THIS PRESENTATION COVERS

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SUBMITTED BY – PRIYA SINGH

Insights

Question

List down the top 10 districts that have the highest number of domestic visitors overall (2016–2019)

Output

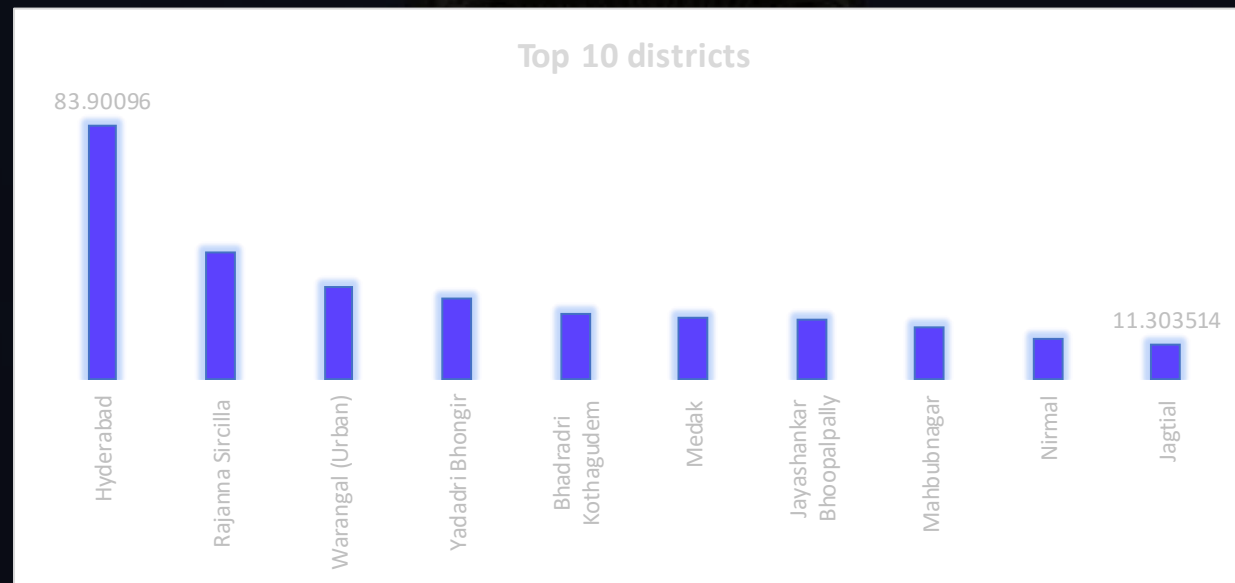| District	Total_Visitors	Total_in_Million	Rank
Hyderabad	83900960	84 M	1
Rajanna Sircilla	41763276	42 M	2
Warangal (Urban)	30726603	31 M	3
Yadadri Bhongir	26893080	27 M	4
Bhadradri Kothagudem	21600962	22 M	5
Medak	20542639	21 M	6
Jayashankar Bhoopalpally	19632865	20 M	7
Mahbubnagar	17180118	17 M	8
Nirmal	13315796	13 M	9
Jagtial	11303514	11 M	10

Insight

These are the top 10 districts that are doing well and HYDERABAD is in the top 1 and it's having 84 M visitors from 2016 – 2019

Question

List down the top 10 districts that have the highest number of domestic visitors overall (2016-2019)

Output

Top 10 districts

83.90096

11.303514

Hyderabad
Rajanna Sircilla
Warangal (Urban)
Yadadri Bhongir
Bhadradri Kothagudem
Medak
Jayashankar Bhoopalpally
Mahbubnagar
Nirmal
Jagtial

Insight

These are the top 10 districts that are doing well and HYDERABAD is in the top 1 and it's having the highest visitors from 2016 - 2019

Question

List down the top 3 districts based on the compounded annual growth rate (CAGR) of visitors between (2016-2019)

Output

District	In_2016_Visitors	By_2019_Visitors	CAGR
Mancherial	7802	269820	225.8 %
Warangal (Rural)	19400	353500	163.15 %
Bhadradri Kothagudem	889030	12817737	143.39 %

Insight   These 3 districts are growing since 2016

What is CAGR ?

COMPOUND ANNUAL GROWTH RATE

$$\text{CAGR Formula} = \left[\left(\frac{\text{Ending Value}}{\text{Beginning Value}} \right)^{\frac{1}{\text{No. of years}}} - 1 \right] \times 100\%$$

Question

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CAGR in %
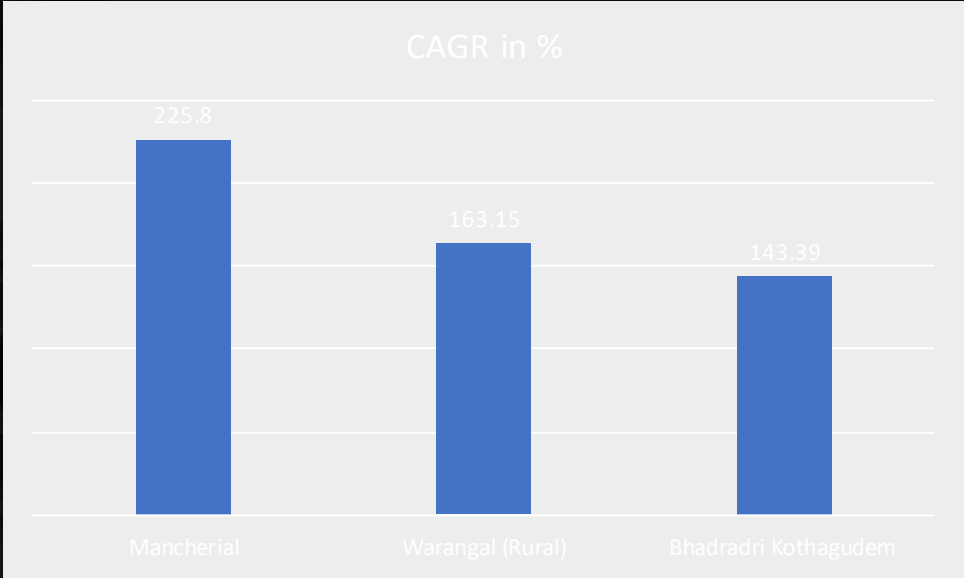
Insight   These 3 districts are growing since 2016

Question

List down the bottom 3 districts based on compounded annual growth rate (CAGR)
of visitors between (2016 – 2019)

Output

District	In_2016_Visitors	By_2019_Visitors	CAGR
Karimnagar	9167468	77491	-79.63 %
Nalgonda	5858461	140918	-71.13 %
Warangal (Urban)	25789934	1797680	-58.85 %

CAGR in %
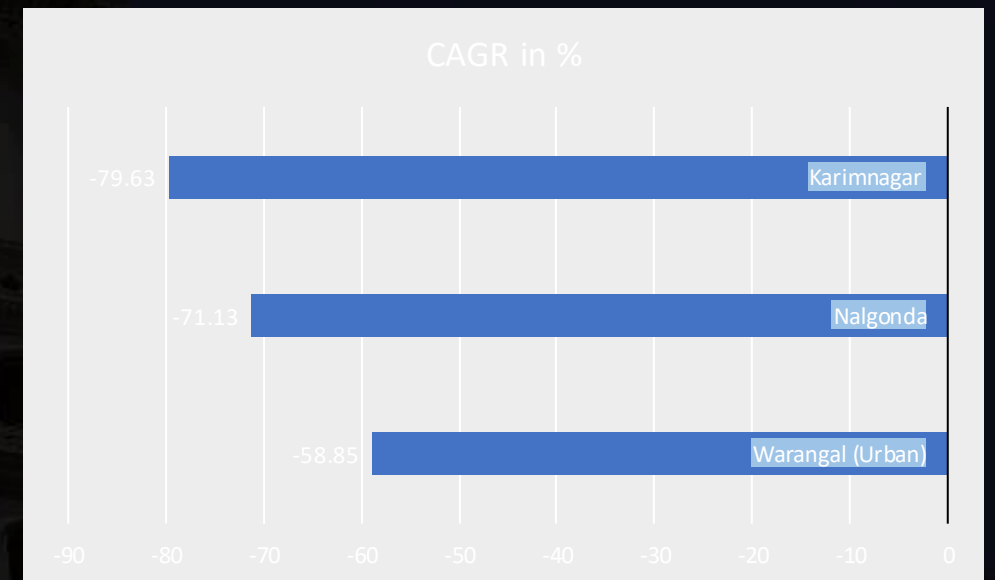
Insight

These 3 districts are not growing since 2016.
Govt should take care of these districts and try to implement
Something new to attract visitors

Question

what are the peak and low season months for HYDERABAD based on the data from 2016 – 2019 for HYDERABAD district only (Year wise)

Output

| District	Year	Month	Type	Total_visitors
Hyderabad	2016	February	Low	808394
Hyderabad	2017	March	Low	1797778
Hyderabad	2018	May	Low	1211046
Hyderabad	2019	September	Low	993948
Hyderabad	2016	June	Peak	12042945
Hyderabad	2017	December	Peak	4910349
Hyderabad	2018	October	Peak	2237550
Hyderabad	2019	January	Peak	1462420

Insight : These are the peak & low season for HYDERABAD

Question

what are the peak and low season months for HYDERABAD based on the data from 2016 – 2019 for HYDERABAD district only (Total wise)

Output

District	Month	Type	Total_Visitors
Hyderabad	June	Peak	12042945
Hyderabad	February	Low	808394

Peak & Low
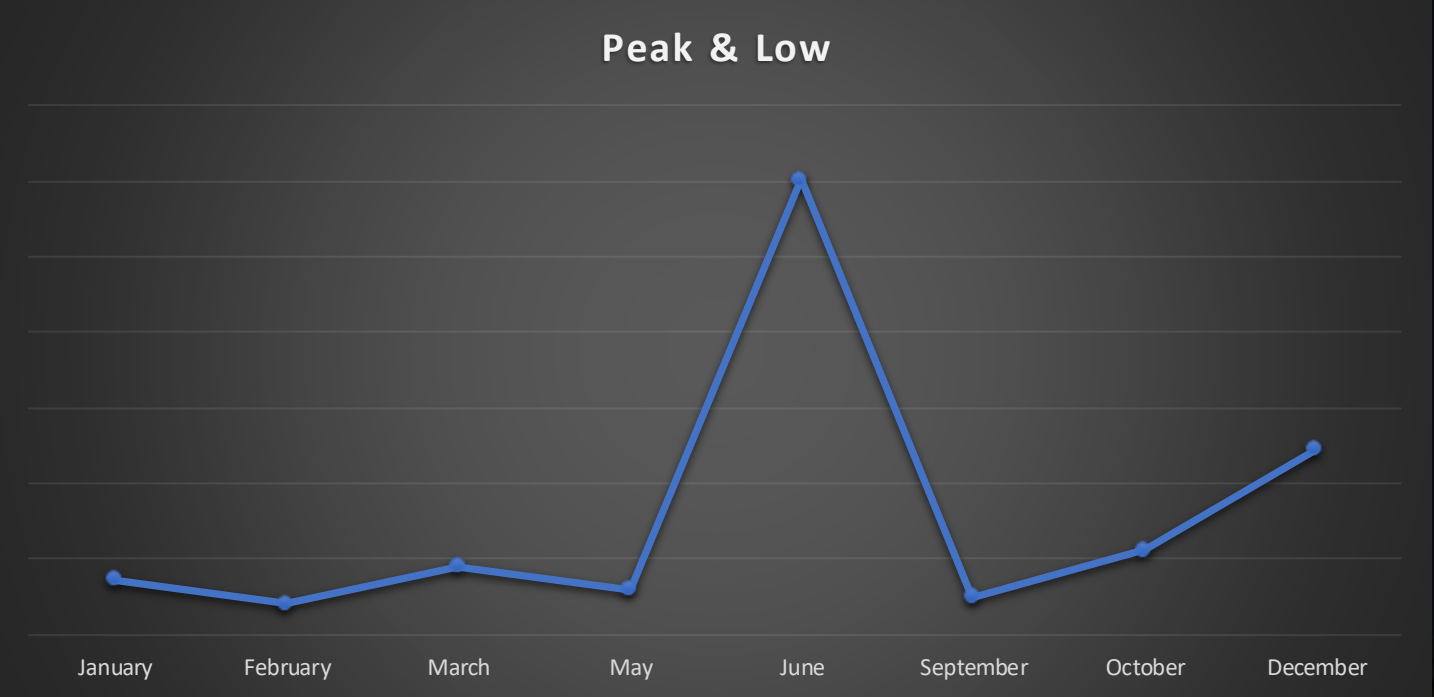
Insight

June month is the Peak Month and February is the Low Month for Hyderabad from 2016 – 2019

Question

show the top & bottom 3 districts with high domestic to foreign tourist ratio

Output

District	Type	Ratio
Nirmal	High	6657898.0000
Jangaon	High	413140.0000
Adilabad	High	228799.2188
Hyderabad	Low	80.2958
Warangal (Rural)	Low	669.2500
Mancherial	Low	1806.7542

HIGH

LOW

Insight

In top 3 districts there are more domestic visitors as compared
To foreign visitors but only hyderabad is the only having almost equal
Number of domestic and foreign visitors

Question

List the top & bottom 5 districts based on 'population to tourist footfall ratio*' ratio in 2019

Output

TOP

District	Year	Type	Ratio
Mulugu	2019	Top	25.4527
Yadadri Bhongir	2019	Top	18.8186
Nirmal	2019	Top	18.4065
Siddipet	2019	Top	12.8345
Hyderabad	2019	Top	8.6403
Nizamabad	2019	Bottom	0.1068
Peddapalli	2019	Bottom	0.0984
Ranga Reddy	2019	Bottom	0.0000
Suryapet	2019	Bottom	0.0000
Vikarabad	2019	Bottom	0.0000

BOTTOM

Insight These top districts are not crowded, so government can plan to accommodate more tourists in these districts

Question

What will be the projected number of domestic and foreign tourists in Hyderabad in 2025 based on the growth rate from previous years

Output

District	IN_2016_Visitors	By_2019_Visitors	CAGR	Visitor_Type	By_2025_Visitors
Hyderabad	23394705	13802362	-16.13 %	Domestic	444436
Hyderabad	163631	319300	24.96 %	Foreign	797484

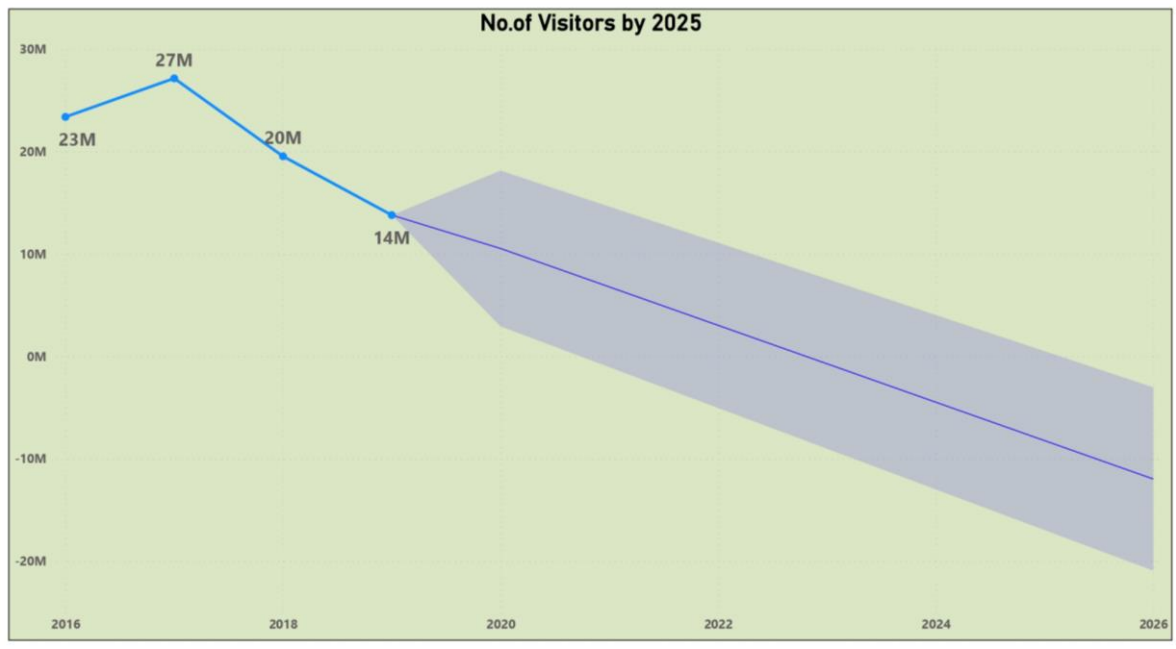[Formula : ((CAGR * Years) * CV) / 100 + CV]

Insight

Domestic visitors will decline by 16.13 % year by year upto 2025
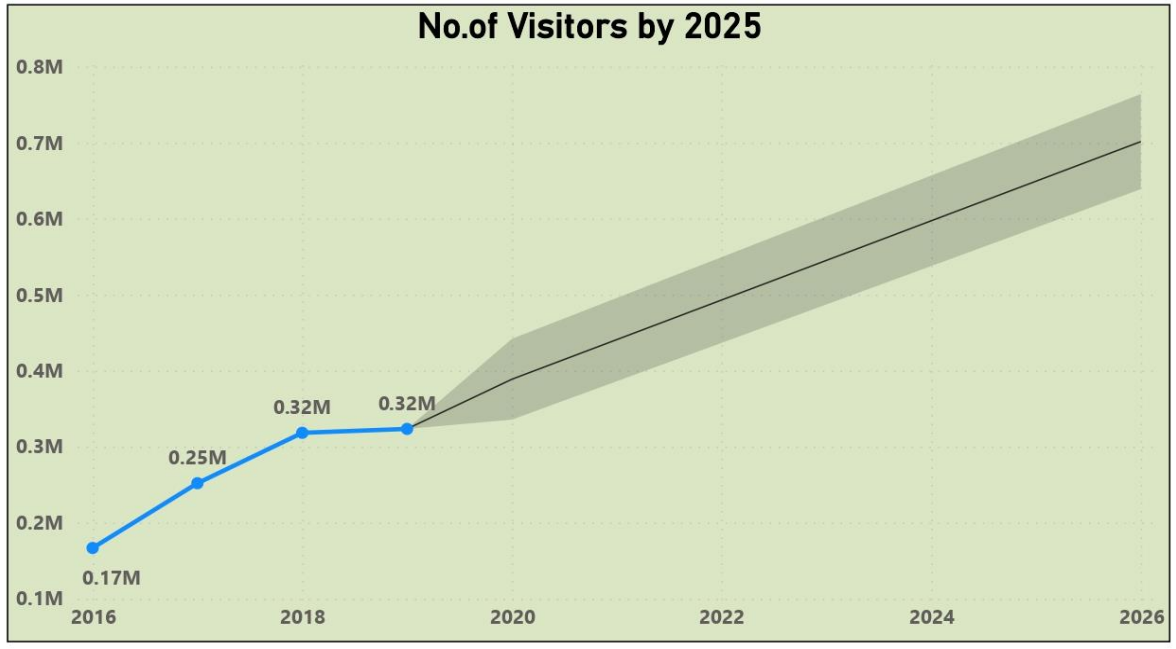And Foreign visitors will increase by 24.96% in 2025

Question

What will be the projected number of domestic and foreign tourists in Hyderabad
in 2025 based on the growth rate from previous years

Domestic

Foreign

Question

Estimate the projected revenue for Hyderabad in 2025 based on average spend per tourist (approximate data)

Tourist	Average Revenue	
Foreign Tourist	₹	5,600.00
Domestic Tourist	₹	1,200.00

District	2025_by_CAGR	2025_by_Forecast	Tourist	Visitors_by_2025	Avg_Spend_by_one
Hyderabad	797484	710443	Foreign	753964	5600
Hyderabad	444436	514833	Domestic	479635	1200

Question

Estimate the projected revenue for Hyderabad in 2025 based on average spend per tourist (approximate data)

Output

District	Tourist	Visitors_by_2025	Actual_revenue_in_2025	Revenue_in_2025_Cr
Hyderabad	Foreign	753964	4222198400	422.2198 Cr
Hyderabad	Domestic	479635	575562000	57.5562 Cr

Total = 479.7 Cr

Insight

Total revenue of Hyderabad district by 2025 is 479.776 Cr as compared with the total tourism by 2025

❖ High Potential District for Tourism Growth

Mancherial	7802	269820	225.8 %
Warangal (Rural)	19400	353500	163.15 %

Mancherial & Warangal (Rural) these two districts have high potential for tourism growth, because these two districts are attracting more tourists year by year.
Manchirial is growing 225.8% every year and
Warangal (R) is growing with 163.15% every year

Queries

```sql
WITH CTE1 AS
    (
    SELECT District , SUM(visitors) AS Total_Visitors,
    CONCAT(FORMAT(SUM(visitors)/1000000,'m'),' ','M') AS 'Total_in_Million'
    FROM d_visitors
    GROUP BY district
    )
SELECT District,Total_Visitors,Total_in_Million,
RANK() OVER ( ORDER BY total_visitors DESC ) AS 'Rank'
FROM CTE1
LIMIT 10;
```

List down the top 3 districts based on the compounded annual growth rate (CAGR) of visitors between (2016-2019)

```sql
WITH CTE1 AS
    (
    SELECT district,SUM(2016_visitors) AS X ,SUM(2019_visitors) AS Y,
    ROUND(((POWER((SUM(2019_visitors) / SUM(2016_visitors)) , (1/3)) - 1)*100),2) AS CAGR
    FROM df_visitors
    GROUP BY district
    ORDER BY cagr DESC
    Limit 3
    )
SELECT District, X AS In_2016_Visitors, Y AS By_2019_Visitors,
CONCAT(CAGR,' %') AS CAGR
FROM CTE1 ;
```

List down the bottom 3 districts based on compounded annual growth rate (CAGR) of visitors between (2016 – 2019)

```sql
WITH CTE1 AS
    (
    SELECT district,SUM(2016_visitors) AS X ,SUM(2019_visitors) AS Y,
    ROUND(((POWER((SUM(2019_visitors) / SUM(2016_visitors)) , (1/3)) - 1)*100),2) AS CAGR
    FROM df_visitors
    GROUP BY district
    HAVING CAGR IS NOT NULL
    ORDER BY CAGR ASC
    LIMIT 3
    )
SELECT District, X AS In_2016_Visitors, Y AS By_2019_Visitors,
CONCAT(CAGR,' %') AS CAGR
FROM CTE1 ;
```

what are the peak and low season months for HYDERABAD based on the data from 2016 – 2019 for HYDERABAD district only (Year wise)

```sql
WITH CTE1 AS
    (
    SELECT District,Year,Month,SUM(Visitors) AS Total_Visitors,
    RANK() OVER (PARTITION BY Year ORDER BY SUM(visitors) DESC) AS A,
    RANK() OVER (PARTITION BY Year ORDER BY SUM(visitors) ASC) AS B
    FROM df_visitors
    WHERE district = 'Hyderabad'
    GROUP BY DISTRICT,Year,Month
    )
SELECT District,Year,Month,
(CASE When a = 1 Then ' Peak '
when b = 1 then ' Low '
END) AS Type,Total_visitors FROM CTE1
WHERE A=1 OR B=1
ORDER BY Type;
```

what are the peak and low season months for HYDERABAD based on the data from 2016 – 2019
for HYDERABAD district only (Total wise)

```sql
WITH CTE1 AS
    (
    SELECT District,Year,Month,SUM(Visitors) AS S,
    RANK() OVER (PARTITION BY district ORDER BY SUM(visitors) ASC) AS A,
    RANK() OVER (PARTITION BY district ORDER BY SUM(visitors) DESC) AS B
    FROM df_visitors
    WHERE district = 'Hyderabad'
    GROUP BY DISTRICT,Year,Month
    )
SELECT District,Month,
(CASE when A=1 then ' Low ' when b=1 then ' Peak ' END) as Type, S AS Total_Visitors FROM CTE1
WHERE A=1 or B=1;
```

```sql
WITH CTE1 AS
    (
    SELECT d.district AS DD,f.district AS FF, sum(d.visitors)/sum(f.visitors) AS Ratio
    FROM d_visitors d JOIN f_visitors f
    ON d.district = f.district
    GROUP BY d.district,f.district
    ORDER BY ratio DESC
    LIMIT 3
    ),
CTE2 AS
    (
    SELECT d.district AS DD,f.district AS FF, sum(d.visitors)/sum(f.visitors) AS Ratio
    FROM d_visitors d JOIN f_visitors f
    ON d.district = f.district
    WHERE f.visitors > 0
    GROUP BY d.district,f.district
    ORDER BY ratio ASC
    LIMIT 3
    )
SELECT DD AS District,'High' AS Type, Ratio FROM cte1
UNION
SELECT DD AS District,'Low' AS Type, Ratio FROM cte2;
```

```sql
WITH CTE1 AS
    (
    SELECT d.district AS District, Year, (SUM(2019_visitors)/SUM(p.population))*100 AS Ratio
    FROM df_visitors d LEFT JOIN pop1 p ON d.district = p.district
    WHERE Year = 2019
    GROUP BY District,Year
    HAVING Ratio IS NOT NULL
    ),
CTE2 AS
    (
    SELECT District, Ratio, Year,
    ROW_NUMBER() OVER (PARTITION BY Year ORDER BY Ratio DESC) AS top,
    ROW_NUMBER() OVER (PARTITION BY Year ORDER BY Ratio ASC) AS bottom
    FROM CTE1
    )
SELECT District,Year,
(CASE when top <= 5 then ' Top ' when bottom <= 5 then ' Bottom ' END) as Type,Ratio
FROM CTE2
WHERE top <= 5 OR bottom <= 5
ORDER BY Ratio DESC;
```

What will be the projected number of domestic and foreign tourists in Hyderabad in 2025 based on the growth rate from previous years

```sql
WITH Main AS (
WITH CTE1 AS
    (
    SELECT district,SUM(2016_visitors) AS X ,SUM(2019_visitors) AS Y,visitor_type,
    ROUND(((POWER((SUM(2019_visitors) / SUM(2016_visitors)) , (1/3)) - 1)*100),2) AS CAGR
    FROM df_visitors
    GROUP BY district,visitor_type
    HAVING cagr IS NOT NULL
    ORDER BY cagr DESC
    )
    SELECT District, X AS In_2016_Visitors, Y AS By_2019_Visitors,
    CONCAT(CAGR,' %') AS CAGR,visitor_type
    FROM CTE1
    WHERE district = 'hyderabad' AND visitor_type = 'Domestic'
    UNION
    SELECT District, X AS In_2016_Visitors, Y AS By_2019_Visitors,
    CONCAT(CAGR,' %') AS CAGR,visitor_type
    FROM CTE1
    WHERE district = 'hyderabad' AND visitor_type = 'Foreign'
)
SELECT District, IN_2016_Visitors, By_2019_Visitors, CAGR, Visitor_Type,
ROUND((by_2019_visitors + (by_2019_visitors * (CAGR * 6))/100),0) AS By_2025_Visitors
FROM Main WHERE visitor_type = 'Domestic'
UNION
SELECT District, IN_2016_Visitors, By_2019_Visitors, CAGR, Visitor_Type,
ROUND((by_2019_visitors + (by_2019_visitors * (CAGR * 6))/100),0) AS By_2025_Visitors
FROM Main WHERE visitor_type = 'Foreign';
```

THANKYOU