

SQL Project: Indian Census 2011 Data Analysis

number of rows into our dataSet

```
SELECT * FROM project.dbo.data1;
```

```
SELECT * FROM project.dbo.data2;
```

dataSet for Jharkhand and Bihar

```
SELECT count(*) FROM project..data1
```

```
SELECT count(*) FROM project..data2
```

population of India

```
SELECT * FROM project..data1 where state in ('Jharkhand' , 'Bihar')
```

Average growth

```
SELECT sum(population) AS Population FROM project..data2
```

Average growth City wise

```
SELECT State,ROUND(AVG(Growth),4)*100 Average_Growth  
FROM project..data1  
GROUP BY State ORDER BY ROUND(AVG(Growth),4)*100 DESC
```

Average sex ratio

```
SELECT state,ROUND(avg(sex_ratio),0) avg_sex_ratio  
FROM project..data1 GROUP BY state ORDER BY avg_sex_ratio DESC;
```

Average literacy rate

```
SELECT state,round(avg(literacy),0) avg_literacy_ratio FROM project..data1  
GROUP BY state HAVING round(avg(literacy),0)>90 ORDER BY avg_literacy_ratio desc ;
```

Top 3 state showing highest growth ratio

```
SELECT top 3 state,avg(growth)*100 avg_growth FROM project..data1 GROUP BY state ORDER BY  
avg_growth desc;
```

Bottom 3 state showing lowest sex ratio

```
SELECT top 3 state,round(avg(sex_ratio),0) avg_sex_ratio  
FROM project..data1 GROUP BY state ORDER BY avg_sex_ratio ASC;
```

Top and bottom 3 states in literacy state

```
DROP TABLE IF EXISTS #topstates;
```

```
CREATE TABLE #topstates
```

```
(
```

```
state nvarchar(255),
```

```
topstates float
```

```
)
```

```
INSERT INTO #topstates
```

```
SELECT State,round(avg(Literacy),0) AS avg_literacy FROM Data1
```

```
GROUP BY State HAVING round(avg(Literacy),0) IS NOT NULL ORDER BY avg_literacy DESC;
```

```
DROP TABLE IF EXISTS #bottomstates;
```

```
CREATE TABLE #bottomstates
```

```
(
```

```
state nvarchar(255),
```

```
bottomstates float
```

```
)
```

```
INSERT INTO #bottomstates
```

```
SELECT State,round(avg(Literacy),0) AS avg_literacy FROM Data1
```

```
GROUP BY State HAVING round(avg(Literacy),0) IS NOT NULL ORDER BY avg_literacy ASC;
```

```
SELECT * FROM (
```

```
SELECT Top 3* FROM #topstates ORDER BY #topstates.topstates DESC ) A
```

```
UNION
```

```
SELECT * FROM (
```

```
SELECT Top 3* FROM #bottomstates ORDER BY #bottomstates.bottomstates ASC) B;
```

States starting with letter a

```
SELECT DISTINCT State FROM Data1 WHERE LOWER(State) LIKE 'a%';
```

Joining both table

Total males and females

```
SELECT D.District,D.State,ROUND(D.Population/(D.Sex_Ratio+1),0) AS Males,
ROUND(D.Population*D.Sex_Ratio/(D.Sex_Ratio+1),0) AS Females FROM
(
SELECT D1.District,D1.State,D1.Sex_Ratio/1000 Sex_Ratio,D2.Population
FROM Project..Data1 AS D1
INNER JOIN Project..Data2 AS D2
ON D1.District = D2.District
) D
```

Total males and females STATE WISE

```
SELECT A.State,SUM(A.Males) AS Total_Males,SUM(A.Females) AS Total_Females FROM
(
SELECT D.District,D.State,ROUND(D.Population/(D.Sex_Ratio+1),0) AS Males,
ROUND(D.Population*D.Sex_Ratio/(D.Sex_Ratio+1),0) AS Females FROM
(
SELECT D1.District,D1.State,D1.Sex_Ratio/1000 Sex_Ratio,D2.Population
FROM Project..Data1 AS D1
INNER JOIN Project..Data2 AS D2
ON D1.District = D2.District
) D
)A
GROUP BY A.State ORDER BY Total_Females DESC
```

Total literate Population by State

```
SELECT A.State ,SUM(Literate_People) Total_Literate_Population,SUM(Illeterate_People)
Total_Illeterate_Population FROM

( SELECT D.District, D.State, ROUND(D.Literacy_Ratio*D.Population,0) Literate_People,
ROUND((1-D.Literacy_Ratio)*D.Population,0) Illeterate_People FROM

( SELECT D1.District,D1.State,D1.Literacy/100 Literacy_Ratio ,D2.Population
FROM Project..Data1 AS D1
INNER JOIN Project..Data2 AS D2
ON D1.District = D2.District

) D) A

GROUP BY A.State
```

Population in previous census State wise

```
SELECT A.State,SUM(A.Previous_Cencus_Population) Previous_Cencus_Population FROM
(SELECT D.District,D.State,ROUND(D.Population/(1+D.Growth),0) Previous_Cencus_Population FROM
(SELECT D1.District,D1.State,D1.Growth Growth ,D2.Population

FROM Project..Data1 AS D1
INNER JOIN Project..Data2 AS D2
ON D1.District = D2.District
) D ) A

GROUP BY A.State;
```

Window

What are the top 3 districts from each state with highest literacy rate

```
SELECT D.* FROM
(SELECT district,State,Literacy,RANK() OVER(PARTITION BY State ORDER BY Literacy DESC) Rank FROM
project..Data1) D

where D.Rank in (1,2,3) ORDER BY State;
```