

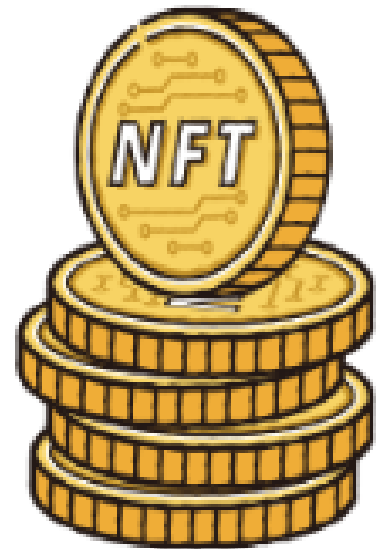
NFT Analysis



Capstone Project

Project Instructions:

Over the past 18 months, an emerging technology has caught the attention of the world; the NFT. What is an NFT? They are digital assets stored on the blockchain. And over \$22 billion was spent last year on purchasing NFTs. Why? People enjoyed the art, the speculated on what they might be worth in the future, and people didn't want to miss out.



CREATED BY :- MANOJ CHOUDHARY!

NFT Analysis



NFT Analysis



Question

Q1. How many sales occurred during this time period?

input

```
select count(*) as sales from pricedata;
```

output

Result Grid	
	sales
▶	19920



NFT Analysis



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Question

Q2. Top 5 most expensive transactions (by USD price).

input

```
select name, eth_price, usd_price from pricedata  
order by usd_price desc  
limit 5;
```

output

	name	eth_price	usd_price
▶	CryptoPunk #4156	2500	11102350
	CryptoPunk #7804	4200	7541310
	CryptoPunk #3100	4200	7541310
	CryptoPunk #8857	2000	6418580
	CryptoPunk #5217	2250	5362807.5

NFT Analysis





Question

Q3. Moving average of USD price that averages the last 50 transactions with also Event and USD Price Columns

input

```
select event_date, usd_price,  
avg(usd_price) over(order by event_date desc) as Moving_Average  
from pricedata  
limit 50;
```

output

	event_date	usd_price	Moving_Average
▶	2022-01-14	194171.84	206814.08
	2022-01-14	207300.32	206814.08
	2022-01-14	162080	206814.08
	2022-01-14	220266.72	206814.08
	2022-01-14	191254.4	206814.08
	2022-01-14	265811.2	206814.08
	2022-01-13	232349.46	209453.6175
	2022-01-13	202395	209453.6175
	2022-01-12	204075.0651	213928.6953066666
	2022-01-12	197528.5885	213928.6953066666
	2022-01-12	193445.1427	213928.6953066666
	2022-01-12	268826.8485	213928.6953066666



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Question

Q4. Return all the NFT names and their average sale price in USD. Sorting in descending order

input

```
select name,  
avg(usr_price) over(order by usr_price desc) as Average_Price  
from pricedata  
order by usr_price desc;
```

output

	name	Average_Price
►	CryptoPunk #4156	11102350
	CryptoPunk #3100	8728323.333333334
	CryptoPunk #7804	8728323.333333334
	CryptoPunk #8857	8150887.5
	CryptoPunk #5217	7593271.5
	CryptoPunk #7252	7213795.583333333
	CryptoPunk #6275	6925673.234285714
	CryptoPunk #2338	6590493.455
	CryptoPunk #6275	6296000.848888889
	CryptoPunk #2140	6047755.964
	CryptoPunk #2681	5787514.512727273



NFT Analysis





Question

Q5. Return each day of the week and the number of sales, as well as the average price in ETH. Order by the count of transactions in ascending order.

input

```
select event_date,  
count(transaction_hash) as Sales,  
avg(eth_price) from pricedata  
group by event_date order by sales asc;
```

output

event_date	Sales	avg(eth_price)
2021-09-18	1	103
2020-12-20	1	2
2020-12-17	1	3.5
2020-12-15	1	2.5
2020-11-29	1	3.24





Question

Q6. Return the sentence which include the NFT name, who bought the NFT, who sold the NFT, the date, and what price it was sold for in USD rounded to the nearest thousandth.

input

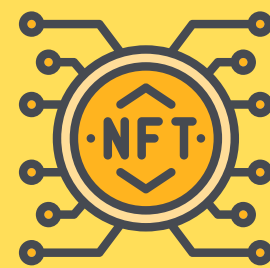
```
alter table pricedata
add column summary varchar(255);

update pricedata set
summary = concat(
    name,
    ' was sold for $',
    floor((usd_price + 99) / 1000) * 1000,
    ' to ',
    buyer_address,
    ' from ',
    seller_address,
    ' on ',
    date_format(event_date, '%Y-%m-%d')
);

select summary from pricedata;
```



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output

summary

CryptoPunk #1139 was sold for \$194000 to 0x91338ccfb8c0adb7756034a82008531d7713009d from...

CryptoPunk #3874 was sold for \$207000 to 0xa7a796c9de9b22b46f0dc1922fe017582c5e10b5 from ...

CryptoPunk #7969 was sold for \$162000 to 0x00 fro...

CryptoPunk #5231 was sold for \$220000 to 0x3e8faf5b3a4ef575a329f8c976ff27f286ab2643 from 0...

CryptoPunk #3193 was sold for \$191000 to 0x00 fro...

CryptoPunk #3961 was sold for \$265000 to 0x00 fro...

CryptoPunk #9056 was sold for \$232000 to 0x1919db36ca2fa2e15f9000fd9cdc2edcf863e685 from ...

CryptoPunk #8335 was sold for \$202000 to 0x00 fro...

CryptoPunk #2354 was sold for \$204000 to 0xc66d5be823969895ec61ed3e4b81af4a208f4b7c from...

CryptoPunk #1915 was sold for \$197000 to 0x91338ccfb8c0adb7756034a82008531d7713009d from...

CryptoPunk #1482 was sold for \$193000 to 0x91338ccfb8c0adb7756034a82008531d7713009d from...

CryptoPunk #4965 was sold for \$268000 to 0x12039d90ba432109d2151425616c8d03e3d32183 fro...

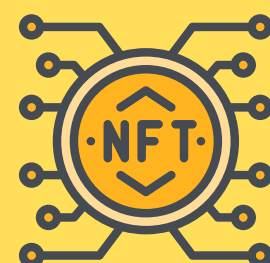
CryptoPunk #9504 was sold for \$216000 to 0x65b1b96bd01926d3d60dd3c8bc452f22819443a9 fro...

CryptoPunk #6928 was sold for \$259000 to 0xa8d31c4546a782085d81a1ec1598054400d7a2ae fro...

CryptoPunk #3080 was sold for \$194000 to 0x1919db36ca2fa2e15f9000fd9cdc2edcf863e685 from ...



NFT Analysis



NFT Analysis



Question

Q7. Create a view called “1919_purchases” and contains any sales where “0x1919db36ca2fa2e15f9000fd9cdc2edcf863e685” was the buyer.

input

```
create view 1919_purchases as
select * from pricedata
where buyer_address = '0x1919db36ca2fa2e15f9000fd9cdc2edcf863e685';

select * from 1919_purchases;
```

output

buyer_address	eth_price	usd_price	seller_address	event_date	token_id	transaction_hash	name	summary
0x1919db36ca...	68.88	232349.46	0x6611fe71c...	2022-01-13	9056	0x9940791875f...	Crypt...	CryptoPu...
0x1919db36ca...	60	194449.8	0x7a0106472...	2022-01-12	3080	0xce457c5ddde...	Crypt...	CryptoPu...
0x1919db36ca...	115	362439.75	0xacb792508...	2022-01-10	4795	0xef4219eeb0c0...	Crypt...	CryptoPu...
0x1919db36ca...	60	189099	0xf05155f79...	2022-01-10	7271	0xfd772e7014c4...	Crypt...	CryptoPu...
0x1919db36ca...	60	189099	0xd1c44141e...	2022-01-10	3836	0x42e57ea8068...	Crypt...	CryptoPu...
0x1919db36ca...	63	201534.48	0xcddfa1328...	2022-01-08	1915	0x5ac669796d8...	Crypt...	CryptoPu...
0x1919db36ca...	63	201534.48	0xcddfa1328...	2022-01-08	1482	0x6817b1e7f5d...	Crypt...	CryptoPu...
0x1919db36ca...	89	303103.74	0x238c94868...	2022-01-07	7910	0x1d70763856d...	Crypt...	CryptoPu...
0x1919db36ca...	68	257380	0xe2e58b5be...	2022-01-05	1580	0x858f1491b69...	Crypt...	CryptoPu...
0x1919db36ca...	62.9	238076.5	0x9b45755f1...	2022-01-05	9247	0xf78fda376ab8...	Crypt...	CryptoPu...

NFT Analysis





Question

Q8. Create a histogram of ETH price ranges. Round to the nearest hundred value.

input

```
select round(eth_price / 100) * 100 as Eth_price_range,  
count(*) as frequency ,  
Rpad('',count(*), '*') AS Bar_Graph  
from pricedata  
group by Eth_price_range  
order by Eth_price_range;
```

output

Eth_price_range	frequency	Bar_Graph
0	15664	*****
100	3857	*****
200	289	*****
300	47	*****
400	31	*****
500	10	*****
600	3	***
700	2	**
800	4	****
900	2	**



NFT Analysis



Question

Q9. Return a union query that contains the highest price each NFT was bought for, with a query that has the lowest price each NFT was bought for. The table should have a name column, a price column called price, and a status column. Order the result set by the name of the NFT, and the status, in ascending order.

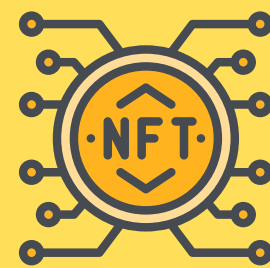
Input

```
select name, max(eth_price) as price, 'Highest' as status
from pricedata
group by name
union all
select name, min(eth_price) as price, 'Lowest' as status
from pricedata
group by name
order by name asc, status asc;
```

NFT Analysis



NFT Analysis

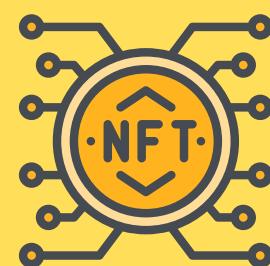


output

	name	price	status
▶	CryptoPunk #0	0	Highest
	CryptoPunk #0	0	Lowest
	CryptoPunk #1	60	Highest
	CryptoPunk #1	0	Lowest
	CryptoPunk #1000	150	Highest
	CryptoPunk #1000	0.75	Lowest
	CryptoPunk #1001	175	Highest
	CryptoPunk #1001	7.305	Lowest
	CryptoPunk #1002	19.95	Highest
	CryptoPunk #1002	19.95	Lowest
	CryptoPunk #1003	22	Highest
	CryptoPunk #1003	22	Lowest
	CryptoPunk #1004	142	Highest
	CryptoPunk #1004	142	Lowest
	CryptoPunk #1005	42	Highest
	CryptoPunk #1005	30	Lowest
	CryptoPunk #1006	25.75	Highest
	CryptoPunk #1006	22	Lowest



NFT Analysis





Question

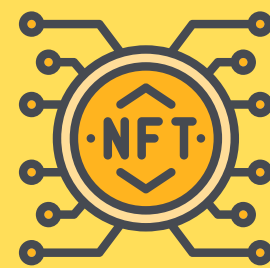
Q10. What NFT sold the most each month / year combination? Also, what was the name and the price in USD? Order in chronological format.

input

```
select
    year(event_date) as Sale_Year,
    month(event_date) as Sale_Month,
    name,
    max(usd_price)
from pricedata
group by Sale_Year, Sale_Month, name;
```



NFT Analysis

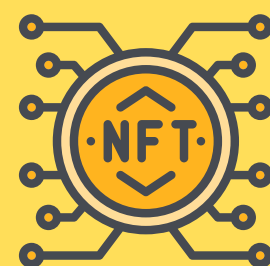


output

Sale_Year	Sale	name	max(usd_price)
2022	1	CryptoPunk #1139	194171.84
2022	1	CryptoPunk #3874	207300.32
2022	1	CryptoPunk #7969	162080
2022	1	CryptoPunk #5231	220266.72
2022	1	CryptoPunk #3193	191254.4
2022	1	CryptoPunk #3961	265811.2
2022	1	CryptoPunk #9056	232349.46
2022	1	CryptoPunk #8335	202395
2022	1	CryptoPunk #2354	204075.0651
2022	1	CryptoPunk #1915	201534.48
2022	1	CryptoPunk #1482	201534.48
2022	1	CryptoPunk #4965	268826.8485
2022	1	CryptoPunk #9504	216033.7278
2022	1	CryptoPunk #6928	258942.317
2022	1	CryptoPunk #3080	194449.8
2022	1	CryptoPunk #6050	200428.15
2022	1	CryptoPunk #3993	196203.7413
2022	1	CryptoPunk #3842	0



NFT Analysis





Question

Q11. Return the total volume (sum of all sales), round to the nearest hundred on a monthly basis (month/year).

input

```
select
    year(event_date) as year,
    month(event_date) as month,
    round(sum(usd_price) / 100) * 100 as sum_of_sales
from pricedata
group by month, year
order by year asc , month asc;
```

output

year	month	sum_of_sales
2017	6	8100
2017	7	59800
2017	8	8100
2017	9	2500
2017	10	1400
2017	11	2000



NFT Analysis



Question

Q12. Count how many transactions the wallet "0x1919db36ca2fa2e15f9000fd9cdc2edcf863e685" had over this time period.

input

```
select count(*) from pricedata  
where buyer_address = '0x1919db36ca2fa2e15f9000fd9cdc2edcf863e685' or  
seller_address = '0x1919db36ca2fa2e15f9000fd9cdc2edcf863e685';
```

output

	count(*)
▶	491



NFT Analysis





Question

Q13. Create an “estimated average value calculator” based off of these criteria:

- Exclude all daily outlier sales where the purchase price is below 10% of the daily average price
- Take the daily average of remaining transactions

input

```
create temporary table temp_table as
select event_date,
       usd_price,
       avg(usd_price) over(partition by event_date ) as avg_usd_price
from pricedata;
```

output

event_date	usd_price	avg_usd_price
2017-06-23	41.92262	33.826114
2017-06-23	80.005	33.826114
2017-06-23	9.6006	33.826114
2017-06-23	96.006	33.826114
2017-06-23	34.24214	33.826114
2017-06-23	64.004	33.826114

