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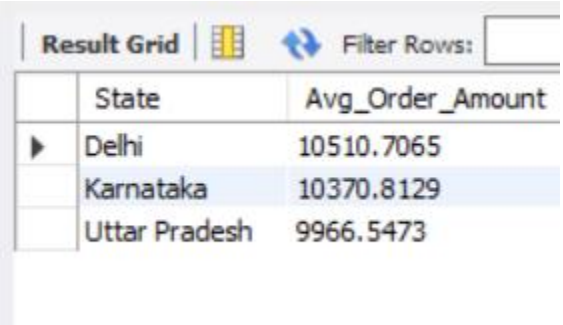
This dataset contains information about Diwali Event sales. Following information is provided:

- **Customer Name**
- **User Id**
- **Product Id**
- **Gender**
- **Age Group**
- **Age**
- **Marital Status**
- **state**
- **Zone**
- **Occupation**
- **Product Category**
- **Orders**
- **Amount Clarity**

Queries and solutions:

Q1: Find the top 3 states with the highest average order amounts?

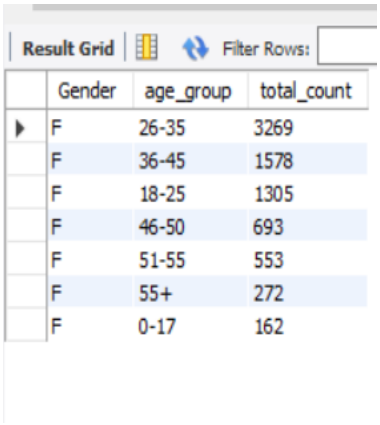
```
SELECT State, AVG(Amount) AS Avg_Order_Amount
FROM `diwali sales data`
GROUP BY State
ORDER BY Avg_Order_Amount DESC
LIMIT 3;
```



State	Avg_Order_Amount
Delhi	10510.7065
Karnataka	10370.8129
Uttar Pradesh	9966.5473

Q2 : Identify the most common age group among female customers?

```
select Gender , `Age Group`as age_group,
count(*) as total_count
 from `diwali sales data`
where Gender like 'F%'
group by Gender,age_group
order by totaL_count  desc;
```



Result Grid | Filter Rows:

Gender	age_group	total_count
F	26-35	3269
F	36-45	1578
F	18-25	1305
F	46-50	693
F	51-55	553
F	55+	272
F	0-17	162

Q3: Retrieve the top 5 occupations that have the highest total sales amount?

```
select occupation , amount ,
 sum(Amount) as total from `diwali sales data`
group by occupation , amount
order by total desc
Limit 5;
```

Result Grid | Filter Rows:

occupation	amount	total
Healthcare	16649	49947
Food Processing	23877	47754
Hospitality	23568	47136
Hospitality	20908	41816
IT Sector	20874	41748

Q4: Find the gender distribution in each product category where the average age is above 30?

```
select gender, product_category , count(gender)  from `diwali sales data`
where age > 30
group by Product Category ,gender;
```

Result Grid | Filter Rows:

gender	product_category	count(gender)
F	Auto	38
M	Auto	18
M	Hand & Power Tools	9
F	Stationery	37
M	Stationery	26
F	Tupperware	34
F	Footwear & Shoes	570
M	Footwear & Shoes	211
M	Tupperware	11
M	Furniture	87
F	Furniture	115
M	Food	392
F	Food	1041
F	Hand & Power Tools	6
F	Games & Toys	171

Q5): Calculate the percentile rank of the orders for each product category?

```
select orders,Product_Category,
percent_rank()   over  (partition by product_category order by orders desc)
as rank_percentage
```

```
from `diwali sales data`

group by Product_Category,orders

;
```

Result Grid | Filter Rows:

orders	Product_Category	rank_percentage
4	Auto	0
3	Auto	0.3333333333333333
2	Auto	0.6666666666666666
1	Auto	1
4	Beauty	0
3	Beauty	0.3333333333333333
2	Beauty	0.6666666666666666
1	Beauty	1
4	Books	0
3	Books	0.3333333333333333
2	Books	0.6666666666666666
1	Books	1
4	Clothing & Apparel	0
3	Clothing & Apparel	0.3333333333333333
2	Clothing & Apparel	0.6666666666666666

Q6): Determine the number of unique users who have ordered from more than one state? Retrieve the top zones with the most customers aged between 25 and 40

```
select distinct(users),different_states_nmbr from

(select cust_name as users ,count(distinct state) as different_states_nmbr   from `diwali sales data`

group by users

having count(distinct state > 1)) as states

order by different_states_nmbr desc ;
```

users	different_states_nmbr
Adhvaita	13
Akshat	13
Alejandro	13
Christina	13
Rutuja	13
Siddharth	13
Amol	12
Cacioppo	12
Catlett	12
Champaklata	12
Dortch	12
Fritzler	12
Gjertsen	12
Gonzalez	12

Q7): Retrieve the top 3 zones with the most customers aged between 25 and 40?

```
select zone,count(cust_name) as number_of_customers from `diwali sales data`
where age between 25 and 40
 group by zone
 order by number_of_customers desc
 Limit 3;
```

Result Grid | Filter Rows:

zone	number_of_customers
Central	2238
Southern	1406
Western	1036

Q8: Identify the product categories where the sum of orders is greater than the average number of orders?

```
select product_category ,sum(orders),avg(orders) from `diwali sales data`
group by product_category
having sum(orders) > avg(orders);
```

Result Grid | Filter Rows:

product_category	sum(orders)	avg(orders)
Auto	239	2.4639
Hand & Power Tools	80	3.0769
Stationery	281	2.5089
Tupperware	166	2.3056
Footwear & Shoes	2646	2.4986
Furniture	889	2.5256
Food	6110	2.4538
Games & Toys	940	2.4352
Sports Products	870	2.4438
Books	245	2.3786
Electronics & Gad...	5226	2.5041
Decor	235	2.4479
Clothing & Apparel	6634	2.4987
Beauty	1086	2.5735
Household items	1331	2.5596

Q9:Calculate the age difference between the youngest and oldest customer in each state?

```
SELECT State, MAX(Age) - MIN(Age) AS Age_Difference
FROM `diwali sales data`
GROUP BY State;
```

Result Grid | Filter Rows:

State	Age_Difference
Maharashtra	79
Andhra Pradesh	78
Uttar Pradesh	80
Karnataka	80
Gujarat	78
Himachal Pradesh	79
Delhi	79
Jharkhand	77
Kerala	80
Haryana	79
Madhya Pradesh	80
Bihar	78
Rajasthan	79
Uttarakhand	80
Telangana	74

Q10: Identify the product categories where the number of orders is within the top 30% of orders across all categories?

```
SELECT Product_Category, Orders,Order_Percentile
FROM (
   SELECT Product_Category, Orders,
        PERCENT_RANK() OVER(ORDER BY Orders) AS Order_Percentile
   FROM `diwali sales data`
) AS RankedOrders
WHERE Order_Percentile >= 0.7
group by product_category , orders
;
```

Result Grid | Filter Rows:

Product_Category	Orders	Order_Percentile
Auto	4	0.7533368926855313
Stationery	4	0.7533368926855313
Tupperware	4	0.7533368926855313
Footwear & Shoes	4	0.7533368926855313
Furniture	4	0.7533368926855313
Food	4	0.7533368926855313
Hand & Power Tools	4	0.7533368926855313
Games & Toys	4	0.7533368926855313
Sports Products	4	0.7533368926855313
Books	4	0.7533368926855313
Electronics & Gad...	4	0.7533368926855313
Decor	4	0.7533368926855313
Clothing & Apparel	4	0.7533368926855313
Beauty	4	0.7533368926855313
Household items	4	0.7533368926855313

Q11: Calculate the total sales amount for each combination of state and product category where the total sales amount is in the top 10% across all states?

```
select state,product_category,Total_sales,x from (
SELECT State, Product_Category, SUM(Amount) AS Total_Sales , percent_rank() over (order by sum(amount))  as x
from  `diwali sales data`
group by state ,product_category
order by x desc) as ranked_sales
where x >= 0.9 ;
```

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

state	product_category	Total_sales	x
Uttar Pradesh	Food	7983142	1
Maharashtra	Food	6421531	0.9958333333333333
Delhi	Footwear & Shoes	5027449	0.9916666666666667
Karnataka	Footwear & Shoes	4963928	0.9875
Karnataka	Food	3995458	0.9833333333333333
Uttar Pradesh	Clothing & Apparel	3104183	0.9791666666666666
Madhya Pradesh	Food	2821970	0.975
Delhi	Food	2643628	0.9708333333333333
Andhra Pradesh	Food	2163209	0.9666666666666667
Andhra Pradesh	Electronics & Gadgets	2123529	0.9625
Uttar Pradesh	Footwear & Shoes	2114611	0.9583333333333334
Maharashtra	Clothing & Apparel	2022215	0.9541666666666667
Haryana	Food	1678205	0.95
Uttar Pradesh	Electronics & Gadgets	1671813	0.9458333333333333
Bihar	Food	1555848	0.9416666666666667