

MUSEUM CASE STUDY

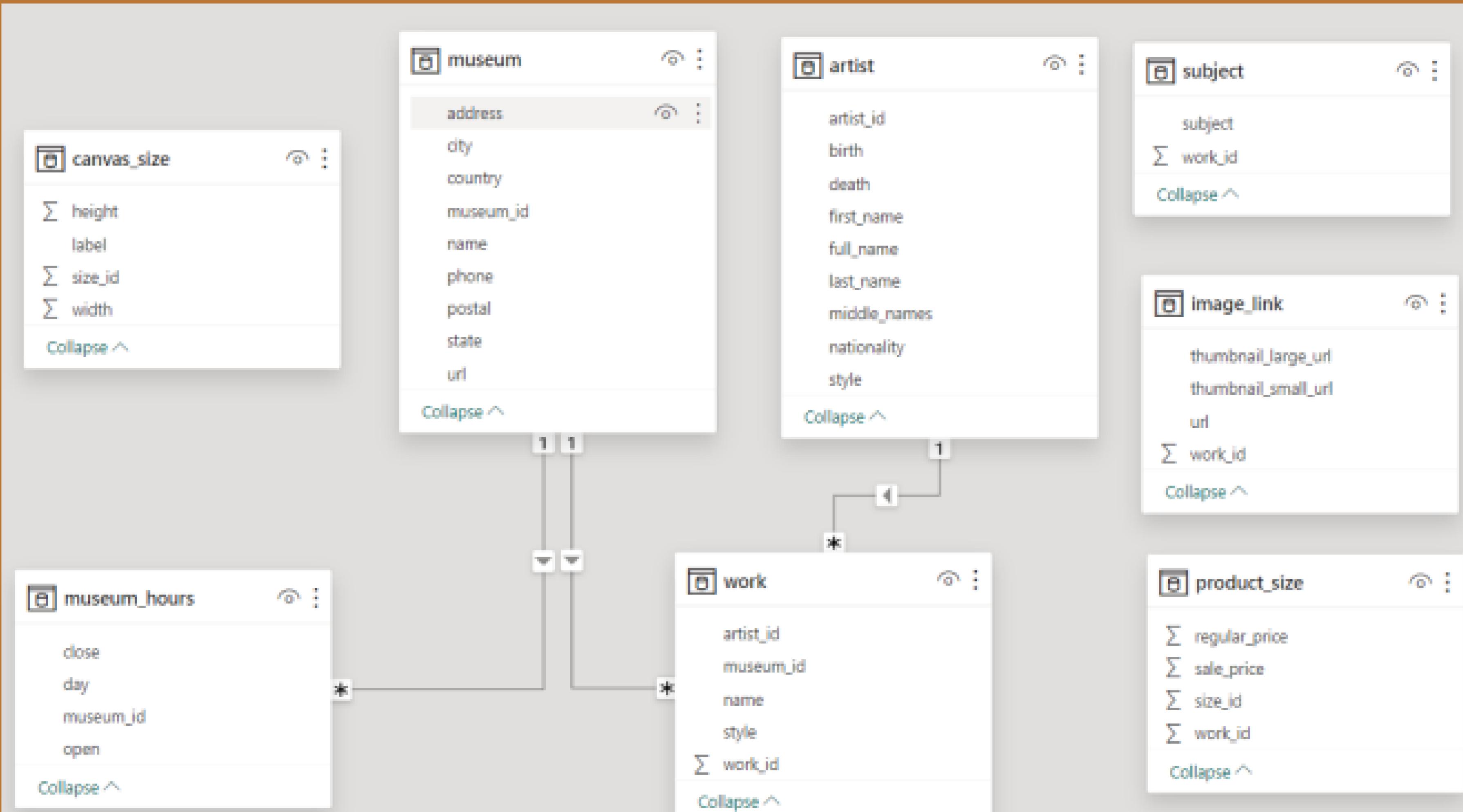
PRESENTED BY - ANURAG
DUBEY



TABLES

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CANVAS_SIZE
ARTIST
MUSEUM
MUSEUM_HOURS
PRODUCT_SIZE
SUBJECT
WORK

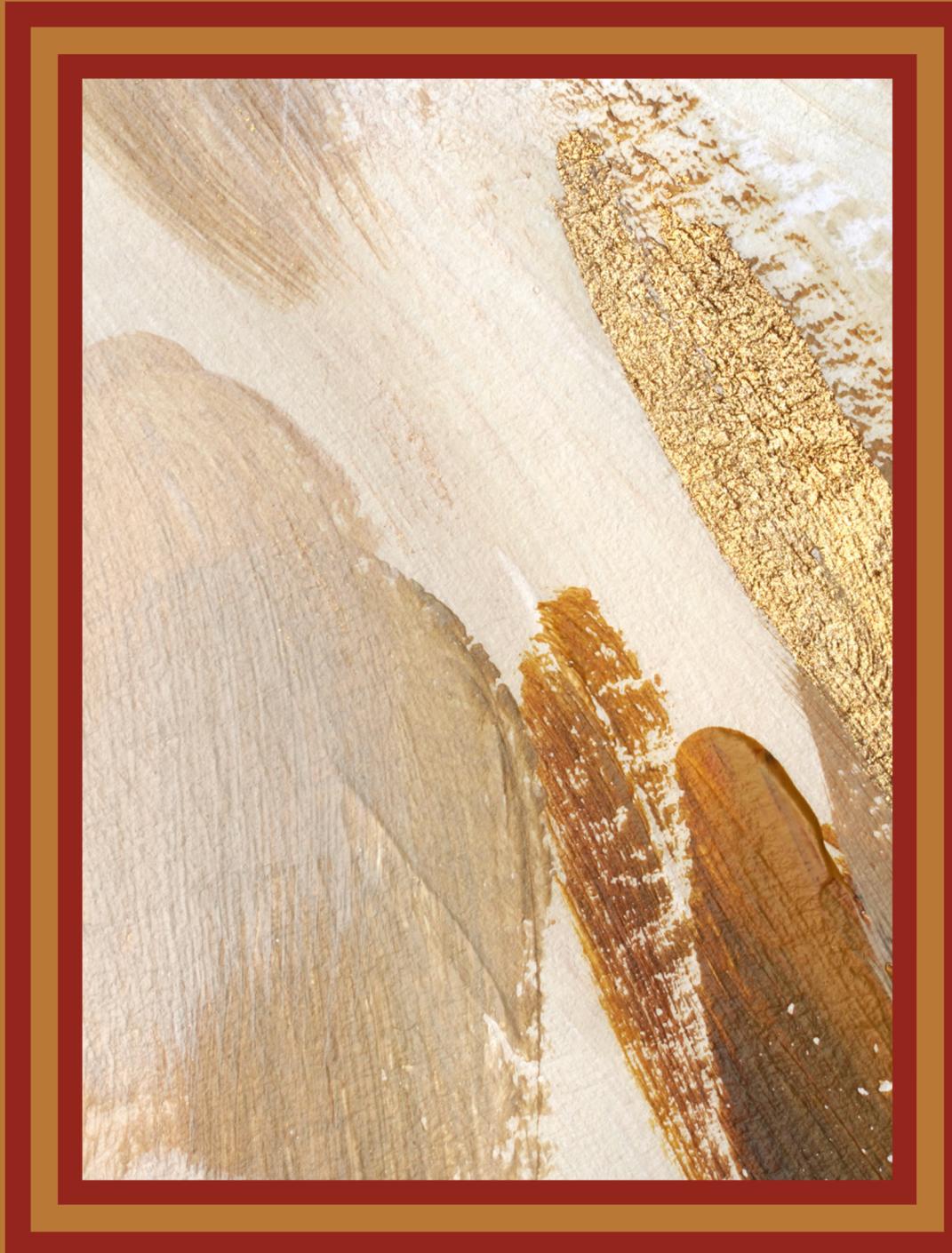


**FETCH ALL THE PAINTINGS WHICH ARE NOT
DISPLAYED ON ANY MUSEUMS?**

```
select * from work  
where museum_id is Null;
```



ARE THERE MUSEUMS WITHOUT ANY PAINTINGS?



```
select * from museum
where museum_id not in
(select museum_id from
work);
```

HOW MANY PAINTINGS HAVE AN ASKING PRICE OF MORE THAN THEIR REGULAR PRICE?

```
select count(work_id) as  
'number of paintings'  
from product_size where  
sale_price > regular_price;
```



IDENTIFY THE PAINTINGS WHOSE ASKING PRICE IS LESS THAN 50% OF ITS REGULAR PRICE



```
SELECT * FROM  
PRODUCT_SIZE WHERE  
SALE_PRICE < REGULAR_PRICE  
*0.5;
```

WHICH CANVA SIZE COSTS THE MOST?



```
WITH SALE_PRICE_RANK AS (
    SELECT SIZE_ID, SALE_PRICE,
    DENSE_RANK() OVER(ORDER BY SALE_PRICE DESC) AS
    SALE_PRICE_RNK
    FROM PRODUCT_SIZE)

SELECT CS.* , SPR.SALE_PRICE
FROM CANVAS_SIZE CS
INNER JOIN (SELECT SIZE_ID, SALE_PRICE FROM
SALE_PRICE_RANK WHERE SALE_PRICE_RNK=1
) SPR ON CS.SIZE_ID = SPR.SIZE_ID;
```

IDENTIFY THE MUSEUMS WITH INVALID CITY INFORMATION IN THE GIVEN DATASET



```
SELECT * FROM MUSEUM  
WHERE CITY LIKE '[0-9]%'
```

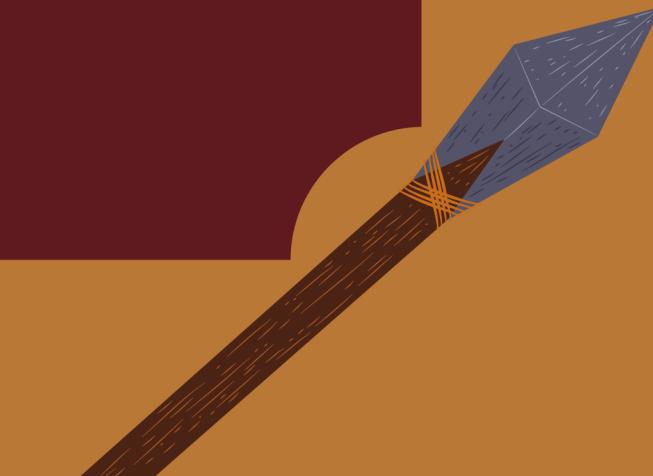
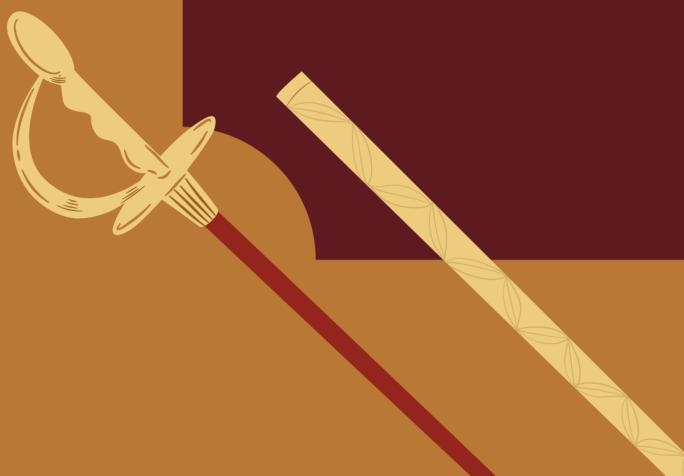
FETCH THE TOP 10 MOST FAMOUS PAINTING SUBJECT



```
SELECT *
  FROM (
    SELECT S.SUBJECT,
           COUNT(*) AS 'NUMBER OF PAINTINGS',
           RANK() OVER(ORDER BY COUNT(*) DESC) AS
      RANKING
    FROM WORK W
   JOIN SUBJECT S ON S.WORK_ID=W.WORK_ID
  GROUP BY S.SUBJECT ) FAMOUS_PAINTING
 WHERE RANKING <= 10;
```

IDENTIFY THE MUSEUMS WHICH ARE OPEN ON
BOTH SUNDAY AND MONDAY. DISPLAY
MUSEUM NAME, CITY.

```
SELECT MH.MUSEUM_ID, M.NAME, M.CITY
FROM MUSEUM_HOURS AS MH
INNER JOIN MUSEUM AS M
ON M.MUSEUM_ID = MH.MUSEUM_ID
WHERE DAY = 'SUNDAY'
AND MH.MUSEUM_ID IN (
    SELECT MUSEUM_ID
    FROM MUSEUM_HOURS
    WHERE DAY = 'MONDAY'
);
```



WHICH ARE THE TOP 5 MOST POPULAR MUSEUM? (POPULARITY IS DEFINED BASED ON MOST NO OF PAINTINGS IN A MUSEUM)

```
SELECT
M.MUSEUM_ID,M.NAME,M.CITY,M.STATE,M.COUNTRY,
MW.NUMBER_OF_PAINTINGS FROM MUSEUM M
INNER JOIN
(SELECT TOP 5 MUSEUM_ID, COUNT(WORK_ID) AS
NUMBER_OF_PAINTINGS FROM WORK
WHERE MUSEUM_ID IS NOT NULL
GROUP BY MUSEUM_ID
ORDER BY 2 DESC) MW ON
M.MUSEUM_ID=MW.MUSEUM_ID
```



WHO ARE THE TOP 5 MOST POPULAR ARTIST? (POPULARITY IS DEFINED BASED ON MOST NO OF PAINTINGS DONE BY AN ARTIST)

SELECT
A.ARTIST_ID,A.FULL_NAME,A.NATIONALITY,A.STYLE,
AW.NUMBER_OF_PAINTINGS FROM ARTIST A INNER
JOIN
(SELECT TOP 5 ARTIST_ID,COUNT(WORK_ID) AS
'NUMBER_OF_PAINTINGS' FROM WORK
GROUP BY ARTIST_ID
ORDER BY 2 DESC) AW ON
A.ARTIST_ID=AW.ARTIST_ID



IDENTIFY THE ARTIST AND THE MUSEUM WHERE THE MOST EXPENSIVE AND LEAST EXPENSIVE PAINTING IS PLACED. DISPLAY THE ARTIST NAME, SALE_PRICE, PAINTING NAME, MUSEUM NAME, MUSEUM CITY AND CANVAS LABEL

WITH RANKEDWORKS AS (

```
SELECT  
    WORK_ID,  
    SALE_PRICE,  
    RANK() OVER (ORDER BY SALE_PRICE ASC) AS ASCENDING_RANK,  
    RANK() OVER (ORDER BY SALE_PRICE DESC) AS DESCENDING_RANK  
FROM PRODUCT_SIZE  
WHERE SALE_PRICE IS NOT NULL
```

)

```
SELECT A.FULL_NAME,PS.SALE_PRICE,W.NAME,M.NAME,M.CITY,CS.LABEL FROM PRODUCT_SIZE PS INNER JOIN WORK AS W ON  
W.WORK_ID=PS.WORK_ID  
INNER JOIN ARTIST AS A ON A.ARTIST_ID=W.ARTIST_ID  
INNER JOIN MUSEUM AS M ON M.MUSEUM_ID=W.MUSEUM_ID  
INNER JOIN CANVAS_SIZE AS CS ON CS.SIZE_ID=PS.SIZE_ID  
WHERE PS.WORK_ID IN (SELECT  
    WORK_ID  
FROM RANKEDWORKS  
WHERE  
    ASCENDING_RANK = 1 OR DESCENDING_RANK = 1)
```





THANK YOU FOR VISITING!

Don't hesitate to ask any questions!