Indian Censes of 2011 data analisys using SQL

```
select * from [indian censes].dbo.Data1;

select * from [indian censes].dbo.[Data 2];

--number of rows into dataset

select count(*) from [indian censes]..Data1

select count(*) from [indian censes]..[Data 2]

--dataset for Andhrapradesh and Maharastra

select * from [indian censes]..Data1 where state in ('Andhra Pradesh','Maharashtra')

--population of India

select * from [indian censes]..[Data 2]

select sum(population) as Population from [indian censes]..[Data 2]

--avg growth percentage

select state,avg(growth)*100 avg_growth from [indian censes]..Data1 group by state;

--avg sex ratio

select state,round(avg(sex_ratio),0) avg_sexratio from [indian censes]..Data1 group by state order by avg_sexratio desc;
```

--avg litericy rate

```
select state,round(avg(literacy),0) avg_literacy from [indian censes]..Data1
group by state having round(avg(literacy),0)>90 order by avg_literacy desc ;
```

--top 3 states showing highest growth ratio

```
select top 3 state,avg(growth)*100 avg_growth from [indian censes]..Data1 group by state order by avg_growth desc;
```

--bottom 3 states showing lowest growth ratio

```
select top 3 state,avg(growth)*100 avg_growth from [indian censes]..Data1 group by state order by avg_growth asc;
```

--bottom 3 states showing lowest sex ratio

```
select top 3 state,round(avg(sex_ratio),0) avg_sexratio from [indian censes]..Data1 group by state order by avg_sexratio asc;
```

--top and botom 3 states in literacy rate

```
drop table if exists #topstates;

create table #topstates
( state nvarchar(255),
  topstate float

  )
```

```
 insert into #topstates
 select state,round(avg(literacy),0) avg_literacy_ratio from [indian censes]..Data1
 group by state order by avg_literacy_ratio desc;

 select top 3* from #topstates order by #topstates.topstate desc;

drop table if exists #bottomstates;

create table #bottomstates
( state nvarchar(255),
 bottomstate float

 )

 insert into #bottomstates
 select state,round(avg(literacy),0) avg_literacy_ratio from [indian censes]..Data1
 group by state order by avg_literacy_ratio asc;

 select top 3* from #bottomstates order by #bottomstates.bottomstate asc;

 --union operator

 select * from (
 select top 3* from #topstates order by #topstates.topstate desc)a

 union

 select * from(
select top 3* from #bottomstates order by #bottomstates.bottomstate asc)b;
```

--states starting with lettter a

```
select distinct state from [indian censes]..Data1 where lower (state) like 'a%' or lower(state) like 'b%'
```

--joining both tables

```
select d.state,sum(d.males) total_males,sum(d.females)total_females from

( select
c.district,c.state,round(c.population/(c.sex_ratio+1),0)males,round((c.population*c.sex_ratio)/(c.sex_rati
o+1),0)females ,c.Population from

( select a.district,a.state,a.sex_ratio/1000 sex_ratio,b.population from [indian censes]..Data1 a inner join
[indian censes]..[Data 2] b on a.district=b.district) c)d

group by d.state;
```

--total literacy rate

```
select c.state, sum(literate_people) total_literate_people,sum(illeterate_people) total_illeterate_people
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 a.district,a.state,a.literacy/100 literacy_ratio,b.population from [indian censes]..Data1 a inner join
[indian censes]..[Data 2] b on a.district=b.district)d)c

group by c.state;
```

--population in previous census

```
select sum(m.state_prev_pop) prev_total_pop,sum(m.state_curr_pop) curr_total_pop from
```

```
(select e.state,sum(e.previous_census_population) state_prev_pop , sum(e.current_census_population) state_curr_pop from

(select d.district,d.state,round(d.population/(1+growth),0) previous_census_population,d.population current_census_population from

(select a.district,a.state,a.growth growth,b.population from [indian censes]..Data1 a inner join [indian censes]..[Data 2] b on a.district=b.district)d)e

group by e.state)m
```

--population vs area

```
select g.total_area/g.prev_total_pop prev_pop_per_area , g.total_area/g.curr_total_pop cur_pop_per_area from

(select q.*,r. total_area from

(select '1' as keyy,n.* from

(select sum(m.state_prev_pop) prev_total_pop,sum(m.state_curr_pop) curr_total_pop from

(select e.state,sum(e.previous_census_population) state_prev_pop , sum(e.current_census_population) state_curr_pop from

(select d.district,d.state,round(d.population/(1+growth),0) previous_census_population,d.population current_census_population from

(select a.district,a.state,a.growth growth,b.population from [indian censes]..Data1 a inner join [indian censes]..[Data 2] b on a.district=b.district)d)e

group by e.state)m)n) q inner join (

select '1' as keyy,z.*from

(select sum(area_km2) total_area from [indian censes]..[Data 2] )z)r on q.keyy=r.keyy)g
```

--window

output top 3 districts from each state with highest literacy rate

```
select a.* from

(select district,state,literacy,rank() over(partition by state order by literacy desc) rnk from [indian censes]..Data1)a

where a.rnk in (1,2,3) order by state
```

```
select a.* from

(select district,state,literacy,rank() over(partition by state order by literacy asc) rnk from [indian censes]..Data1)a

where a.rnk in (1,2,3) order by state
```