

SQL DATA-ANALYSIS

of

Project: Providing Tourism Insights to the Telangana Government.

(A Codebasics Resume Challenge Project)

Module-1



THIS IS MODULE 1 OF A DATA ANALYSIS PROJECT FOCUSED ON PROVIDING VALUABLE INSIGHTS TO THE TELANGANA TOURISM DEPARTMENT.

USING SQL ANALYSIS AND DATA CLEANING TECHNIQUES, I HAVE EXTRACTED KEY INSIGHTS AND ADDRESSED RESEARCH QUESTIONS. STAY TUNED FOR MORE MODULES TO EXPLORE FURTHER INSIGHTS AND RECOMMENDATIONS.



[QUESTION-1]

LIST DOWN THE TOP 10 DISTRICTS THAT HAVE THE HIGHEST NUMBER OF DOMESTIC
VISITORS OVERALL (2016–2019)?

```
-- [Query-1]: Top 10 Districts (Domestic)

select district,
        sum(visitors) as overall_visitors

from telangana_project.modify_domestic_visitors
group by district
order by overall_visitors desc limit 10;
```

	district	overall_visitors
•	Hyderabad	83900960
	Rajanna Sircilla	41763276
	Warangal (Urban)	30726603
	Yadadri Bhongir	26893080
	Bhadradri Kothagudem	21600962
	Medak	20542639
	Jayashankar Bhoopalpally	19632865
	Mahbubnagar	17180118
	Nirmal	13315796
	Jagtial	11303514

[QUESTION-2]

LIST DOWN THE TOP 3 DISTRICTS BASED ON COMPOUND ANNUAL GROWTH RATE (CAGR)
OF VISITORS BETWEEN (2016–2019)?

```
• • •
  [Query-1]: For Domestic
with cte as (
select district,
        sum(case when year=2016 then visitors else 0 end) as Initial_Value,
        sum(case when year=2019 then visitors else 0 end) as Final_Value
from telangana_project.modify_domestic_visitors
group by district
select *, round((power(Final_Value/Initial_Value,1/3)-1)*100,2) as CAGR
from cte
order by CAGR desc limit 5;
```



	district	Initial_Value	Final_Value	CAGR
>	Mancherial	7802	269810	225.8
	Warangal (Rural)	19400	353500	163.15
	Bhadradri Kothagudem	889030	12817737	143.39

[QUESTION-3]

LIST DOWN THE BOTTOM 3 DISTRICTS BASED ON COMPOUNDED ANNUAL GROWTH RATE(CAGR)
OF VISITORS BETWEEN (2016–2019)?

```
• • •
-- For Domestic
with cte as (
select district,
      sum(case when year=2016 then visitors else 0 end) as Initial_Value,
      sum(case when year=2019 then visitors else 0 end) as Final_Value
from telangana_project.modify_domestic_visitors
group by district
select *, round((power(Final_Value/Initial_Value,1/3)-1)*100,2) as CAGR
from cte
where Initial_Value ≠ 0
order by CAGR asc limit 3;
```

	district	Initial_Value	Final_Value	CAGR
•	Karimnagar	9167468	77491	-79.63
	Nalgonda	5858461	140918	-71.13
	Warangal (Urban)	25788035	1795230	-58.86

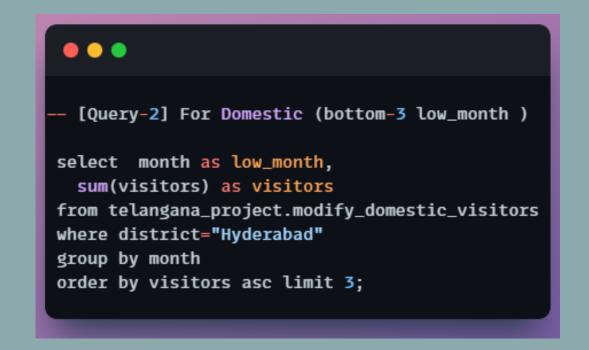
[QUESTION-4]

WHAT ARE THE PEAK AND LOW SEASON MONTHS FOR HYDERABAD BASED ON THE DATA FROM 2016 TO 2019 FOR HYDERABAD DISTRICT?

```
-- [Query-1] For Domestic (Top-3 peak_month)

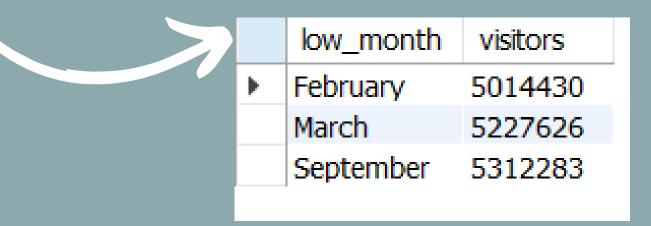
select month as peak_month,
   sum(visitors) as visitors

from telangana_project.modify_domestic_visitors
where district="hyderabad"
group by month
order by visitors desc limit 3;
```





	peak_month	visitors
•	June	16897783
	December	9338637
	October	6552397



[QUESTION-5]

SHOW THE TOP & BOTTOM 3 DISTRICTS WITH HIGH DOMESTIC TO FOREIGN TOURIST RATIO?

```
• • •
with cte as (
select d.district,
       sum(d.visitors) as d_visitors,
       sum(f.visitors) as f_visitors
from telangana_project.modify_domestic_visitors d
join telangana_project.modify_foreign_visitors f
on d.district=f.district and d.year=f.year and d.month=f.month
group by district
cte2 as (
select *, round(d_visitors/f_visitors,0) as ratio
from cte
where f_{visitors} \neq 0
order by ratio
cte3 as (
select *, rank() over(order by ratio) as top,
          rank() over(order by ratio desc) as bottom
from cte2
select district, d_visitors, f_visitors, ratio, top
from cte3
where top<4 or bottom<4
```

district	d_visitors	f_visitors	ratio	top
Hyderabad	83900960	1044898	80	1
Warangal (Rural)	819162	306	2677	2
Mulugu	1819800	575	3165	3
Adilabad	7321575	32	228799	11
Jangaon	826280	2	413140	12
Nirmal	13315796	2	6657898	13
Mirmai	13315/96	2	665/898	13



[QUESTION-6]

LIST THE TOP AND BOTTOM 5 DISTRICTS BASED ON 'POPULATION TO TOURIST FOOTFALL RATIO'* RATIO IN 2019?(*RATIO: TOTAL VISITORS/TOTAL RESIDENTS POPULATION IN THE GIVEN YEAR)

```
• • •
with cte as (
select D.district, sum(D.visitors) as d_visitors,
              sum(F.visitors) as f_visitors,
              sum(D.visitors)+sum(F.visitors) as t_visitors
from telangana_project.modify_domestic_visitors D
join telangana_project.modify_foreign_visitors F
on F.district=D.district and F.month=D.month and F.year=D.year
where D.year=2019
group by district
cte1 as (
select C.*, population_2019 as t_residents,
            round(t_visitors/population_2019,2) as footfall_ratio
from cte C
join population_year_wise Y
on Y.district=C.district
where t_visitors ≠ 0
select district, footfall_ratio, top
from ( select *, row_number() over(order by footfall_ratio desc) as top,
                 row_number() over(order by footfall_ratio asc) as bottom
     from cte1) as subquery
where top<6 or bottom<6
order by footfall_ratio desc;
```

district	footfall_ratio	top
Rajanna Sircilla	28.66	1
Bhadradri Kothagudem	11.27	2
Medak	6.68	3
Mulugu	6.64	4
Yadadri Bhongir	5.71	5
Karimnagar	0.07	24
Komaram Bheem Asifabad	0.03	25
Nizamabad	0.03	26
Peddapalli	0.02	27
Kamareddy	0.00	28
	Rajanna Sircilla Bhadradri Kothagudem Medak Mulugu Yadadri Bhongir Karimnagar Komaram Bheem Asifabad Nizamabad Peddapalli	Rajanna Sircilla 28.66 Bhadradri Kothagudem 11.27 Medak 6.68 Mulugu 6.64 Yadadri Bhongir 5.71 Karimnagar 0.07 Komaram Bheem Asifabad 0.03 Nizamabad 0.03 Peddapalli 0.02

[QUESTION:7]

WHAT WILL BE THE PROJECTED NUMBER OF DOMESTIC AND FOREIGN TOURISTS IN HYDERABAD IN 2025 BASED ON THE GROWTH RATE FROM PREVIOUS YEARS?

```
with cte as (
select district, sum(case when year=2016 then visitors else 0 end) as Initial_Value,
    sum(case when year=2019 then visitors else 0 end) as Final_Value
from telangana_project.modify_domestic_visitors
where district="Hyderabad"
)
select *, round(Final_Value*power((1+AGR),6),0) as projected_dom_2025
from (
    select *, round(power(Final_Value/Initial_Value, (1/3))-1,2) as AGR  # AGR=-0.16
from cte
    ) as subquery
```



	district	Initial_Value	Final_Value	AGR	projected_dom_2025
•	Hyderabad	23394705	13802362	-0.16	4848743

[QUESTION-8]

ESTIMATED THE PROJECTED REVENUE FOR HYDERABAD IN 2025 BASED ON AVERAGE SPEND PER TOURIST (APPROXIMATE DATA)

TOURIST | AVERAGE REVENUE FOREIGN | RS. 5600.00 DOMESTIC | RS. 1200.00

```
-- [Query-1] For Domestic Estimation
with cte as (
select district, sum(case when year=2016 then visitors else 0 end) as Initial_Value,
                sum(case when year=2019 then visitors else 0 end) as Final_Value
from telangana_project.modify_domestic_visitors
where district="hyderabad"
select *, round(Final_Value*power((1+AGR),6),0) as projected_dom_2025,
         round(Final_Value*power((1+AGR),6),0)*1200 as Projected_dom_revenue
from (
   select *, round(power(Final_Value/Initial_Value, (1/3))-1,2) as AGR
                                                                            # AGR=-0.16
    from cte
   ) as subquery
```

1	district	Initial_Value	Final_Value	AGR	projected_dom_2025	Projected_dom_revenue
	Hyderabad	23394705	13802362	-0.16	4848743	5818491600

THANK YOU!

FOLLOW ME ON LINKEDIN FOR REGULAR UPDATES