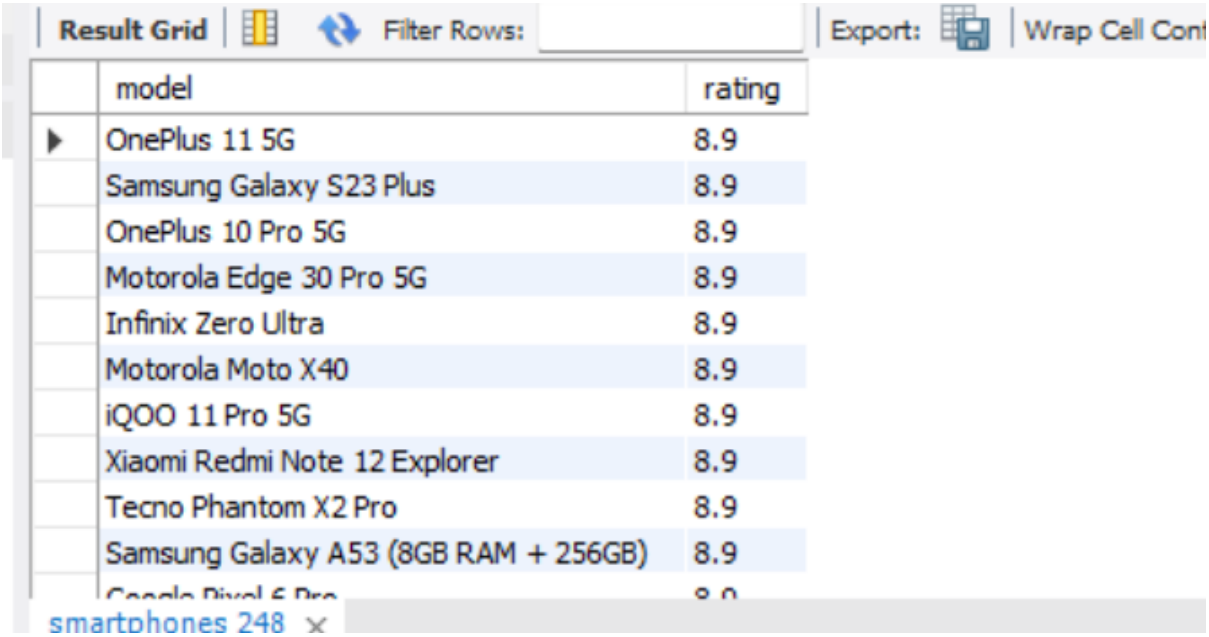
```
SELECT
   MODEL
FROM
   SMARTPHONES
WHERE
   MODEL LIKE '%Pro%'
      AND MODEL LIKE '%Plus%';
```



32.Find the model with the highest rating

```
 SELECT
   model, rating
FROM
   smartphones
WHERE
   rating >= (SELECT
```

```
    MAX(rating)
FROM
    smartphones);
```



Result Grid | Filter Rows: | Export: | Wrap Cell Cont

model	rating
OnePlus 11 5G	8.9
Samsung Galaxy S23 Plus	8.9
OnePlus 10 Pro 5G	8.9
Motorola Edge 30 Pro 5G	8.9
Infinix Zero Ultra	8.9
Motorola Moto X40	8.9
iQOO 11 Pro 5G	8.9
Xiaomi Redmi Note 12 Explorer	8.9
Tecno Phantom X2 Pro	8.9
Samsung Galaxy A53 (8GB RAM + 256GB)	8.9
Google Pixel 6 Pro	8.9

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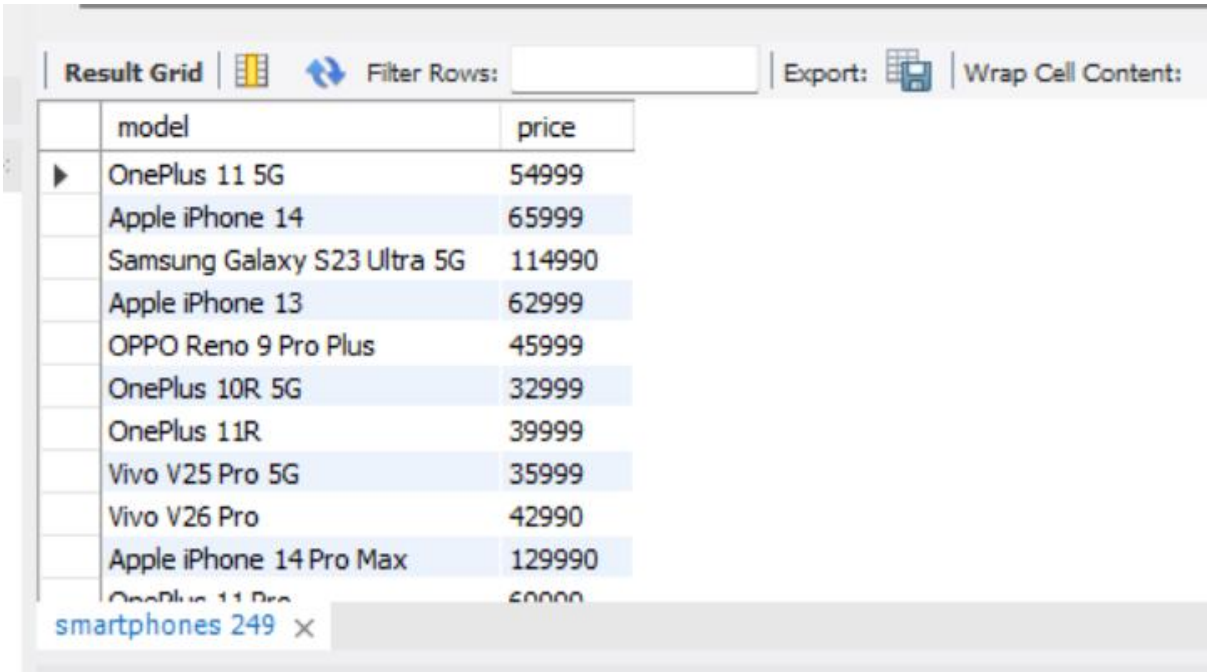
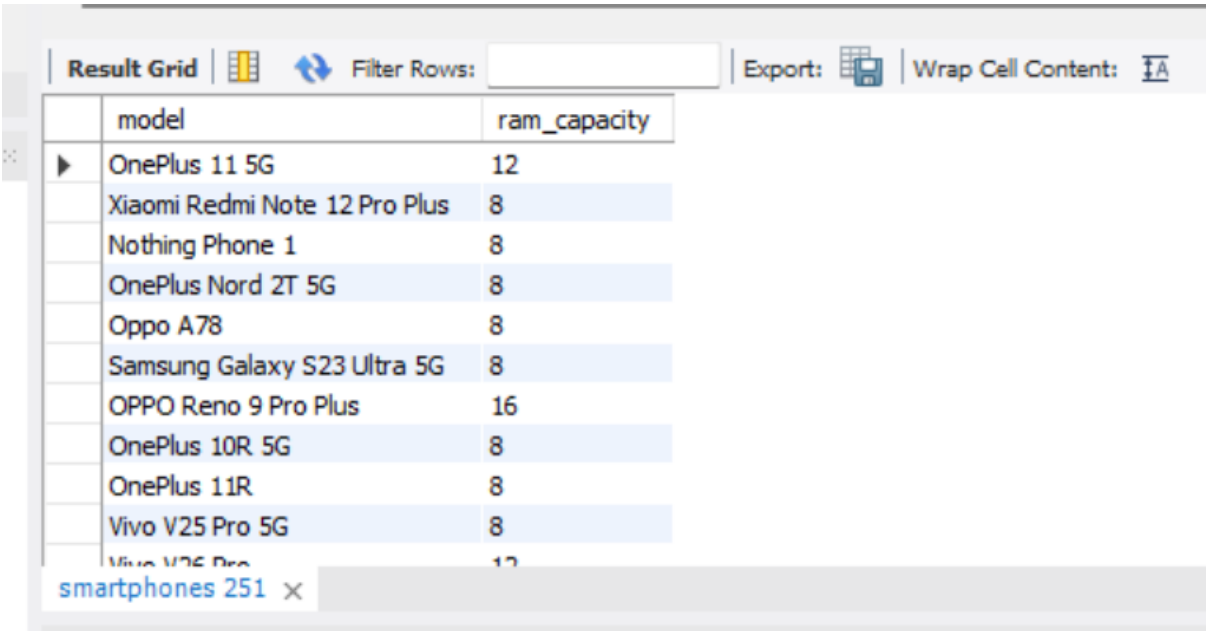
33.Get smartphones priced above the average price of all smartphones

```
SELECT
   model, price
FROM
   smartphones
WHERE
   price > (SELECT
        AVG(price)
    FROM
        smartphones);
```



34.List smartphones whose RAM is greater than the average RAM capacity.

```
SELECT
   model, ram_capacity
FROM
   smartphones
WHERE
   ram_capacity > (SELECT
         AVG(ram_capacity)
      FROM
         smartphones);
```



Result Grid | Filter Rows: | Export: | Wrap Cell Content:

model	ram_capacity
OnePlus 11 5G	12
Xiaomi Redmi Note 12 Pro Plus	8
Nothing Phone 1	8
OnePlus Nord 2T 5G	8
Oppo A78	8
Samsung Galaxy S23 Ultra 5G	8
OPPO Reno 9 Pro Plus	16
OnePlus 10R 5G	8
OnePlus 11R	8
Vivo V25 Pro 5G	8

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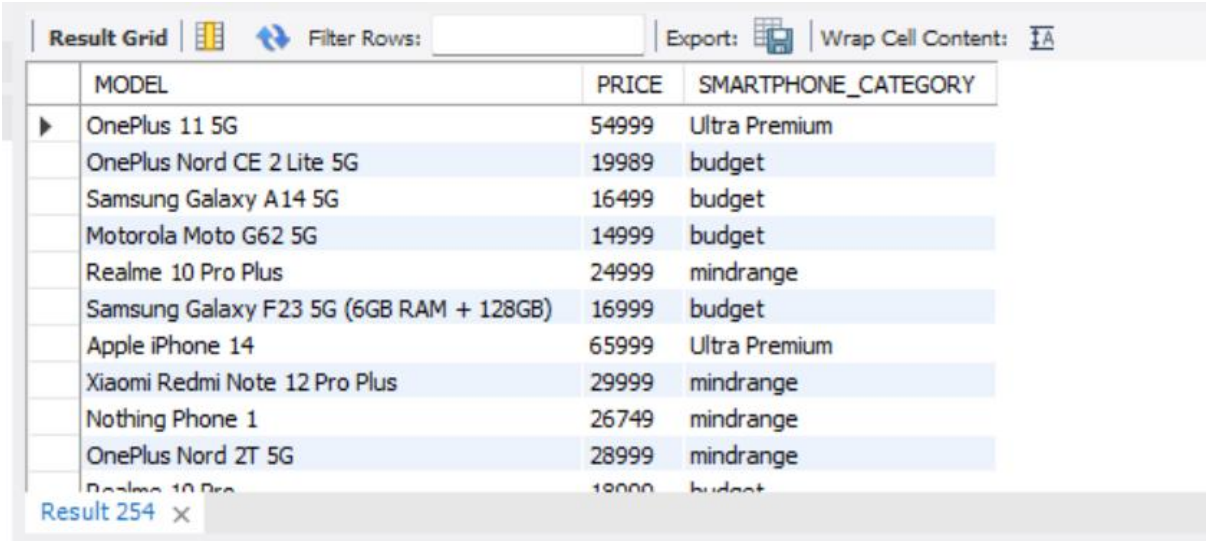
35.find out budget,mindrange,premium smartphones if budget = <20000 , mindrange = 20000 - 30000 ,premium = 30000 - 50000 else ultra_premium

```
SELECT
   MODEL,
   PRICE,
   CASE
      WHEN PRICE < 20000 THEN 'budget'
      WHEN PRICE BETWEEN 20000 AND 30000 THEN 'mindrange'
      WHEN PRICE BETWEEN 30001 AND 50000 THEN 'premium'
      ELSE 'Ultra Premium'
   END AS SMARTPHONE_CATEGORY
FROM
   SMARTPHONES;
```



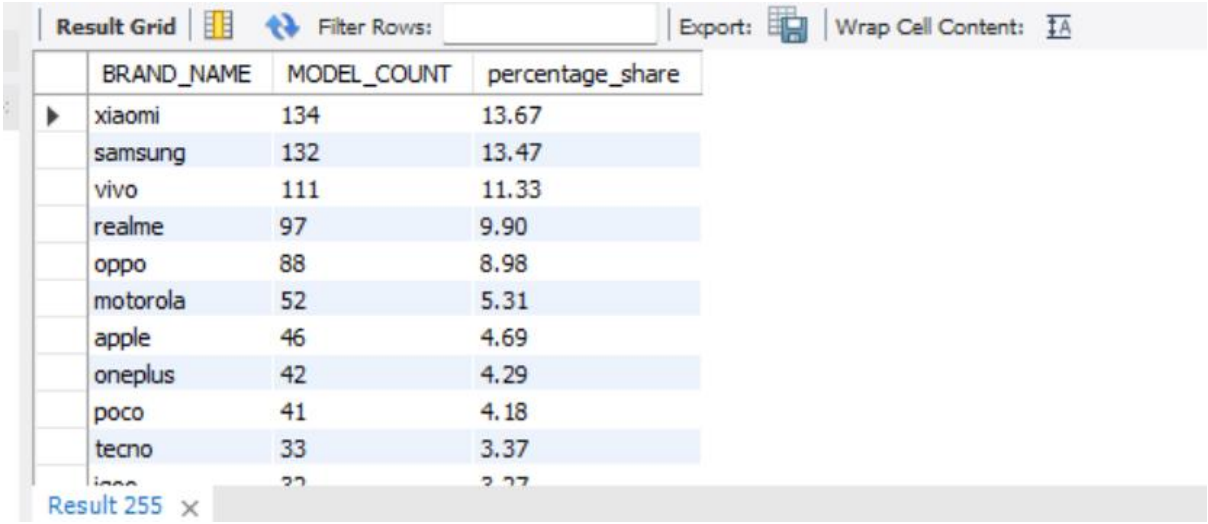
Result Grid | Filter Rows: | Export: | Wrap Cell Content:

MODEL	PRICE	SMARTPHONE_CATEGORY
OnePlus 11 5G	54999	Ultra Premium
OnePlus Nord CE 2 Lite 5G	19989	budget
Samsung Galaxy A14 5G	16499	budget
Motorola Moto G62 5G	14999	budget
Realme 10 Pro Plus	24999	mindrange
Samsung Galaxy F23 5G (6GB RAM + 128GB)	16999	budget
Apple iPhone 14	65999	Ultra Premium
Xiaomi Redmi Note 12 Pro Plus	29999	mindrange
Nothing Phone 1	26749	mindrange
OnePlus Nord 2T 5G	28999	mindrange
Realme 10 Pro	18000	budget

Result 254

36.What percentage of total models belongs to each brand?

```
SELECT
   BRAND_NAME,
   COUNT(*) AS MODEL_COUNT,
   ROUND(COUNT(*) * 100 / (SELECT
               COUNT(*)
            FROM
               SMARTPHONES),
         2) AS percentage_share
FROM
   SMARTPHONES
GROUP BY BRAND_NAME
ORDER BY percentage_share DESC;
```



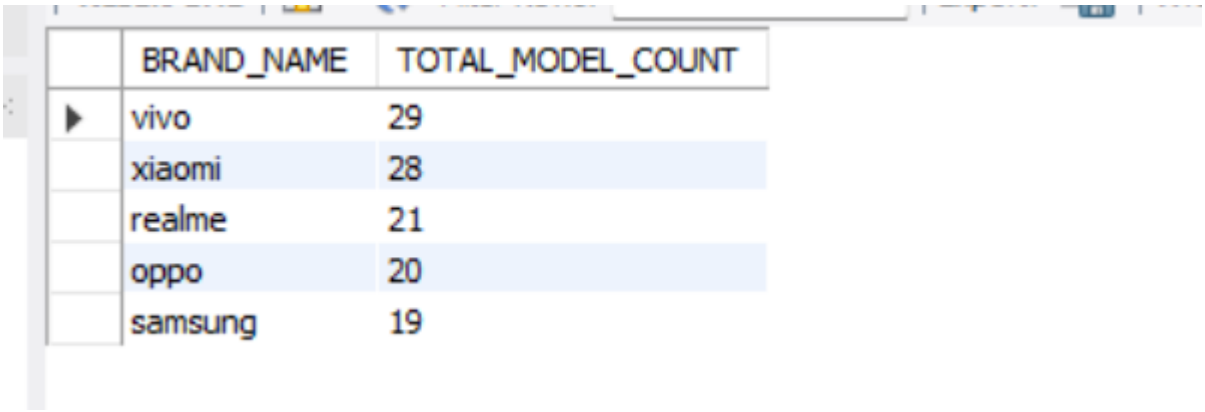
Result Grid | Filter Rows: | Export: | Wrap Cell Content:

BRAND_NAME	MODEL_COUNT	percentage_share
xiaomi	134	13.67
samsung	132	13.47
vivo	111	11.33
realme	97	9.90
oppo	88	8.98
motorola	52	5.31
apple	46	4.69
oneplus	42	4.29
poco	41	4.18
tecno	33	3.37

Result 255

37.TOP 5 brands dominate the midrange segment 20K–30K

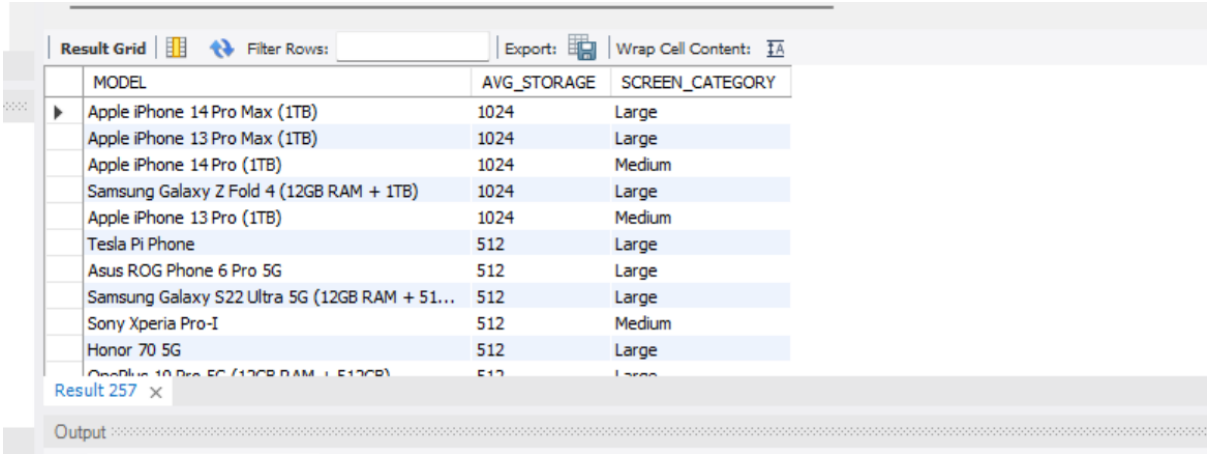
```
SELECT
   BRAND_NAME, COUNT(*) TOTAL_MODEL_COUNT
FROM
   SMARTPHONES
WHERE
   PRICE BETWEEN 20000 AND 30000
GROUP BY BRAND_NAME
ORDER BY TOTAL_MODEL_COUNT DESC
LIMIT 5;
```



BRAND_NAME	TOTAL_MODEL_COUNT
vivo	29
xiaomi	28
realme	21
oppo	20
samsung	19

38.What is the average internal storage offered by smartphones in different screen size categories (Small, Medium, Large)?

```
SELECT
   MODEL,
   ROUND(AVG(INTERNAL_MEMORY)) AS AVG_STORAGE,
   CASE
      WHEN SCREEN_SIZE < 6.0 THEN 'Small'
      WHEN SCREEN_SIZE BETWEEN 6.0 AND 6.5 THEN 'Medium'
      ELSE 'Large'
   END AS SCREEN_CATEGORY
FROM
   SMARTPHONES
GROUP BY MODEL , SCREEN_CATEGORY
ORDER BY AVG_STORAGE DESC;
```



Result Grid | Filter Rows: | Export: | Wrap Cell Content:

MODEL	AVG_STORAGE	SCREEN_CATEGORY
Apple iPhone 14 Pro Max (1TB)	1024	Large
Apple iPhone 13 Pro Max (1TB)	1024	Large
Apple iPhone 14 Pro (1TB)	1024	Medium
Samsung Galaxy Z Fold 4 (12GB RAM + 1TB)	1024	Large
Apple iPhone 13 Pro (1TB)	1024	Medium
Tesla Pi Phone	512	Large
Asus ROG Phone 6 Pro 5G	512	Large
Samsung Galaxy S22 Ultra 5G (12GB RAM + 51...	512	Large
Sony Xperia Pro-I	512	Medium
Honor 70 5G	512	Large

Result 257 | Output

39.What is the most common internal storage configuration for each brand?

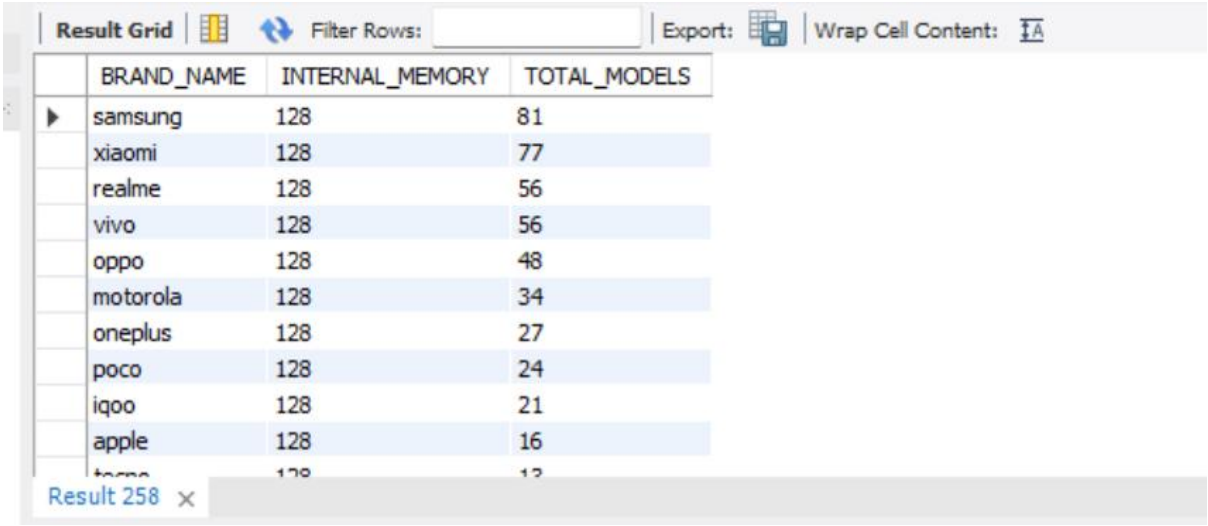
```
SELECT BRAND_NAME,INTERNAL_MEMORY,TOTAL_MODELS FROM
```

(SELECT BRAND_NAME,INTERNAL_MEMORY,COUNT(*) AS TOTAL_MODELS,

ROW_NUMBER() OVER(PARTITION BY BRAND_NAME ORDER BY COUNT(*) DESC) AS RN

FROM SMARTPHONES GROUP BY BRAND_NAME,INTERNAL_MEMORY) AS RANKED_STORAGE

WHERE RN = 1 ORDER BY TOTAL_MODELS DESC;



BRAND_NAME	INTERNAL_MEMORY	TOTAL_MODELS
samsung	128	81
xiaomi	128	77
realme	128	56
vivo	128	56
oppo	128	48
motorola	128	34
oneplus	128	27
poco	128	24
iqoo	128	21
apple	128	16