INDIAN CENSUS – 2011

SQL PROJECT

Q1. Number of rows into our dataset1

```
SELECT COUNT(*) AS Total_RowsDS1 FROM Dataset1;

SELECT COUNT(*) AS Total_RowsDS2 FROM Dataset2;
```

Results Messages

	Total_RowsDS1
1	640

	Total_RowsDS2
1	640

Q2. Dataset for Specific state

```
SELECT * FROM Dataset1
WHERE State in ('Kerala');
```

Results Messages

	District	State	Growth	Sex_Ratio	Literacy
1	Malappuram	Kerala	0.135	1098	93.57
2	Thiruvananthapuram	Kerala	0.021	1087	93.02
3	Ernakulam	Kerala	0.057	1027	95.89
4	Thrissur	Kerala	0.049	1108	95.08
5	Kozhikode	Kerala	0.072	1098	95.08
6	Palakkad	Kerala	0.074	1067	89.31
7	Kollam	Kerala	0.019	1113	94.09
8	Kannur	Kerala	0.047	1136	95.1
9	Alappuzha	Kerala	0.009	1100	95.72
10	Kottayam	Kerala	0.011	1039	97.21
11	Kasaragod	Kerala	0.086	1080	90.09
12	Pathanamthitta	Kerala	-0.03	1132	96.55
13	Idukki	Kerala	-0.018	1006	91.99
14	Wayanad	Kerala	0.047	1035	89.03

```sql
SELECT * FROM Dataset1
WHERE State in ('Kerala','Tamil Nadu','Bihar');
```

Results Messages

	District	State	Growth	Sex_Ratio	Literacy
1	Patna	Bihar	0.237	897	70.68
2	Purbi Champaran	Bihar	0.294	902	55.79
3	Muzaffarpur	Bihar	0.281	900	63.43
4	Chennai	Tamil Nadu	0.07	989	90.18
5	Madhubani	Bihar	0.255	926	58.62
6	Gaya	Bihar	0.264	937	63.67
7	Samastipur	Bihar	0.255	911	61.86
8	Malappuram	Kerala	0.135	1098	93.57
9	Kancheepuram	Tamil Nadu	0.39	986	84.49
10	Saran	Bihar	0.216	954	65.96
11	Darbhanga	Bihar	0.195	911	56.56
12	Vellore	Tamil Nadu	0.132	1007	79.17
13	Pashchim Champaran	Bihar	0.293	909	55.7
14	Thiruvallur	Tamil Nadu	0.353	987	84.03
15	Vaishali	Bihar	0.286	895	66.6

Q3. Population of India

```sql
SELECT SUM(Population)Total_Population FROM Dataset2;
```

Results Messages

	Total_Population
1	1210854977

Q4. Average growth rate

```sql
SELECT AVG(Growth)AVG_Growth FROM Dataset1;
```

Results Messages

	AVG_Growth
1	0.1925125

Q5. Average growth rate by State

```
SELECT State,(AVG(Growth)*100)AVG_Growth FROM Dataset1
GROUP BY State;
```

Results Messages

	State	AVG_Growth
1	Andaman And Nicobar Islands	0.6
2	Andhra Pradesh	10.9391304347826
3	Arunachal Pradesh	27.80625
4	Assam	16.5185185185185
5	Bihar	25.2342105263158
6	Chandigarh	17.2
7	Chhattisgarh	20.0555555555556
8	Dadra and Nagar Haveli	55.9
9	Daman and Diu	42.75
10	Delhi	13.9
11	Goa	8.25
12	Gujarat	17.0846153846154
13	Haryana	20.5
14	Himachal Pradesh	11.35
15	Jammu and Kashmir	24.2727272727273

Q6. Average sex ratio by Top 10 State

```
SELECT TOP 10 State, AVG(Sex_Ratio)AVG_Sex_Ratio FROM
Dataset1
GROUP BY State
ORDER BY AVG_Sex_Ratio DESC;
```

Results Messages

	State	AVG_Sex_Ratio
1	Kerala	1080
2	Puducherry	1074
3	Uttarakhand	1010
4	Tamil Nadu	999
5	Chhattisgarh	994
6	Andhra Pradesh	994
7	Karnataka	984
8	Orissa	983
9	Meghalaya	979
10	Manipur	975

Q7. Average sex ratio by Bottom 10 State

```
SELECT Top 10 State,AVG(Sex_Ratio)AVG_Sex_Ratio
FROM Dataset1
GROUP BY State
ORDER BY AVG_Sex_Ratio ASC;
```

Results Messages

	State	AVG_Sex_Ratio
1	Dadra and Nagar Haveli	774
2	Daman and Diu	782
3	Chandigarh	818
4	Andaman And Nicobar Islands	857
5	Delhi	866
6	Sikkim	874
7	Haryana	879
8	Jammu and Kashmir	883
9	Punjab	896
10	Uttar Pradesh	909

Q8. Average Literacy rate by State

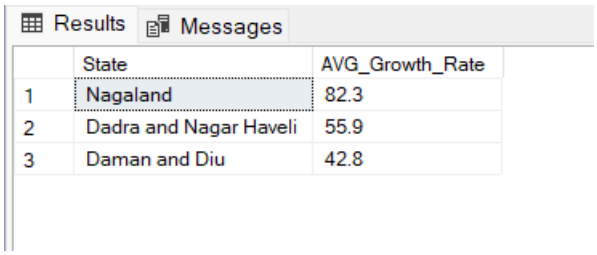
```
SELECT State,ROUND( AVG(Literacy),2)AVG_Literacy_rate
FROM Dataset1
GROUP BY State
HAVING ROUND( AVG(Literacy),2)> 85
ORDER BY  AVG_Literacy_rate DESC;
```

Results Messages

	State	AVG_Literacy_rate
1	Kerala	93.7
2	Lakshadweep	91.85
3	Mizoram	89.36
4	Goa	88.58
5	Puducherry	87.46
6	Tripura	86.64
7	Delhi	86.56
8	Chandigarh	86.05
9	Daman and Diu	85.76

Q9. Top 3 State showing highest growth ratio

```
SELECT TOP 3
State,ROUND((AVG(Growth)*100),1)AVG_Growth_Rate
FROM Dataset1
GROUP BY State
ORDER BY AVG_Growth_Rate DESC;
```

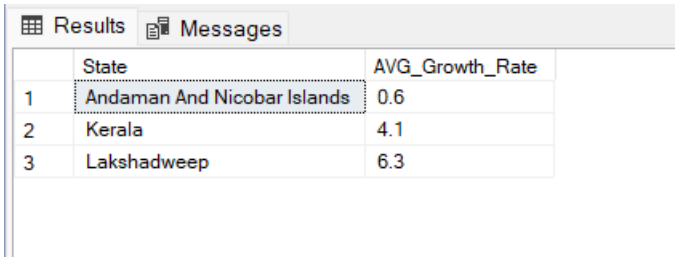


Results | Messages

	State	AVG_Growth_Rate
1	Nagaland	82.3
2	Dadra and Nagar Haveli	55.9
3	Daman and Diu	42.8

Q10. Bottom 3 State showing Lowest growth ratio

```
SELECT TOP 3
State,ROUND((AVG(Growth)*100),1)AVG_Growth_Rate
FROM Dataset1
GROUP BY State
ORDER BY AVG_Growth_Rate ASC;
```



Results | Messages

	State	AVG_Growth_Rate
1	Andaman And Nicobar Islands	0.6
2	Kerala	4.1
3	Lakshadweep	6.3

Q11. Top and bottom 3 states in literacy state

```
DROP TABLE IF EXISTS #Topstates;
CREATE TABLE #Topstates
(State nvarchar(50),
Topstates float
)

INSERT INTO #Topstates
```

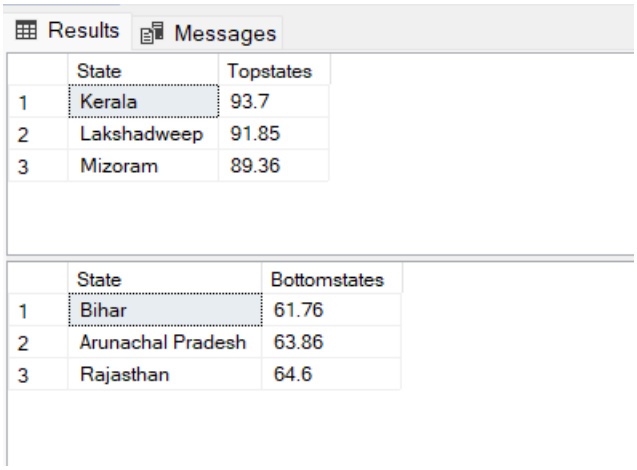
```sql
SELECT TOP 3 State,
ROUND(AVG(Literacy),2)AVG_Literacy_rate
FROM Dataset1
GROUP BY State
ORDER BY AVG_Literacy_rate DESC;

SELECT * FROM #Topstates

DROP TABLE IF EXISTS #Bottomstates;
CREATE TABLE #Bottomstates
(State nvarchar(50),
Bottomstates float
)

INSERT INTO #Bottomstates
SELECT Top 3 State,ROUND(AVG(Literacy),2)AVG_Literacy_rate
FROM Dataset1
GROUP BY State
ORDER BY AVG_Literacy_rate ASC;

SELECT * FROM #Bottomstates
```



Results Messages

	State	Topstates
1	Kerala	93.7
2	Lakshadweep	91.85
3	Mizoram	89.36

	State	Bottomstates
1	Bihar	61.76
2	Arunachal Pradesh	63.86
3	Rajasthan	64.6

Q12. Union Operator

```
SELECT * FROM #Topstates
UNION
SELECT * FROM #Bottomstates
```

Results Messages

	State	Topstates
1	Arunachal Pradesh	63.86
2	Bihar	61.76
3	Kerala	93.7
4	Lakshadweep	91.85
5	Mizoram	89.36
6	Rajasthan	64.6

Q13. Joining both Table

```
SELECT
Dataset1.District,Dataset1.State,Dataset1.Sex_Ratio,Datase
t2.Population
FROM Dataset1
INNER JOIN Dataset2 ON Dataset1.District =
Dataset2.District
```

Results Messages

	District	State	Sex_Ratio	Population
1	Thane	Maharashtra	886	11060148
2	North Twenty Four Parganas	West Bengal	955	10009781
3	Bangalore	Karnataka	916	9621551
4	Pune	Maharashtra	915	9429408
5	Mumbai Suburban	Maharashtra	860	9356962
6	South Twenty Four Parganas	West Bengal	956	8161961
7	Barddhaman	West Bengal	945	7717563
8	Ahmadabad	Gujarat	904	7214225
9	Murshidabad	West Bengal	958	7103807
10	Jaipur	Rajasthan	910	6626178
11	Nashik	Maharashtra	934	6107187
12	Surat	Gujarat	787	6081322
13	Allahabad	Uttar Pradesh	901	5954391
14	Paschim Medinipur	West Bengal	966	5913457
15	Patna	Bihar	897	5838465
16	Hugli	West Bengal	961	5519145
17	Rangareddy	Andhra Pra...	961	5296741
18	Nadia	West Bengal	947	5167600
19	East Godavari	Andhra Pra...	1006	5154296
20	Purba Medinipur	West Bengal	938	5095875
21	Guntur	Andhra Pra...	1003	4887813
22	Haora	West Bengal	939	4850029

Q14. Total males and females

Number of females = Total population * Sex ratio / (1000 + Sex ratio)
Number of males = Total population - Number of females

```
SELECT DATA2.State,
SUM(DATA2.Females)AS Total_females,
SUM(DATA2.Males)AS Total_males
FROM
(SELECT DATA1.District,DATA1.State,
ROUND(DATA1.Population * DATA1.Sex_Ratio / (1000 +
DATA1.Sex_Ratio),0) AS Females,
ROUND(DATA1.Population-(DATA1.Population * DATA1.Sex_Ratio
/ (1000 + DATA1.Sex_Ratio)),0) AS Males
FROM
( SELECT
Dataset1.District,Dataset1.State,Dataset1.Sex_Ratio,Datase
t2.Population
FROM Dataset1
INNER JOIN Dataset2 ON Dataset1.District =
Dataset2.District) AS DATA1)AS DATA2
GROUP BY DATA2.State
```

Results | Messages

	State	Total_females	Total_males
1	Andaman And Nicobar Islands	126970	148014
2	Andhra Pradesh	42141160	42439617
3	Arunachal Pradesh	582402	624752
4	Assam	15265719	15939857
5	Bihar	49182975	53518388
6	Chandigarh	474894	580556
7	Chhattisgarh	13518218	13659264
8	Daman and Diu	92983	150264
9	Delhi	64065	77939
10	Goa	719306	739239
11	Gujarat	27889194	30423412
12	Haryana	11856287	13495175
13	Himachal Pradesh	5263833	5337119
14	Jammu and Kashmir	5900699	6640603
15	Jharkhand	15536711	16386367
16	Karnataka	30255239	31095288
17	Kerala	17378572	16027489
18	Lakshadweep	31342	33131

Q15. Find number of Literate and Illiterate people

Total number of literate people = Total population * (Literacy rate / 100)

```
SELECT D2.State,
SUM(D2.Total_literate_people) AS Literate_people,
SUM(D2.Total_illiterate_people) AS Illiterate_people
FROM
(SELECT D1.District, D1.State, D1.Population,
ROUND((D1.Population*D1.Literacy/100),0) AS
Total_literate_people,
ROUND(D1.Population-(D1.Population*D1.Literacy/100),0) AS
Total_illiterate_people
FROM
(SELECT
Dataset1.District,Dataset1.State,Dataset1.Literacy,Dataset
2.Population
FROM Dataset1
INNER JOIN Dataset2 ON Dataset1.District =
Dataset2.District) AS D1) AS D2
GROUP BY D2.State
```

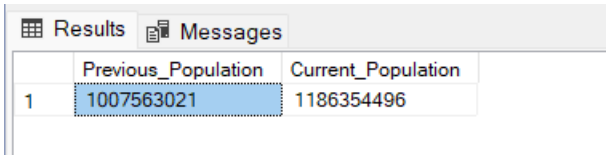
Results Messages

	State	Literate_people	Illiterate_people
1	Andaman And Nicobar Islands	241015	33969
2	Andhra Pradesh	56671677	27909100
3	Arunachal Pradesh	761557	445597
4	Assam	22484409	8721167
5	Bihar	63994271	38707092
6	Chandigarh	908215	147235
7	Chhattisgarh	18621154	8556328
8	Daman and Diu	211827	31420
9	Delhi	125446	16558
10	Goa	1293736	164809
11	Gujarat	45836339	12476267
12	Haryana	19123489	6227973
13	Himachal Pradesh	8883924	1717028
14	Jammu and Kashmir	8391150	4150152
15	Jharkhand	21132066	10791012
16	Karnataka	46146322	15204205
17	Kerala	31395554	2010507
18	Lakshadweep	59218	5255

Q16. Find Population in previous census

Previous population = Current population / (1 + (Growth rate / 100))

```
SELECT SUM(D3.Previous_Population)AS Previous_Population,
SUM(D3.Current_Population)AS Current_Population
FROM
(SELECT D2.State,
SUM(D2.Previous_Population) AS Previous_Population,
SUM(D2.Population) AS Current_Population
FROM
(SELECT D1.District,D1.State,
ROUND(D1.Population/(1+D1.Growth_Rate/100),0)AS
Previous_Population,
D1.Population
FROM
(SELECT
Dataset1.District,Dataset1.State,(Dataset1.Growth*100)AS
Growth_Rate,Dataset2.Population
FROM Dataset1
INNER JOIN Dataset2 ON Dataset1.District =
Dataset2.District) AS D1)AS D2
GROUP BY State)D3
```



THANK YOU