

Data Ingestion from the RDS to HDFS using Sqoop

1. Sqoop import command

```
sqoop import --connect jdbc:mysql://upgradawsrds.cpclxrkdvwvmz.us-east-1.rds.amazonaws.com/indiaahs2012_13 --username upgraduser --password upgraduser --table Key_indicator_districtwise
```

2. Command to see the list of imported data

```
[cloudera@quickstart ~]$ hdfs dfs -ls
Found 8 items
drwx----- - cloudera cloudera      0 2018-07-06 19:00 .Trash
drwx----- - cloudera cloudera      0 2018-07-07 04:01 .staging
-rw-r--r--  1 cloudera cloudera    89 2018-06-08 03:50 CSVSerde.txt
drwxr-xr-x - cloudera cloudera      0 2018-07-06 17:20 Key_indicator_districtwise
drwxr-xr-x - cloudera cloudera      0 2018-07-04 17:11 _sqoop
-rw-r--r--  1 cloudera cloudera 25153 2018-06-08 03:48 csv-serde-1.1.2-0.11.0-all.jar
drwxr-xr-x - cloudera cloudera      0 2018-07-06 18:34 department
-rw-r--r--  1 cloudera cloudera 82101 2018-06-22 03:55 json-serde-1.3.7-jar-with-dependencies.jar
[cloudera@quickstart ~]$ hdfs dfs -ls Key_indicator_districtwise
Found 5 items
-rw-r--r--  1 cloudera cloudera      0 2018-07-06 17:20 Key_indicator_districtwise/_SUCCESS
-rw-r--r--  1 cloudera cloudera 244283 2018-07-06 17:20 Key_indicator_districtwise/part-m-00000
-rw-r--r--  1 cloudera cloudera 249691 2018-07-06 17:20 Key_indicator_districtwise/part-m-00001
-rw-r--r--  1 cloudera cloudera 257360 2018-07-06 17:20 Key_indicator_districtwise/part-m-00002
-rw-r--r--  1 cloudera cloudera 276318 2018-07-06 17:20 Key_indicator_districtwise/part-m-00003
```

External table creation in Hive and loading the ingested data into it. Data ingestion verification.

1. Command to create the external table

```
hive> create external table key_indicative_ext (
  > ID      int,
  > State_Name  varchar(100),
  > State_District_Name  varchar(100),
  > AA_Sample_Units_Total double,
  > AA_Sample_Units_Rural double,
  > AA_Sample_Units_Urban double,
  > AA_Households_Total double,
  > AA_Households_Rural double,
  > AA_Households_Urban double,
  > AA_Population_Total double,
  > AA_Population_Rural double,
  > AA_Population_Urban double,
  > AA_Ever_Married_Women_Aged_15_49_Years_Total double,
  > AA_Ever_Married_Women_Aged_15_49_Years_Rural double,
  > AA_Ever_Married_Women_Aged_15_49_Years_Urban double,
  > AA_Currently_Married_Women_Aged_15_49_Years_Total double,
  > AA_Currently_Married_Women_Aged_15_49_Years_Rural double,
  > AA_Currently_Married_Women_Aged_15_49_Years_Urban double,
  > AA_Children_12_23_Months_Total double,
  > AA_Children_12_23_Months_Rural double,
  > AA_Children_12_23_Months_Urban double,
  > BB_Average_Household_Size_Sc_Total double,
  > BB_Average_Household_Size_Sc_Rural double,
  > BB_Average_Household_Size_Sc_Urban double,
  > BB_Average_Household_Size_St_Total double,
  > BB_Average_Household_Size_St_Rural double,
```

> BB_Average_Household_Size_St_Urban double,
 > BB_Average_Household_Size_All_Total double,
 > BB_Average_Household_Size_All_Rural double,
 > BB_Average_Household_Size_All_Urban double,
 > BB_Population_Below_Age_15_Years_Total double,
 > BB_Population_Below_Age_15_Years_Rural double,
 > BB_Population_Below_Age_15_Years_Urban double,
 > BB_Dependency_Ratio_Total double,
 > BB_Dependency_Ratio_Rural double,
 > BB_Dependency_Ratio_Urban double,
 > BB_Currently_Married_Illiterate_Women_Aged_15_49_Years_Total double,
 > BB_Currently_Married_Illiterate_Women_Aged_15_49_Years_Rural double,
 > BB_Currently_Married_Illiterate_Women_Aged_15_49_Years_Urban double,
 > CC_Sex_Ratio_At_Birth_Total double,
 > CC_Sex_Ratio_At_Birth_Rural double,
 > CC_Sex_Ratio_At_Birth_Urban double,
 > CC_Sex_Ratio_0_4_Years_Total double,
 > CC_Sex_Ratio_0_4_Years_Rural double,
 > CC_Sex_Ratio_0_4_Years_Urban double,
 > CC_Sex_Ratio_All_Ages_Total double,
 > CC_Sex_Ratio_All_Ages_Rural double,
 > CC_Sex_Ratio_All_Ages_Urban double,
 > DD_Person_Total double,
 > DD_Person_Rural double,
 > DD_Person_Urban double,
 > DD_Male_Total double,
 > DD_Male_Rural double,
 > DD_Male_Urban double,
 > DD_Female_Total double,
 > DD_Female_Rural double,
 > DD_Female_Urban double,
 > EE_Marriages_Among_Females_Below_Legal_Age_18_Years_Total double,
 > EE_Marriages_Among_Females_Below_Legal_Age_18_Years_Rural double,
 > EE_Marriages_Among_Females_Below_Legal_Age_18_Years_Urban double,
 > EE_Marriages_Among_Males_Below_Legal_Age_21_Years_Total double,
 > EE_Marriages_Among_Males_Below_Legal_Age_21_Years_Rural double,
 > EE_Marriages_Among_Males_Below_Legal_Age_21_Years_Urban double,
 > EE_Married_Women_20_24_Years_Married_Before_18_Years_Total double,
 > EE_Married_Women_20_24_Years_Married_Before_18_Years_Rural double,
 > EE_Married_Women_20_24_Years_Married_Before_18_Years_Urban double,
 > EE_Married_Men_25_29_Years_Married_Before_21_Years_Total double,
 > EE_Married_Men_25_29_Years_Married_Before_21_Years_Rural double,
 > EE_Married_Men_25_29_Years_Married_Before_21_Years_Urban double,
 > EE_Mean_Age_At_Marriage_Male_Total double,
 > EE_Mean_Age_At_Marriage_Male_Rural double,
 > EE_Mean_Age_At_Marriage_Male_Urban double,
 > EE_Mean_Age_At_Marriage_Female_Total double,
 > EE_Mean_Age_At_Marriage_Female_Rural double,
 > EE_Mean_Age_At_Marriage_Female_Urban double,
 > FF_Children_Attending_School_Age_6_17_Years_Person_Total double,
 > FF_Children_Attending_School_Age_6_17_Years_Person_Rural double,
 > FF_Children_Attending_School_Age_6_17_Years_Person_Urban double,
 > FF_Children_Attending_School_Age_6_17_Years_Male_Total double,
 > FF_Children_Attending_School_Age_6_17_Years_Male_Rural double,
 > FF_Children_Attending_School_Age_6_17_Years_Male_Urban double,
 > FF_Children_Attending_School_Age_6_17_Years_Female_Total double,
 > FF_Children_Attending_School_Age_6_17_Years_Female_Rural double,
 > FF_Children_Attending_School_Age_6_17_Years_Female_Urban double,
 > FF_Children_Attended_Before_Drop_Out_Age_6_17_Years_Person_Total double,
 > FF_Children_Attended_Before_Drop_Out_Age_6_17_Years_Person_Rural double,
 > FF_Children_Attended_Before_Drop_Out_Age_6_17_Years_Person_Urban double,
 > FF_Children_Attended_Before_Drop_Out_Age_6_17_Years_Male_Total double,
 > FF_Children_Attended_Before_Drop_Out_Age_6_17_Years_Male_Rural double,
 > FF_Children_Attended_Before_Drop_Out_Age_6_17_Years_Male_Urban double,
 > FF_Children_Attended_Before_Drop_Out_Age_6_17_Years_Female_Total double,
 > FF_Children_Attended_Before_Drop_Out_Age_6_17_Years_Female_Rural double,
 > FF_Children_Attended_Before_Drop_Out_Age_6_17_Years_Female_Urban double,
 > GG_Children_Aged_5_14_Years_Engaged_In_Work_Person_Total double,
 > GG_Children_Aged_5_14_Years_Engaged_In_Work_Person_Rural double,
 > GG_Children_Aged_5_14_Years_Engaged_In_Work_Person_Urban double,
 > GG_Children_Aged_5_14_Years_Engaged_In_Work_Male_Total double,

> GG_Children_Aged_5_14_Years_Engaged_In_Work_Male_Rural double,
 > GG_Children_Aged_5_14_Years_Engaged_In_Work_Male_Urban double,
 > GG_Children_Aged_5_14_Years_Engaged_In_Work_Female_Total double,
 > GG_Children_Aged_5_14_Years_Engaged_In_Work_Female_Rural double,
 > GG_Children_Aged_5_14_Years_Engaged_In_Work_Female_Urban double,
 > GG_Work_Participation_Rate_15_Years_And_Above_Person_Total double,
 > GG_Work_Participation_Rate_15_Years_And_Above_Person_Rural double,
 > GG_Work_Participation_Rate_15_Years_And_Above_Person_Urban double,
 > GG_Work_Participation_Rate_15_Years_And_Above_Male_Total double,
 > GG_Work_Participation_Rate_15_Years_And_Above_Male_Rural double,
 > GG_Work_Participation_Rate_15_Years_And_Above_Male_Urban double,
 > GG_Work_Participation_Rate_15_Years_And_Above_Female_Total double,
 > GG_Work_Participation_Rate_15_Years_And_Above_Female_Rural double,
 > GG_Work_Participation_Rate_15_Years_And_Above_Female_Urban double,
 > HH_Prevalence_Disability_Per_100000_Population_Person_Total double,
 > HH_Prevalence_Disability_Per_100000_Population_Person_Rural double,
 > HH_Prevalence_Disability_Per_100000_Population_Person_Urban double,
 > HH_Prevalence_Disability_Per_100000_Population_Male_Total double,
 > HH_Prevalence_Disability_Per_100000_Population_Male_Rural double,
 > HH_Prevalence_Disability_Per_100000_Population_Male_Urban double,
 > HH_Prevalence_Disability_Per_100000_Population_Female_Total double,
 > HH_Prevalence_Disability_Per_100000_Population_Female_Rural double,
 > HH_Prevalence_Disability_Per_100000_Population_Female_Urban double,
 > II_Injured_By_Type_Of_Treatment_Per_100000_Severe_Person_Total double,
 > II_Injured_By_Type_Of_Treatment_Per_100000_Severe_Person_Rural double,
 > II_Injured_By_Type_Of_Treatment_Per_100000_Severe_Person_Urban double,
 > II_Injured_By_Type_Of_Treatment_Per_100000_Severe_Male_Total double,
 > II_Injured_By_Type_Of_Treatment_Per_100000_Severe_Male_Rural double,
 > II_Injured_By_Type_Of_Treatment_Per_100000_Severe_Male_Urban double,
 > II_Injured_By_Type_Of_Treatment_Per_100000_Severe_Female_Total double,
 > II_Injured_By_Type_Of_Treatment_Per_100000_Severe_Female_Rural double,
 > II_Injured_By_Type_Of_Treatment_Per_100000_Severe_Female_Urban double,
 > II_Injured_By_Type_Of_Treatment_Per_100000_Major_Person_Total double,
 > II_Injured_By_Type_Of_Treatment_Per_100000_Major_Person_Rural double,
 > II_Injured_By_Type_Of_Treatment_Per_100000_Major_Person_Urban double,
 > II_Injured_By_Type_Of_Treatment_Per_100000_Major_Male_Total double,
 > II_Injured_By_Type_Of_Treatment_Per_100000_Major_Male_Rural double,
 > II_Injured_By_Type_Of_Treatment_Per_100000_Major_Male_Urban double,
 > II_Injured_By_Type_Of_Treatment_Per_100000_Major_Female_Total double,
 > II_Injured_By_Type_Of_Treatment_Per_100000_Major_Female_Rural double,
 > II_Injured_By_Type_Of_Treatment_Per_100000_Major_Female_Urban double,
 > II_Injured_By_Type_Of_Treatment_Per_100000_Minor_Person_Total double,
 > II_Injured_By_Type_Of_Treatment_Per_100000_Minor_Person_Rural double,
 > II_Injured_By_Type_Of_Treatment_Per_100000_Minor_Person_Urban double,
 > II_Injured_By_Type_Of_Treatment_Per_100000_Minor_Male_Total double,
 > II_Injured_By_Type_Of_Treatment_Per_100000_Minor_Male_Rural double,
 > II_Injured_By_Type_Of_Treatment_Per_100000_Minor_Male_Urban double,
 > II_Injured_By_Type_Of_Treatment_Per_100000_Minor_Female_Total double,
 > II_Injured_By_Type_Of_Treatment_Per_100000_Minor_Female_Rural double,
 > II_Injured_By_Type_Of_Treatment_Per_100000_Minor_Female_Urban double,
 > JJ_Acute_Illness_Per_100000_Diarrhoea_Dysentery_Person_Total double,
 > JJ_Acute_Illness_Per_100000_Diarrhoea_Dysentery_Person_Rural double,
 > JJ_Acute_Illness_Per_100000_Diarrhoea_Dysentery_Person_Urban double,
 > JJ_Acute_Illness_Per_100000_Diarrhoea_Dysentery_Male_Total double,
 > JJ_Acute_Illness_Per_100000_Diarrhoea_Dysentery_Male_Rural double,
 > JJ_Acute_Illness_Per_100000_Diarrhoea_Dysentery_Male_Urban double,
 > JJ_Acute_Illness_Per_100000_Diarrhoea_Dysentery_Female_Total double,
 > JJ_Acute_Illness_Per_100000_Diarrhoea_Dysentery_Female_Rural double,
 > JJ_Acute_Illness_Per_100000_Diarrhoea_Dysentery_Female_Urban double,
 > JJ_Acute_Illness_Per_100000_Respiratory_Infection_Person_Total double,
 > JJ_Acute_Illness_Per_100000_Respiratory_Infection_Person_Rural double,
 > JJ_Acute_Illness_Per_100000_Respiratory_Infection_Person_Urban double,
 > JJ_Acute_Illness_Per_100000_Respiratory_Infection_Male_Total double,
 > JJ_Acute_Illness_Per_100000_Respiratory_Infection_Male_Rural double,
 > JJ_Acute_Illness_Per_100000_Respiratory_Infection_Male_Urban double,
 > JJ_Acute_Illness_Per_100000_Respiratory_Infection_Female_Total double,
 > JJ_Acute_Illness_Per_100000_Respiratory_Infection_Female_Rural double,
 > JJ_Acute_Illness_Per_100000_Respiratory_Infection_Female_Urban double,
 > JJ_Acute_Illness_Per_100000_Fever_All_Types_Person_Total double,
 > JJ_Acute_Illness_Per_100000_Fever_All_Types_Person_Rural double,
 > JJ_Acute_Illness_Per_100000_Fever_All_Types_Person_Urban double,

> JJ_Acute_Illness_Per_100000_Fever_All_Types_Male_Total double,
 > JJ_Acute_Illness_Per_100000_Fever_All_Types_Male_Rural double,
 > JJ_Acute_Illness_Per_100000_Fever_All_Types_Male_Urban double,
 > JJ_Acute_Illness_Per_100000_Fever_All_Types_Female_Total double,
 > JJ_Acute_Illness_Per_100000_Fever_All_Types_Female_Rural double,
 > JJ_Acute_Illness_Per_100000_Fever_All_Types_Female_Urban double,
 > JJ_Acute_Illness_Per_100000_Any_Type_Of_Acute_Person_Total double,
 > JJ_Acute_Illness_Per_100000_Any_Type_Of_Acute_Person_Rural double,
 > JJ_Acute_Illness_Per_100000_Any_Type_Of_Acute_Person_Urban double,
 > JJ_Acute_Illness_Per_100000_Any_Type_Of_Acute_Male_Total double,
 > JJ_Acute_Illness_Per_100000_Any_Type_Of_Acute_Male_Rural double,
 > JJ_Acute_Illness_Per_100000_Any_Type_Of_Acute_Male_Urban double,
 > JJ_Acute_Illness_Per_100000_Any_Type_Of_Acute_Female_Total double,
 > JJ_Acute_Illness_Per_100000_Any_Type_Of_Acute_Female_Rural double,
 > JJ_Acute_Illness_Per_100000_Any_Type_Of_Acute_Female_Urban double,
 > JJ_Acute_Illness_And_Taking_Treatment_Person_Total double,
 > JJ_Acute_Illness_And_Taking_Treatment_Person_Rural double,
 > JJ_Acute_Illness_And_Taking_Treatment_Person_Urban double,
 > JJ_Acute_Illness_And_Taking_Treatment_Male_Total double,
 > JJ_Acute_Illness_And_Taking_Treatment_Male_Rural double,
 > JJ_Acute_Illness_And_Taking_Treatment_Male_Urban double,
 > JJ_Acute_Illness_And_Taking_Treatment_Female_Total double,
 > JJ_Acute_Illness_And_Taking_Treatment_Female_Rural double,
 > JJ_Acute_Illness_And_Taking_Treatment_Female_Urban double,
 > JJ_Acute_Illness_And_Taking_Treatment_Government_Person_Total double,
 > JJ_Acute_Illness_And_Taking_Treatment_Government_Person_Rural double,
 > JJ_Acute_Illness_And_Taking_Treatment_Government_Person_Urban double,
 > JJ_Acute_Illness_And_Taking_Treatment_Government_Male_Total double,
 > JJ_Acute_Illness_And_Taking_Treatment_Government_Male_Rural double,
 > JJ_Acute_Illness_And_Taking_Treatment_Government_Male_Urban double,
 > JJ_Acute_Illness_And_Taking_Treatment_Government_Female_Total double,
 > JJ_Acute_Illness_And_Taking_Treatment_Government_Female_Rural double,
 > JJ_Acute_Illness_And_Taking_Treatment_Government_Female_Urban double,
 > KK_Symptoms_Of_Chronic_Illness_Per_100000_Person_Total double,
 > KK_Symptoms_Of_Chronic_Illness_Per_100000_Person_Rural double,
 > KK_Symptoms_Of_Chronic_Illness_Per_100000_Person_Urban double,
 > KK_Symptoms_Of_Chronic_Illness_Per_100000_Male_Total double,
 > KK_Symptoms_Of_Chronic_Illness_Per_100000_Male_Rural double,
 > KK_Symptoms_Of_Chronic_Illness_Per_100000_Male_Urban double,
 > KK_Symptoms_Of_Chronic_Illness_Per_100000_Female_Total double,
 > KK_Symptoms_Of_Chronic_Illness_Per_100000_Female_Rural double,
 > KK_Symptoms_Of_Chronic_Illness_Per_100000_Female_Urban double,
 > KK_Chronic_Illness_And_Sought_Medical_Care_Person_Total double,
 > KK_Chronic_Illness_And_Sought_Medical_Care_Person_Rural double,
 > KK_Chronic_Illness_And_Sought_Medical_Care_Person_Urban double,
 > KK_Chronic_Illness_And_Sought_Medical_Care_Male_Total double,
 > KK_Chronic_Illness_And_Sought_Medical_Care_Male_Rural double,
 > KK_Chronic_Illness_And_Sought_Medical_Care_Male_Urban double,
 > KK_Chronic_Illness_And_Sought_Medical_Care_Female_Total double,
 > KK_Chronic_Illness_And_Sought_Medical_Care_Female_Rural double,
 > KK_Chronic_Illness_And_Sought_Medical_Care_Female_Urban double,
 > KK_Diag_For_Chronic_III_Per_100000_Diabetes_Person_Total double,
 > KK_Diag_For_Chronic_III_Per_100000_Diabetes_Person_Rural double,
 > KK_Diag_For_Chronic_III_Per_100000_Diabetes_Person_Urban double,
 > KK_Diag_For_Chronic_III_Per_100000_Diabetes_Male_Total double,
 > KK_Diag_For_Chronic_III_Per_100000_Diabetes_Male_Rural double,
 > KK_Diag_For_Chronic_III_Per_100000_Diabetes_Male_Urban double,
 > KK_Diag_For_Chronic_III_Per_100000_Diabetes_Female_Total double,
 > KK_Diag_For_Chronic_III_Per_100000_Diabetes_Female_Rural double,
 > KK_Diag_For_Chronic_III_Per_100000_Diabetes_Female_Urban double,
 > KK_Diag_For_Chronic_III_Per_100000_Hypertension_Person_Total double,
 > KK_Diag_For_Chronic_III_Per_100000_Hypertension_Person_Rural double,
 > KK_Diag_For_Chronic_III_Per_100000_Hypertension_Person_Urban double,
 > KK_Diag_For_Chronic_III_Per_100000_Hypertension_Male_Total double,
 > KK_Diag_For_Chronic_III_Per_100000_Hypertension_Male_Rural double,
 > KK_Diag_For_Chronic_III_Per_100000_Hypertension_Male_Urban double,
 > KK_Diag_For_Chronic_III_Per_100000_Hypertension_Female_Total double,
 > KK_Diag_For_Chronic_III_Per_100000_Hypertension_Female_Rural double,
 > KK_Diag_For_Chronic_III_Per_100000_Hypertension_Female_Urban double,
 > KK_Diag_For_Chronic_III_Per_100000_Tb_Person_Total double,
 > KK_Diag_For_Chronic_III_Per_100000_Tb_Person_Rural double,

> KK_Diag_For_Chronic_Ill_Per_100000_Tb_Person_Urban double,
 > KK_Diag_For_Chronic_Ill_Per_100000_Tb_Male_Total double,
 > KK_Diag_For_Chronic_Ill_Per_100000_Tb_Male_Rural double,
 > KK_Diag_For_Chronic_Ill_Per_100000_Tb_Male_Urban double,
 > KK_Diag_For_Chronic_Ill_Per_100000_Tb_Female_Total double,
 > KK_Diagnosed_For_Chronic_Illness_Per_100000_Tb_Female_Rural double,
 > KK_Diagnosed_For_Chronic_Illness_Per_100000_Tb_Female_Urban double,
 > KK_Diagnosed_For_Chronic_Illness_Per_100000_Asthma_Person_Total double,
 > KK_Diagnosed_For_Chronic_Illness_Per_100000_Asthma_Person_Rural double,
 > KK_Diagnosed_For_Chronic_Illness_Per_100000_Asthma_Person_Urban double,
 > KK_Diagnosed_For_Chronic_Illness_Per_100000_Asthma_Male_Total double,
 > KK_Diagnosed_For_Chronic_Illness_Per_100000_Asthma_Male_Rural double,
 > KK_Diagnosed_For_Chronic_Illness_Per_100000_Asthma_Male_Urban double,
 > KK_Diagnosed_For_Chronic_Illness_Per_100000_Asthma_Female_Total double,
 > KK_Diagnosed_For_Chronic_Illness_Per_100000_Asthma_Female_Rural double,
 > KK_Diagnosed_For_Chronic_Illness_Per_100000_Asthma_Female_Urban double,
 > KK_Diag_For_Chronic_Illness_Per_100000_Arthritis_Person_Total double,
 > KK_Diag_For_Chronic_Illness_Per_100000_Arthritis_Person_Rural double,
 > KK_Diag_For_Chronic_Illness_Per_100000_Arthritis_Person_Urban double,
 > KK_Diag_For_Chronic_Illness_Per_100000_Arthritis_Male_Total double,
 > KK_Diag_For_Chronic_Illness_Per_100000_Arthritis_Male_Rural double,
 > KK_Diag_For_Chronic_Illness_Per_100000_Arthritis_Male_Urban double,
 > KK_Diag_For_Chronic_Illness_Per_100000_Arthritis_Female_Total double,
 > KK_Diag_For_Chronic_Illness_Per_100000_Arthritis_Female_Rural double,
 > KK_Diag_For_Chronic_Illness_Per_100000_Arthritis_Female_Urban double,
 > KK_Diag_For_Chronic_Illness_Per_100000_Any_Kind_Person_Total double,
 > KK_Diag_For_Chronic_Illness_Per_100000_Any_Kind_Person_Rural double,
 > KK_Diag_For_Chronic_Illness_Per_100000_Any_Kind_Of_Person_Urban double,
 > KK_Diag_For_Chronic_Illness_Per_100000_Any_Kind_Of_Male_Total double,
 > KK_Diag_For_Chronic_Illness_Per_100000_Any_Kind_Of_Male_Rural double,
 > KK_Diag_For_Chronic_Illness_Per_100000_Any_Kind_Of_Male_Urban double,
 > KK_Diag_For_Chronic_Illness_Per_100000_Any_Kind_Of_Female_Total double,
 > KK_Diag_For_Chronic_Illness_Per_100000_Any_Kind_Of_Female_Rural double,
 > KK_Diag_For_Chronic_Illness_Per_100000_Any_Kind_Of_Female_Urban double,
 > KK_Chronic_Illness_And_Getting_Regular_Treatment_Person_Total double,
 > KK_Chronic_Illness_And_Getting_Regular_Treatment_Person_Rural double,
 > KK_Chronic_Illness_And_Getting_Regular_Treatment_Person_Urban double,
 > KK_Chronic_Illness_And_Getting_Regular_Treatment_Male_Total double,
 > KK_Chronic_Illness_And_Getting_Regular_Treatment_Male_Rural double,
 > KK_Chronic_Illness_And_Getting_Regular_Treatment_Male_Urban double,
 > KK_Chronic_Illness_And_Getting_Regular_Treatment_Female_Total double,
 > KK_Chronic_Illness_And_Getting_Regular_Treatment_Female_Rural double,
 > KK_Chronic_Illness_And_Getting_Regular_Treatment_Female_Urban double,
 > KK_Chronic_Ill_And_Getting_Regular_Treatment_Govt_Person_Total double,
 > KK_Chronic_Ill_And_Getting_Regular_Treatment_Govt_Person_Rural double,
 > KK_Chronic_Ill_And_Getting_Regular_Treatment_Govt_Person_Urban double,
 > KK_Chronic_Ill_And_Getting_Regular_Treatment_Govt_Male_Total double,
 > KK_Chronic_Ill_And_Getting_Regular_Treatment_Govt_Male_Rural double,
 > KK_Chronic_Ill_And_Getting_Regular_Treatment_Govt_Male_Urban double,
 > KK_Chronic_Ill_And_Getting_Regular_Treatment_Govt_Female_Total double,
 > KK_Chronic_Ill_And_Getting_Regular_Treatment_Govt_Female_Rural double,
 > KK_Chronic_Ill_And_Getting_Regular_Treatment_Govt_Female_Urban double,
 > LL_Crude_Birth_Rate_Cbr_Total double,
 > LL_Crude_Birth_Rate_Cbr_Rural double,
 > LL_Crude_Birth_Rate_Cbr_Urban double,
 > LL_Natural_Growth_Rate_Total double,
 > LL_Natural_Growth_Rate_Rural double,
 > LL_Natural_Growth_Rate_Urban double,
 > LL_Total_Fertility_Rate_Total double,
 > LL_Total_Fertility_Rate_Rural double,
 > LL_Total_Fertility_Rate_Urban double,
 > LL_Women_20_24_Reporting_Birth_Of_Order_2_Above_Total double,
 > LL_Women_20_24_Reporting_Birth_Of_Order_2_Above_Rural double,
 > LL_Women_20_24_Reporting_Birth_Of_Order_2_Above_Urban double,
 > LL_Women_Reporting_Birth_Of_Order_3_Above_Total double,
 > LL_Women_Reporting_Birth_Of_Order_3_Above_Rural double,
 > LL_Women_Reporting_Birth_Of_Order_3_Above_Urban double,
 > LL_Women_With_Two_Children_Wanting_No_More_Children_Total double,
 > LL_Women_With_Two_Children_Wanting_No_More_Children_Rural double,
 > LL_Women_With_Two_Children_Wanting_No_More_Children_Urban double,
 > LL_Women_15_19_Years_Who_Were_Already_Mothers_Or_Pregnant_Total double,

> LL_Women_15_19_Years_Who_Were_Already_Mothers_Or_Pregnant_Rural double,
 > LL_Women_15_19_Years_Who_Were_Already_Mothers_Or_Pregnant_Urban double,
 > LL_Median_Age_At_First_Live_Birth_Of_Women_15_49_Years_Total double,
 > LL_Median_Age_At_First_Live_Birth_Of_Women_15_49_Years_Rural double,
 > LL_Median_Age_At_First_Live_Birth_Of_Women_15_49_Years_Urban double,
 > LL_Median_Age_At_First_Live_Birth_Of_Women_25_49_Years_Total double,
 > LL_Median_Age_At_First_Live_Birth_Of_Women_25_49_Years_Rural double,
 > LL_Median_Age_At_First_Live_Birth_Of_Women_25_49_Years_Urban double,
 > LL_Live_Births_Taking_Place_After_An_Interval_Of_36_Months_Total double,
 > LL_Live_Births_Taking_Place_After_An_Interval_Of_36_Months_Rural double,
 > LL_Live_Births_Taking_Place_After_An_Interval_Of_36_Months_Urban double,
 > LL_Mean_Number_Of_Children_Ever_Born_To_Women_15_49_Years_Total double,
 > LL_Mean_Number_Of_Children_Ever_Born_To_Women_15_49_Years_Rural double,
 > LL_Mean_Number_Of_Children_Ever_Born_To_Women_15_49_Years_Urban double,
 > LL_Mean_Number_Of_Children_Surviving_To_Women_15_49_Years_Total double,
 > LL_Mean_Number_Of_Children_Surviving_To_Women_15_49_Years_Rural double,
 > LL_Mean_Number_Of_Children_Surviving_To_Women_15_49_Years_Urban double,
 > LL_Mean_Number_Of_Children_Ever_Born_To_Women_45_49_Years_Total double,
 > LL_Mean_Number_Of_Children_Ever_Born_To_Women_45_49_Years_Rural double,
 > LL_Mean_Number_Of_Children_Ever_Born_To_Women_45_49_Years_Urban double,
 > MM_Pregnancy_To_Women_15_49_Years_Resulting_In_Abortion_Total double,
 > MM_Pregnancy_To_Women_15_49_Years_Resulting_In_Abortion_Rural double,
 > MM_Pregnancy_To_Women_15_49_Years_Resulting_In_Abortion_Urban double,
 > MM_Women_Who_Received_Any_Anc_Before_Abortion_Total double,
 > MM_Women_Who_Received_Any_Anc_Before_Abortion_Rural double,
 > MM_Women_Who_Received_Any_Anc_Before_Abortion_Urban double,
 > MM_Women_Who_Went_For_Ultrasound_Before_Abortion_Total double,
 > MM_Women_Who_Went_For_Ultrasound_Before_Abortion_Rural double,
 > MM_Women_Who_Went_For_Ultrasound_Before_Abortion_Urban double,
 > MM_Average_Month_Of_Pregnancy_At_The_Time_Of_Abortion_Total double,
 > MM_Average_Month_Of_Pregnancy_At_The_Time_Of_Abortion_Rural double,
 > MM_Average_Month_Of_Pregnancy_At_The_Time_Of_Abortion_Urban double,
 > MM_Abortion_Performed_By_Skilled_Health_Personnel_Total double,
 > MM_Abortion_Performed_By_Skilled_Health_Personnel_Rural double,
 > MM_Abortion_Performed_By_Skilled_Health_Personnel_Urban double,
 > MM_Abortion_Taking_Place_In_Institution_Total double,
 > MM_Abortion_Taking_Place_In_Institution_Rural double,
 > MM_Abortion_Taking_Place_In_Institution_Urban double,
 > NN_Current_Usage_Any_Method_Total double,
 > NN_Current_Usage_Any_Method_Rural double,
 > NN_Current_Usage_Any_Method_Urban double,
 > NN_Current_Usage_Any_Modern_Method_Total double,
 > NN_Current_Usage_Any_Modern_Method_Rural double,
 > NN_Current_Usage_Any_Modern_Method_Urban double,
 > NN_Current_Usage_Female_Sterilization_Total double,
 > NN_Current_Usage_Female_Sterilization_Rural double,
 > NN_Current_Usage_Female_Sterilization_Urban double,
 > NN_Current_Usage_Male_Sterilization_Total double,
 > NN_Current_Usage_Male_Sterilization_Rural double,
 > NN_Current_Usage_Male_Sterilization_Urban double,
 > NN_Current_Usage_Copper_T_Iud_Total double,
 > NN_Current_Usage_Copper_T_Iud_Rural double,
 > NN_Current_Usage_Copper_T_Iud_Urban double,
 > NN_Current_Usage_Pills_Total double,
 > NN_Current_Usage_Pills_Rural double,
 > NN_Current_Usage_Pills_Urban double,
 > NN_Current_Usage_Condom_Nirodh_Total double,
 > NN_Current_Usage_Condom_Nirodh_Rural double,
 > NN_Current_Usage_Condom_Nirodh_Urban double,
 > NN_Current_Usage_Emergency_Contraceptive_Pills_Total double,
 > NN_Current_Usage_Emergency_Contraceptive_Pills_Rural double,
 > NN_Current_Usage_Emergency_Contraceptive_Pills_Urban double,
 > NN_Current_Usage_Any_Traditional_Method_Total double,
 > NN_Current_Usage_Any_Traditional_Method_Rural double,
 > NN_Current_Usage_Any_Traditional_Method_Urban double,
 > NN_Current_Usage_Periodic_Abstinence_Total double,
 > NN_Current_Usage_Periodic_Abstinence_Rural double,
 > NN_Current_Usage_Periodic_Abstinence_Urban double,
 > NN_Current_Usage-Withdrawal_Total double,
 > NN_Current_Usage-Withdrawal_Rural double,
 > NN_Current_Usage-Withdrawal_Urban double,

> NN_Current_Usage_Lam_Total double,
 > NN_Current_Usage_Lam_Rural double,
 > NN_Current_Usage_Lam_Urban double,
 > OO_Unmet_Need_For_Spacing_Total double,
 > OO_Unmet_Need_For_Spacing_Rural double,
 > OO_Unmet_Need_For_Spacing_Urban double,
 > OO_Unmet_Need_For_Limiting_Total double,
 > OO_Unmet_Need_For_Limiting_Rural double,
 > OO_Unmet_Need_For_Limiting_Urban double,
 > OO_Total_Unmet_Need_Total double,
 > OO_Total_Unmet_Need_Rural double,
 > OO_Total_Unmet_Need_Urban double,
 > PP_Married_Pregnant_Women_15_49_Years_Registered_For_Anc_Total double,
 > PP_Married_Pregnant_Women_15_49_Years_Registered_For_Anc_Rural double,
 > PP_Married_Pregnant_Women_15_49_Years_Registered_For_Anc_Urban double,
 > PP_Mothers_Who_Received_Any_Antenatal_Check_Up_Total double,
 > PP_Mothers_Who_Received_Any_Antenatal_Check_Up_Rural double,
 > PP_Mothers_Who_Received_Any_Antenatal_Check_Up_Urban double,
 > PP_Mothers_Who_Had_Antenatal_Check_Up_In_First_Trimester_Total double,
 > PP_Mothers_Who_Had_Antenatal_Check_Up_In_First_Trimester_Rural double,
 > PP_Mothers_Who_Had_Antenatal_Check_Up_In_First_Trimester_Urban double,
 > PP_Mothers_Who_Received_3_Or_More_Antenatal_Care_Total double,
 > PP_Mothers_Who_Received_3_Or_More_Antenatal_Care_Rural double,
 > PP_Mothers_Who_Received_3_Or_More_Antenatal_Care_Urban double,
 > PP_Mothers_Who_Received_At_Least_One_Tt_Injection_Total double,
 > PP_Mothers_Who_Received_At_Least_One_Tt_Injection_Rural double,
 > PP_Mothers_Who_Received_At_Least_One_Tt_Injection_Urban double,
 > PP_Mothers_Who_Consumed_Ifa_For_100_Days_Or_More_Total double,
 > PP_Mothers_Who_Consumed_Ifa_For_100_Days_Or_More_Rural double,
 > PP_Mothers_Who_Consumed_Ifa_For_100_Days_Or_More_Urban double,
 > PP_Mothers_Who_Had_Full_Antenatal_Check_Up_Total double,
 > PP_Mothers_Who_Had_Full_Antenatal_Check_Up_Rural double,
 > PP_Mothers_Who_Had_Full_Antenatal_Check_Up_Urban double,
 > PP_Mothers_Who_Received_Anc_From_Govt_Source_Total double,
 > PP_Mothers_Who_Received_Anc_From_Govt_Source_Rural double,
 > PP_Mothers_Who_Received_Anc_From_Govt_Source_Urban double,
 > PP_Mothers_Whose_Blood_Pressure_Bp_Taken_Total double,
 > PP_Mothers_Whose_Blood_Pressure_Bp_Taken_Rural double,
 > PP_Mothers_Whose_Blood_Pressure_Bp_Taken_Urban double,
 > PP_Mothers_Whose_Blood_Taken_For_Hb_Total double,
 > PP_Mothers_Whose_Blood_Taken_For_Hb_Rural double,
 > PP_Mothers_Whose_Blood_Taken_For_Hb_Urban double,
 > PP_Mothers_Who_Underwent_Ultrasound_Total double,
 > PP_Mothers_Who_Underwent_Ultrasound_Rural double,
 > PP_Mothers_Who_Underwent_Ultrasound_Urban double,
 > QQ_Institutional_Delivery_Total double,
 > QQ_Institutional_Delivery_Rural double,
 > QQ_Institutional_Delivery_Urban double,
 > QQ_Delivery_At_Government_Institution_Total double,
 > QQ_Delivery_At_Government_Institution_Rural double,
 > QQ_Delivery_At_Government_Institution_Urban double,
 > QQ_Delivery_At_Private_Institution_Total double,
 > QQ_Delivery_At_Private_Institution_Rural double,
 > QQ_Delivery_At_Private_Institution_Urban double,
 > QQ_Delivery_At_Home_Total double,
 > QQ_Delivery_At_Home_Rural double,
 > QQ_Delivery_At_Home_Urban double,
 > QQ_Delivery_At_Home_Conducted_By_Skilled_Health_Personnel_Total double,
 > QQ_Delivery_At_Home_Conducted_By_Skilled_Health_Personnel_Rural double,
 > QQ_Delivery_At_Home_Conducted_By_Skilled_Health_Personnel_Urban double,
 > QQ_Safe_Delivery_Total double,
 > QQ_Safe_Delivery_Rural double,
 > QQ_Safe_Delivery_Urban double,
 > QQ_Caesarean_Out_Of_Total_Delivery_In_Government_Total double,
 > QQ_Caesarean_Out_Of_Total_Delivery_In_Government_Rural double,
 > QQ_Caesarean_Out_Of_Total_Delivery_In_Government_Urban double,
 > QQ_Caesarean_Out_Of_Total_Delivery_In_Private_Total double,
 > QQ_Caesarean_Out_Of_Total_Delivery_In_Private_Rural double,
 > QQ_Caesarean_Out_Of_Total_Delivery_In_Private_Urban double,
 > RR_Less_Than_24_Hrs_Stay_In_Institution_After_Delivery_Total double,
 > RR_Less_Than_24_Hrs_Stay_In_Institution_After_Delivery_Rural double,

> RR_Less_Than_24_Hrs_Stay_In_Institution_After_Delivery_Urban double,
 > RR_Mothers_Who_Received_Within_48_Hrs_Of_Delivery_Total double,
 > RR_Mothers_Who_Received_Within_48_Hrs_Of_Delivery_Rural double,
 > RR_Mothers_Who_Received_Within_48_Hrs_Of_Delivery_Urban double,
 > RR_Mothers_Who_Received_Within_1_Week_Of_Delivery_Total double,
 > RR_Mothers_Who_Received_Within_1_Week_Of_Delivery_Rural double,
 > RR_Mothers_Who_Received_Within_1_Week_Of_Delivery_Urban double,
 > RR_Mothers_Who_Did_Not_Receive_Any_Post_Natal_Check_Up_Total double,
 > RR_Mothers_Who_Did_Not_Receive_Any_Post_Natal_Check_Up_Rural double,
 > RR_Mothers_Who_Did_Not_Receive_Any_Post_Natal_Check_Up_Urban double,
 > RR_New_Borns_Who_Were_Checked_Up_Within_24_Hrs_Of_Birth_Total double,
 > RR_New_Borns_Who_Were_Checked_Up_Within_24_Hrs_Of_Birth_Rural double,
 > RR_New_Borns_Who_Were_Checked_Up_Within_24_Hrs_Of_Birth_Urban double,
 > SS_Availed_Financial_Assistance_For_Delivery_Under_Jsy_Total double,
 > SS_Availed_Financial_Assistance_For_Delivery_Under_Jsy_Rural double,
 > SS_Availed_Financial_Assistance_For_Delivery_Under_Jsy_Urban double,
 > SS_Availed_Financial_Assis_For_Inst_Delivery_Under_Jsy_Total double,
 > SS_Availed_Financial_Assis_For_Inst_Delivery_Under_Jsy_Rural double,
 > SS_Availed_Financial_Assis_For_Inst_Delivery_Under_Jsy_Urban double,
 > SS_Availed_Financial_Assis_For_Govt_Delivery_Under_Jsy_Total double,
 > SS_Availed_Financial_Assis_For_Govt_Delivery_Under_Jsy_Rural double,
 > SS_Availed_Financial_Assis_For_Govt_Delivery_Under_Jsy_Urban double,
 > TT_Children_Aged_12_23_Months_Having_Immunization_Card_Total double,
 > TT_Children_Aged_12_23_Months_Having_Immunization_Card_Rural double,
 > TT_Children_Aged_12_23_Months_Having_Immunization_Card_Urban double,
 > TT_Children_Aged_12_23_Months_Who_Have_Received_Bcg_Total double,
 > TT_Children_Aged_12_23_Months_Who_Have_Received_Bcg_Rural double,
 > TT_Children_Aged_12_23_Months_Who_Have_Received_Bcg_Urban double,
 > TT_Children_12_23_Months_Received_3_Doses_Of_Polio_Vaccine_Total double,
 > TT_Children_12_23_Months_Received_3_Doses_Of_Polio_Vaccine_Rural double,
 > TT_Children_12_23_Months_Received_3_Doses_Of_Polio_Vaccine_Urban double,
 > TT_Children_12_23_Months_Received_3_Doses_Of_Dpt_Vaccine_Total double,
 > TT_Children_12_23_Months_Received_3_Doses_Of_Dpt_Vaccine_Rural double,
 > TT_Children_12_23_Months_Received_3_Doses_Of_Dpt_Vaccine_Urban double,
 > TT_Children_Aged_12_23_Months_Received_Measles_Vaccine_Total double,
 > TT_Children_Aged_12_23_Months_Received_Measles_Vaccine_Rural double,
 > TT_Children_Aged_12_23_Months_Received_Measles_Vaccine_Urban double,
 > TT_Children_Aged_12_23_Months_Fully_Immunized_Total double,
 > TT_Children_Aged_12_23_Months_Fully_Immunized_Rural double,
 > TT_Children_Aged_12_23_Months_Fully_Immunized_Urban double,
 > TT_Children_Who_Have_Received_Polio_Dose_At_Birth_Total double,
 > TT_Children_Who_Have_Received_Polio_Dose_At_Birth_Rural double,
 > TT_Children_Who_Have_Received_Polio_Dose_At_Birth_Urban double,
 > TT_Children_Who_Did_Not_Receive_Any_Vaccination_Total double,
 > TT_Children_Who_Did_Not_Receive_Any_Vaccination_Rural double,
 > TT_Children_Who_Did_Not_Receive_Any_Vaccination_Urban double,
 > TT_Children_6_35_Mon_At_Least_1_Vit_A_Dose_Last_6_Months_Total double,
 > TT_Children_6_35_Mon_At_Least_1_Vit_A_Dose_Last_6_Months_Rural double,
 > TT_Children_6_35_Mon_At_Least_1_Vit_A_Dose_Last_6_Months_Urban double,
 > TT_Children_6_35_Mon_Ifa_Tablets_Syrup_Last_3_Months_Total double,
 > TT_Children_6_35_Mon_Ifa_Tablets_Syrup_Last_3_Months_Rural double,
 > TT_Children_6_35_Mon_Ifa_Tablets_Syrup_Last_3_Months_Urban double,
 > TT_Children_Whose_Birth_Weight_Was_Taken_Total double,
 > TT_Children_Whose_Birth_Weight_Was_Taken_Rural double,
 > TT_Children_Whose_Birth_Weight_Was_Taken_Urban double,
 > TT_Children_With_Birth_Weight_Less_Than_2_5_Kg_Total double,
 > TT_Children_With_Birth_Weight_Less_Than_2_5_Kg_Rural double,
 > TT_Children_With_Birth_Weight_Less_Than_2_5_Kg_Urban double,
 > UU_Children_Suffering_From_Diarrhoea_Total double,
 > UU_Children_Suffering_From_Diarrhoea_Rural double,
 > UU_Children_Suffering_From_Diarrhoea_Urban double,
 > UU_Children_Diarrhoea_Who_Received_Haf_Ors_Ort_Total double,
 > UU_Children_Diarrhoea_Who_Received_Haf_Ors_Ort_Rural double,
 > UU_Children_Diarrhoea_Who_Received_Haf_Ors_Ort_Urban double,
 > UU_Children_Suffering_From_Acute_Respiratory_Infection_Total double,
 > UU_Children_Suffering_From_Acute_Respiratory_Infection_Rural double,
 > UU_Children_Suffering_From_Acute_Respiratory_Infection_Urban double,
 > UU_Children_Acute_Respiratory_Infection_Sought_Treatment_Total double,
 > UU_Children_Acute_Respiratory_Infection_Sought_Treatment_Rural double,
 > UU_Children_Acute_Respiratory_Infection_Sought_Treatment_Urban double,
 > UU_Children_Suffering_From_Fever_Total double,

> UU_Children_Suffering_From_Fever_Rural double,
 > UU_Children_Suffering_From_Fever_Urban double,
 > UU_Children_Suffering_From_Fever_Who_Sought_Treatment_Total double,
 > UU_Children_Suffering_From_Fever_Who_Sought_Treatment_Rural double,
 > UU_Children_Suffering_From_Fever_Who_Sought_Treatment_Urban double,
 > VV_Children_Breastfed_Within_One_Hour_Of_Birth_Total double,
 > VV_Children_Breastfed_Within_One_Hour_Of_Birth_Rural double,
 > VV_Children_Breastfed_Within_One_Hour_Of_Birth_Urban double,
 > VV_Children_6_35_Mon_Excl_Breastfed_For_At_Least_6_Mon_Total double,
 > VV_Children_6_35_Mon_Excl_Breastfed_For_At_Least_6_Mon_Rural double,
 > VV_Children_6_35_Mon_Excl_Breastfed_For_At_Least_6_Mon_Urban double,
 > VV_Other_Than_Breast_Milk_During_First_6_Months_Water_Total double,
 > VV_Other_Than_Breast_Milk_During_First_6_Months_Water_Rural double,
 > VV_Other_Than_Breast_Milk_During_First_6_Months_Water_Urban double,
 > VV_1st_6_Months_Animal_Formula_Milk_Total double,
 > VV_1st_6_Months_Animal_Formula_Milk_Rural double,
 > VV_1st_6_Months_Animal_Formula_Milk_Urban double,
 > VV_1st_6_Months_Semi_Solid_Mashed_Food_Total double,
 > VV_1st_6_Months_Semi_Solid_Mashed_Food_Rural double,
 > VV_1st_6_Months_Semi_Solid_Mashed_Food_Urban double,
 > VV_1st_6_Months_Solid_Adult_Food_Total double,
 > VV_1st_6_Months_Solid_Adult_Food_Rural double,
 > VV_1st_6_Months_Solid_Adult_Food_Urban double,
 > VV_1st_6_Months_Vegetables_Fruits_Total double,
 > VV_1st_6_Months_Vegetables_Fruits_Rural double,
 > VV_1st_6_Months_Vegetables_Fruits_Urban double,
 > VV_Avg_Month_Other_Than_Breast_Milk_Water_Total double,
 > VV_Avg_Month_Other_Than_Breast_Milk_Water_Rural double,
 > VV_Avg_Month_Other_Than_Breast_Milk_Water_Urban double,
 > VV_Avg_Month_Other_Than_Breast_Milk_Animal_Formula_Milk_Total double,
 > VV_Avg_Month_Other_Than_Breast_Milk_Animal_Formula_Milk_Rural double,
 > VV_Avg_Month_Other_Than_Breast_Milk_Animal_Formula_Milk_Urban double,
 > VV_Avg_Month_Other_Than_Breast_Milk_Semi_Solid_Mashed_Food_Total double,
 > VV_Avg_Month_Other_Than_Breast_Milk_Semi_Solid_Mashed_Food_Rural double,
 > VV_Avg_Month_Other_Than_Breast_Milk_Semi_Solid_Mashed_Food_Urban double,
 > VV_Avg_Month_Other_Than_Breast_Milk_Solid_Adult_Food_Total double,
 > VV_Avg_Month_Other_Than_Breast_Milk_Solid_Adult_Food_Rural double,
 > VV_Avg_Month_Other_Than_Breast_Milk_Solid_Adult_Food_Urban double,
 > VV_Avg_Month_Other_Than_Breast_Milk_Vegetables_Fruits_Total double,
 > VV_Avg_Month_Other_Than_Breast_Milk_Vegetables_Fruits_Rural double,
 > VV_Avg_Month_Other_Than_Breast_Milk_Vegetables_Fruits_Urban double,
 > WW_Birth_Registered_Total double,
 > WW_Birth_Registered_Rural double,
 > WW_Birth_Registered_Urban double,
 > WW_Children_Registered_And_Received_Birth_Certificate_Total double,
 > WW_Children_Registered_And_Received_Birth_Certificate_Rural double,
 > WW_Children_Registered_And_Received_Birth_Certificate_Urban double,
 > XX_Women_Who_Are_Aware_Of_Hiv_Aids_Total double,
 > XX_Women_Who_Are_Aware_Of_Hiv_Aids_Rural double,
 > XX_Women_Who_Are_Aware_Of_Hiv_Aids_Urban double,
 > XX_Women_Who_Are_Aware_Of_Rti_Sti_Total double,
 > XX_Women_Who_Are_Aware_Of_Rti_Sti_Rural double,
 > XX_Women_Who_Are_Aware_Of_Rti_Sti_Urban double,
 > XX_Women_Who_Are_Aware_Of_Haf_Ors_Ort_Zinc_Total double,
 > XX_Women_Who_Are_Aware_Of_Haf_Ors_Ort_Zinc_Rural double,
 > XX_Women_Who_Are_Aware_Of_Haf_Ors_Ort_Zinc_Urban double,
 > XX_Women_Who_Are_Aware_Of_Danger_Signs_Of_Ari_Pneumonia_Total double,
 > XX_Women_Who_Are_Aware_Of_Danger_Signs_Of_Ari_Pneumonia_Rural double,
 > XX_Women_Who_Are_Aware_Of_Danger_Signs_Of_Ari_Pneumonia_Urban double,
 > YY_Crude_Death_Rate_Cdr_Total_Person double,
 > YY_Crude_Death_Rate_Cdr_Total_Male double,
 > YY_Crude_Death_Rate_Cdr_Total_Female double,
 > YY_Crude_Death_Rate_Cdr_Rural_Person double,
 > YY_Crude_Death_Rate_Cdr_Rural_Male double,
 > YY_Crude_Death_Rate_Cdr_Rural_Female double,
 > YY_Crude_Death_Rate_Cdr_Urban_Person double,
 > YY_Crude_Death_Rate_Cdr_Urban_Male double,
 > YY_Crude_Death_Rate_Cdr_Urban_Female double,
 > YY_Infant_Mortality_Rate_Imr_Total_Person double,
 > YY_Infant_Mortality_Rate_Imr_Total_Male double,
 > YY_Infant_Mortality_Rate_Imr_Total_Female double,

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> YY_Infant_Mortality_Rate_Imr_Rural_Person    double,
> YY_Infant_Mortality_Rate_Imr_Rural_Male double,
> YY_Infant_Mortality_Rate_Imr_Rural_Female    double,
> YY_Infant_Mortality_Rate_Imr_Urban_Person    double,
> YY_Infant_Mortality_Rate_Imr_Urban_Male double,
> YY_Infant_Mortality_Rate_Imr_Urban_Female    double,
> YY_Neo_Natal_Mortality_Rate_Total    double,
> YY_Neo_Natal_Mortality_Rate_Rural    double,
> YY_Neo_Natal_Mortality_Rate_Urban    double,
> YY_Post_Neo_Natal_Mortality_Rate_Total double,
> YY_Post_Neo_Natal_Mortality_Rate_Rural double,
> YY_Post_Neo_Natal_Mortality_Rate_Urban double,
> YY_Under_Five_Mortality_Rate_U5MR_Total_Person double,
> YY_Under_Five_Mortality_Rate_U5MR_Total_Male double,
> YY_Under_Five_Mortality_Rate_U5MR_Total_Female double,
> YY_Under_Five_Mortality_Rate_U5MR_Rural_Person double,
> YY_Under_Five_Mortality_Rate_U5MR_Rural_Male double,
> YY_Under_Five_Mortality_Rate_U5MR_Rural_Female double,
> YY_Under_Five_Mortality_Rate_U5MR_Urban_Person double,
> YY_Under_Five_Mortality_Rate_U5MR_Urban_Male double,
> YY_Under_Five_Mortality_Rate_U5MR_Urban_Female double,
> ZZ_Crude_Birth_Rate_Total_Lower_Limit double,
> ZZ_Crude_Birth_Rate_Total_Upper_Limit double,
> ZZ_Crude_Birth_Rate_Rural_Lower_Limit double,
> ZZ_Crude_Birth_Rate_Rural_Upper_Limit double,
> ZZ_Crude_Birth_Rate_Urban_Lower_Limit double,
> ZZ_Crude_Birth_Rate_Urban_Upper_Limit double,
> ZZ_Crude_Death_Rate_Total_Lower_Limit double,
> ZZ_Crude_Death_Rate_Total_Upper_Limit double,
> ZZ_Crude_Death_Rate_Rural_Lower_Limit double,
> ZZ_Crude_Death_Rate_Rural_Upper_Limit double,
> ZZ_Crude_Death_Rate_Urban_Lower_Limit double,
> ZZ_Crude_Death_Rate_Urban_Upper_Limit double,
> ZZ_Infant_Mortality_Rate_Total_Lower_Limit double,
> ZZ_Infant_Mortality_Rate_Total_Upper_Limit double,
> ZZ_Infant_Mortality_Rate_Rural_Lower_Limit double,
> ZZ_Infant_Mortality_Rate_Rural_Upper_Limit double,
> ZZ_Infant_Mortality_Rate_Urban_Lower_Limit double,
> ZZ_Infant_Mortality_Rate_Urban_Upper_Limit double,
> ZZ_Under_Five_Mortality_Rate_U5MR_Total_Lower_Limit double,
> ZZ_Under_Five_Mortality_Rate_U5MR_Total_Upper_Limit double,
> ZZ_Under_Five_Mortality_Rate_U5MR_Rural_Lower_Limit double,
> ZZ_Under_Five_Mortality_Rate_U5MR_Rural_Upper_Limit double,
> ZZ_Under_Five_Mortality_Rate_U5MR_Urban_Lower_Limit double,
> ZZ_Under_Five_Mortality_Rate_U5MR_Urban_Upper_Limit double,
> ZZ_Sex_Ratio_At_Birth_Total_Lower_Limit double,
> ZZ_Sex_Ratio_At_Birth_Total_Upper_Limit double,
> ZZ_Sex_Ratio_At_Birth_Rural_Lower_Limit double,
> ZZ_Sex_Ratio_At_Birth_Rural_Upper_Limit double,
> ZZ_Sex_Ratio_At_Birth_Urban_Lower_Limit double,
> ZZ_Sex_Ratio_At_Birth_Urban_Upper_Limit double
) row format delimited fields terminated by ',';
OK
Time taken: 0.891 seconds

```

2. Command to load the ingested data into the external table

```
hive> load data inpath '/user/cloudera/Key_indicator_districtwise' into table
key_indicative_ext;
```

Loading data to table default.key_indicative_ext

Table default.key_indicative_ext stats: [numFiles=4, totalSize=1027652]

OK

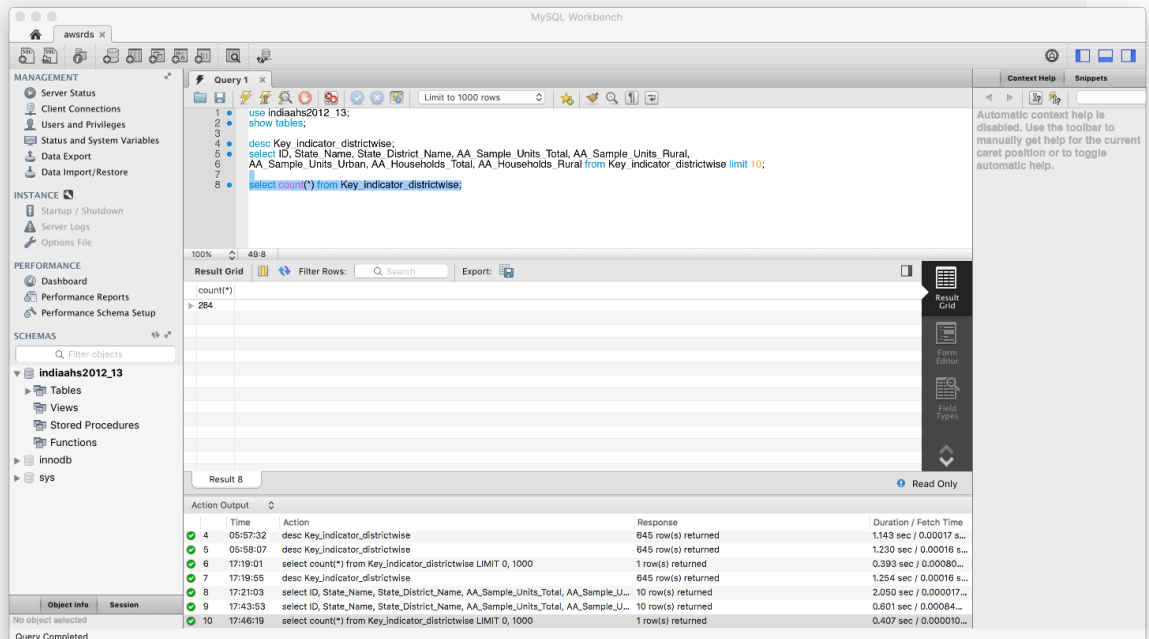
Time taken: 0.703 seconds

3. Queries to verify that the ingestion is correctly accomplished

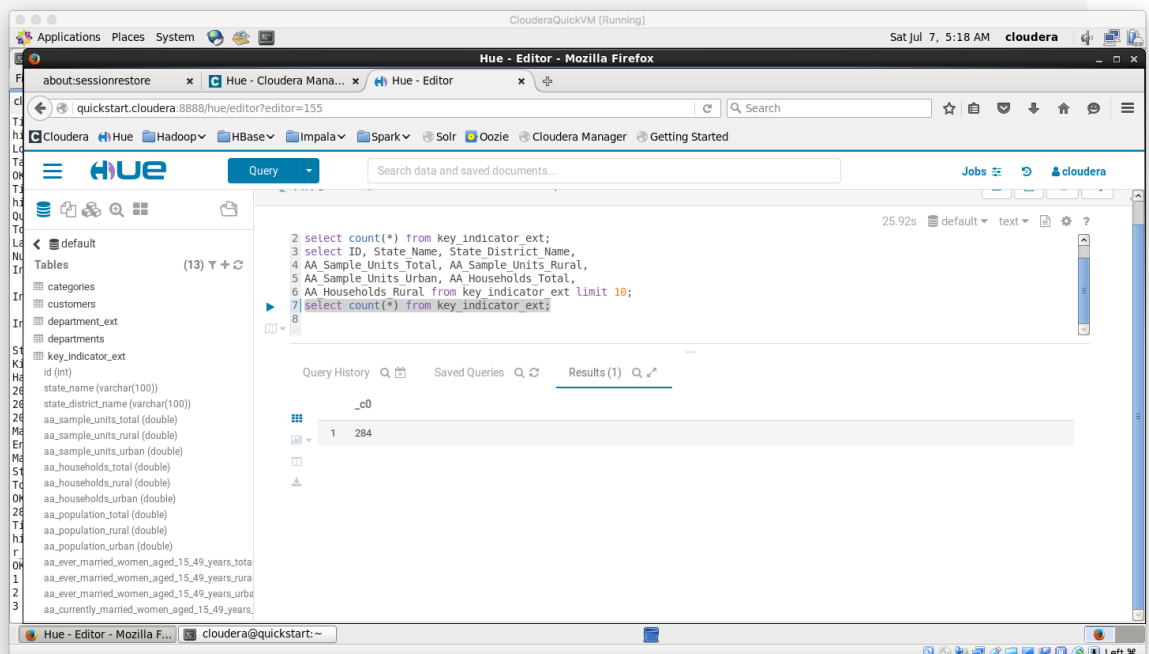
- Query to count the total number of rows along with the screenshots of the data fetched by the query on MySQL Workbench and Hue

`select count(*) from key_indicative_ext;`

MYSQL ScreenShot:



HUE Screen Shot:



- Query to select the top 10 rows and first 8 columns along with the screenshots of the data fetched by the query on MySQL Workbench and Hue
- select ID, State_Name, State_District_Name,
AA_Sample_Units_Total, AA_Sample_Units_Rural,
AA_Sample_Units_Urban, AA_Households_Total,
AA_Households_Rural from key_indicative_ext limit 10;

MYSQL Screen Shot:

The screenshot shows the MySQL Workbench interface. The query editor contains the following SQL query:

```

1 use indiaahs2012_13;
2 show tables;
3 select count(*) from Key_Indicator_districtwise;
4 desc Key_Indicator_districtwise;
5 select ID, State_Name, State_District_Name, AA_Sample_Units_Total, AA_Sample_Units_Rural,
6 AA_Sample_Units_Urban, AA_Households_Total, AA_Households_Rural from Key_Indicator_districtwise limit 10;

```

The results pane displays the output of the query. The first three rows show the results of the 'show tables' and 'desc' queries. The last row shows the results of the 'select' query, which is the top 10 rows of the 'Key_Indicator_districtwise' table.

ID	State_Name	State_District_Name	AA_Sample_Units_Total	AA_Sample_Units_Rural	AA_Sample_Units_Urban	AA_Households_Total	AA_Households_Rural
1	Assam	Barpeta	53	47	6	13711	12765
2	Assam	Bongaigaon	89	73	16	17384	14904
3	Assam	Cachar	105	84	21	27488	24207
4	Assam	Darrang	26	24	2	5951	5769
5	Assam	Dhemaj	121	108	13	14481	12619
6	Assam	Dhubri	42	35	7	11001	9954
7	Assam	Dibrugarh	91	66	25	21378	16514
8	Assam	Goalpara	64	56	8	15891	14630
9	Assam	Golaghat	70	61	9	16021	14183
10	Assam	Hailakandi	10	8	2	2802	2381

HUE Screen Shot:

The screenshot shows the Hue Editor interface. The query editor contains the following SQL query:

```

2 select ID, State Name, State District Name,
3 AA_Sample Units Total, AA Sample Units Rural,
4 AA_Sample Units Urban, AA Households Total,
5 AA Households Rural from key_indicative_ext limit 10;

```

The results pane displays the output of the query, which is the top 10 rows of the 'key_indicative_ext' table.

	id	state_name	state_district_name	aa_sample_units_total	aa_sample_units_rural	aa_sample_units_urban	aa_households_total	aa_households_rural
1	1	Assam	Barpeta	53	47	6	13711	12765
2	2	Assam	Bongaigaon	89	73	16	17384	14904
3	3	Assam	Cachar	105	84	21	27488	24207
4	4	Assam	Darrang	26	24	2	5951	5769
5	5	Assam	Dhemaji	121	108	13	14481	12619
6	6	Assam	Dhubri	42	35	7	11001	9954
7	7	Assam	Dibrugarh	91	66	25	21378	16514
8	8	Assam	Goalpara	64	56	8	15891	14630
9	9	Assam	Golaghat	70	61	9	16021	14183
10	10	Assam	Hailakandi	10	8	2	2802	2381

Subset schema creation in Hive to support the analyses:

1. Columns used in the subset schema

- a. **state_name** VARCHAR(100),
- b. **state_district_name** VARCHAR(100),
- c. **mortality_rate** DOUBLE,
- d. **fertility_rate** DOUBLE,
- e. **population_total** DOUBLE,
- f. **household_total** DOUBLE,
- g. **sex_ration** DOUBLE

2. Storage format used

ORC

3. Create and insert command for the default format

```
create table if NOT EXISTS key_indicative_sub_table (  
state_name VARCHAR(100),  
state_district_name VARCHAR(100),  
mortality_rate DOUBLE,  
fertility_rate DOUBLE,  
population_total DOUBLE,  
household_total DOUBLE,  
sex_ration DOUBLE);
```

```
INSERT INTO TABLE key_indicative_sub_table  
SELECT state_name,  
state_district_name,  
YY_Under_Five_Mortality_Rate_U5MR_Total_Person,  
LL_Total_Fertility_Rate_Total,  
AA_Population_Total,  
AA_Households_Total,  
CC_Sex_Ratio_All_Ages_Total  
FROM key_indicative_ext;
```

4. Create and insert command for the formats such as ORC

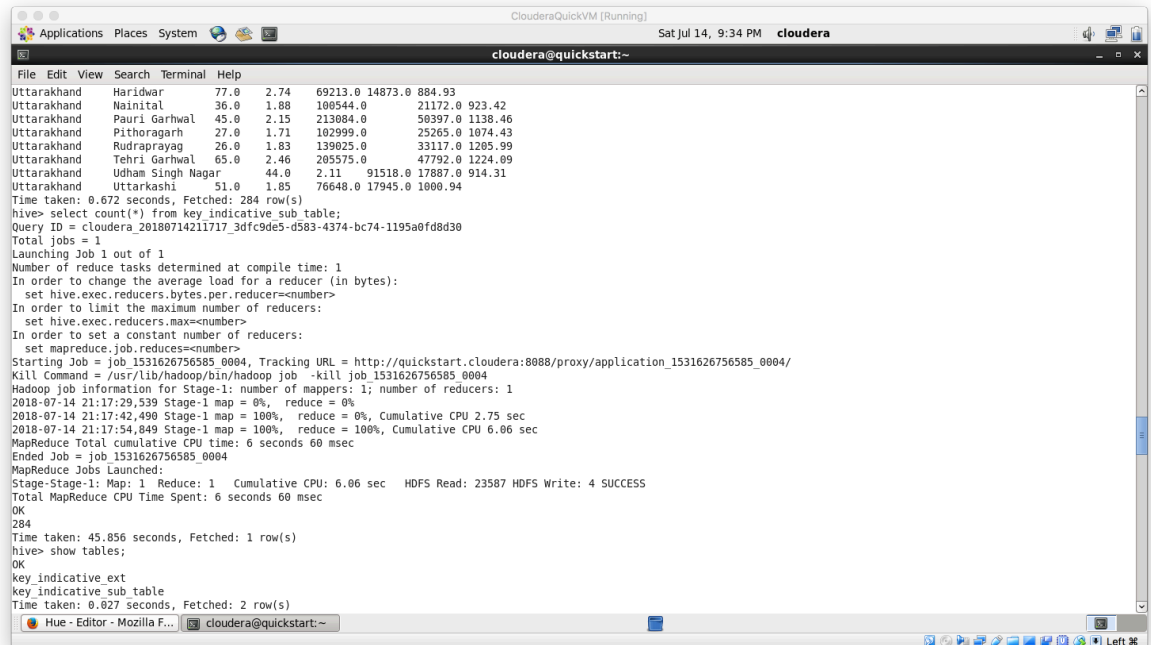
```
hive> create table key_indicative_orc_sub_table(  
  > state_name VARCHAR(100),  
  > state_district_name VARCHAR(100),  
  > mortality_rate DOUBLE,  
  > fertility_rate DOUBLE,  
  > population_total DOUBLE,  
  > household_total DOUBLE,  
  > sex_ration DOUBLE)  
  > STORED AS ORC  
  > LOCATION '/user/hive/orc/cloudera'  
  > TBLPROPERTIES ("orc.compress"="SNAPPY");
```

```
hive> insert into table key_indicative_orc_sub_table  
  > select state_name,  
  > state_district_name,  
  > YY_Under_Five_Mortality_Rate_U5MR_Total_Person,  
  > LL_Total_Fertility_Rate_Total,  
  > AA_Population_Total,  
  > AA_Households_Total,  
  > CC_Sex_Ratio_All_Ages_Total  
  > FROM key_indicative_ext;
```

5. Screenshot of runtimes against each query given above for the default format as well as for the formats such as ORC

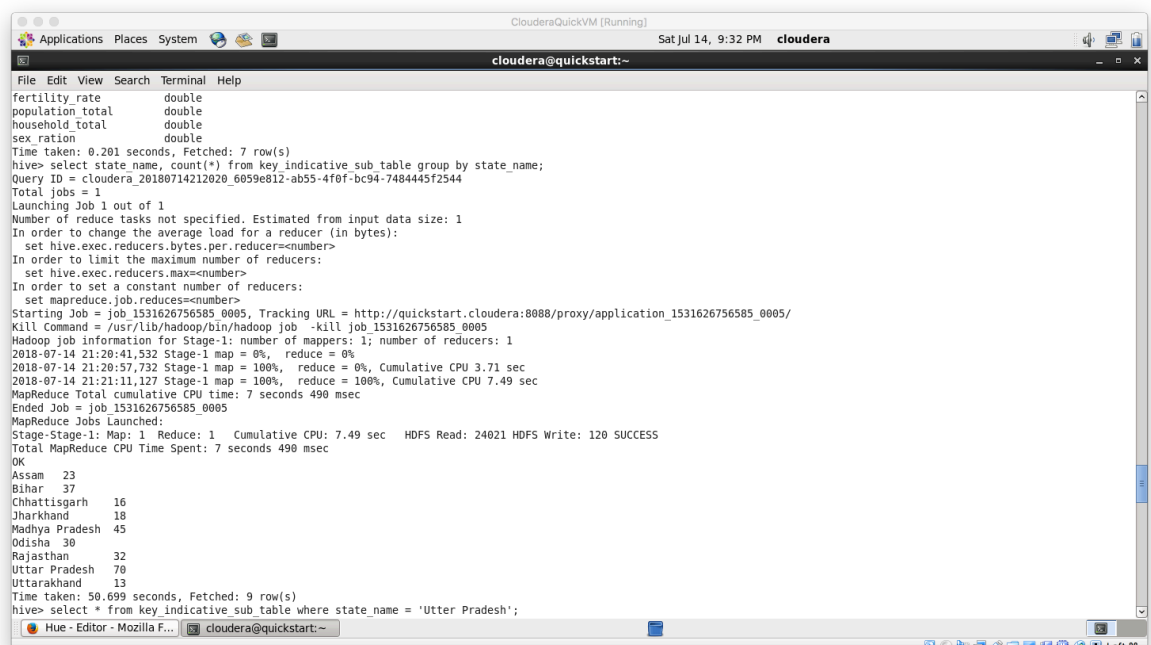
For default format:

1. **hive> select count(*) from key_indicative_sub_table;**



```
ClouderaQuickVM [Running] Sat Jul 14, 9:34 PM cloudera
cloudera@quickstart:~
File Edit View Search Terminal Help
Uttarakhand Haridwar 77.0 2.74 69213.0 14873.0 884.93
Uttarakhand Nainital 36.0 1.88 100544.0 21172.0 923.42
Uttarakhand Pauri Garhwal 45.0 2.15 213084.0 50397.0 1138.46
Uttarakhand Pithoragarh 27.0 1.71 102999.0 25265.0 1074.43
Uttarakhand Rudrapur 26.0 1.83 139025.0 33117.0 1205.99
Uttarakhand Tehri Garhwal 65.0 2.46 205575.0 47792.0 1224.09
Uttarakhand Udham Singh Nagar 44.0 2.11 91518.0 17887.0 914.31
Uttarakhand Uttarkashi 51.0 1.85 76648.0 17945.0 1000.94
Time taken: 0.672 seconds, Fetched: 284 row(s)
hive> select count(*) from key_indicative_sub_table;
Query ID = cloudera_20180714211717_3dfc9de5-d583-4374-bc74-1195a0fd8d30
Total jobs = 1
Launching Job 1 out of 1
Number of reduce tasks determined at compile time: 1
In order to change the average load for a reducer (in bytes):
  set hive.exec.reducers.bytes.per.reducer=<number>
In order to limit the maximum number of reducers:
  set hive.exec.reducers.max=<number>
In order to set a constant number of reducers:
  set mapreduce.job.reduces=<number>
Starting Job = job_1531626756585_0004, Tracking URL = http://quickstart.cloudera:8088/proxy/application_1531626756585_0004/
Kill Command = /usr/lib/hadoop/bin/hadoop job -kill job_1531626756585_0004
Hadoop job information for Stage-1: number of mappers: 1; number of reducers: 1
2018-07-14 21:17:29,539 Stage-1 map = 0%, reduce = 0%
2018-07-14 21:17:42,490 Stage-1 map = 100%, reduce = 0%, Cumulative CPU 2.75 sec
2018-07-14 21:17:54,049 Stage-1 map = 100%, reduce = 100%, Cumulative CPU 6.06 sec
MapReduce Total cumulative CPU time: 6 seconds 60 msec
Ended Job = job_1531626756585_0004
MapReduce Jobs Launched:
Stage-Stage-1: Map: 1 Reduce: 1 Cumulative CPU: 6.06 sec HDFS Read: 23587 HDFS Write: 4 SUCCESS
Total MapReduce CPU Time Spent: 6 seconds 60 msec
OK
284
Time taken: 45.856 seconds, Fetched: 1 row(s)
hive> show tables;
OK
key_indicative_ext
key_indicative_sub_table
Time taken: 0.027 seconds, Fetched: 2 row(s)
```

2. **hive> select state_name, count(*) from key_indicative_sub_table group by state_name;**



```
ClouderaQuickVM [Running] Sat Jul 14, 9:32 PM cloudera
cloudera@quickstart:~
File Edit View Search Terminal Help
fertility_rate double
population_total double
household_total double
sex_ratio double
Time taken: 0.201 seconds, Fetched: 7 row(s)
hive> select state_name, count(*) from key_indicative_sub_table group by state_name;
Query ID = cloudera_20180714212020_6059e812-ab55-4f0f-bc94-7484445f2544
Total jobs = 1
Launching Job 1 out of 1
Number of reduce tasks not specified. Estimated from input data size: 1
In order to change the average load for a reducer (in bytes):
  set hive.exec.reducers.bytes.per.reducer=<number>
In order to limit the maximum number of reducers:
  set hive.exec.reducers.max=<number>
In order to set a constant number of reducers:
  set mapreduce.job.reduces=<number>
Starting Job = job_1531626756585_0005, Tracking URL = http://quickstart.cloudera:8088/proxy/application_1531626756585_0005/
Kill Command = /usr/lib/hadoop/bin/hadoop job -kill job_1531626756585_0005
Hadoop job information for Stage-1: number of mappers: 1; number of reducers: 1
2018-07-14 21:20:41,532 Stage-1 map = 0%, reduce = 0%
2018-07-14 21:20:57,732 Stage-1 map = 100%, reduce = 0%, Cumulative CPU 3.71 sec
2018-07-14 21:21:11,127 Stage-1 map = 100%, reduce = 100%, Cumulative CPU 7.49 sec
MapReduce Total cumulative CPU time: 7 seconds 490 msec
Ended Job = job_1531626756585_0005
MapReduce Jobs Launched:
Stage-Stage-1: Map: 1 Reduce: 1 Cumulative CPU: 7.49 sec HDFS Read: 24021 HDFS Write: 120 SUCCESS
Total MapReduce CPU Time Spent: 7 seconds 490 msec
OK
Assam 23
Bihar 37
Chhattisgarh 16
Jharkhand 18
Madhya Pradesh 45
Odisha 30
Rajasthan 32
Uttar Pradesh 70
Uttarakhand 13
Time taken: 50.699 seconds, Fetched: 9 row(s)
hive> select * from key_indicative_sub_table where state_name = 'Uttar Pradesh';
```

- hive> select * from key_indicative_sub_table where state_name = 'Uttar Pradesh';

```
Uttar Pradesh Hathras 78.0 3.2 55062.0 9779.0 868.83
Uttar Pradesh Jalaun 97.0 3.1 53505.0 10675.0 880.57
Uttar Pradesh Jaunpur 91.0 2.87 43285.0 7272.0 1037.06
Uttar Pradesh Jhansi 59.0 2.3 73590.0 16295.0 875.12
Uttar Pradesh Jyotiba Phule Nagar 92.0 3.51 37927.0 6546.0 930.23
Uttar Pradesh Kannauj 102.0 3.28 156432.0 27431.0 893.92
Uttar Pradesh Kanpur Dehat 94.0 2.84 50626.0 10543.0 873.47
Uttar Pradesh Kanpur Nagar 50.0 2.11 144182.0 29525.0 875.09
Uttar Pradesh Kaushambi 113.0 3.89 67572.0 13179.0 1032.4
Uttar Pradesh Kheri 117.0 3.88 60900.0 12004.0 888.43
Uttar Pradesh Kushinagar 99.0 3.33 48371.0 8608.0 1136.50
Uttar Pradesh Lalitpur 114.0 3.4 39529.0 8108.0 889.05
Uttar Pradesh Lucknow 58.0 2.23 105538.0 21138.0 898.35
Uttar Pradesh Maharajganj 96.0 3.23 68263.0 12950.0 1133.13
Uttar Pradesh Mahoba 73.0 3.55 63537.0 13461.0 887.27
Uttar Pradesh Mainpuri 78.0 3.37 60823.0 10727.0 885.2
Uttar Pradesh Mathura 58.0 2.90 59930.0 10406.0 876.42
Uttar Pradesh Mau 86.0 2.06 74750.0 12606.0 1038.26
Uttar Pradesh Meerut 59.0 3.07 77688.0 12884.0 900.55
Uttar Pradesh Mirzapur 105.0 2.57 38180.0 6709.0 962.7
Uttar Pradesh Moradabad 80.0 3.61 66632.0 11054.0 902.28
Uttar Pradesh Muzaffarnagar 71.0 3.22 75749.0 12812.0 888.14
Uttar Pradesh Pilibhit 91.0 3.56 43038.0 7773.0 880.49
Uttar Pradesh Pratapgarh 104.0 2.9 86770.0 15095.0 1142.93
Uttar Pradesh Rae Bareilly 80.0 3.29 66935.0 12981.0 946.64
Uttar Pradesh Rampur 86.0 3.48 66460.0 11435.0 904.74
Uttar Pradesh Saharanpur 99.0 3.31 58510.0 10259.0 919.02
Uttar Pradesh Sant Kabir Nagar 91.0 3.84 43549.0 8028.0 1174.95
Uttar Pradesh Sant Ravidas Nagar (Bhadohi) 106.0 2.88 55736.0 8974.0 998.61
Uttar Pradesh Shahjahanpur 100.0 4.17 55307.0 9822.0 853.67
Uttar Pradesh Shravasti 130.0 5.52 38131.0 7483.0 983.63
Uttar Pradesh Siddharthnagar 116.0 4.82 56238.0 9919.0 1178.11
Uttar Pradesh Sitapur 114.0 4.42 50237.0 9323.0 882.49
Uttar Pradesh Sonbhadra 99.0 3.78 33562.0 6838.0 952.06
Uttar Pradesh Sultanpur 66.0 3.03 61923.0 11251.0 984.1
Uttar Pradesh Unnao 83.0 3.08 69606.0 14128.0 807.85
Uttar Pradesh Varanasi 90.0 2.32 86266.0 14974.0 921.53
Time taken: 50.252 seconds, Fetched: 70 row(s)
hive> select count(*) from key_indicative_sub_table;
```

For ORC formats:

- hive> select count(*) from key_indicative_orc_sub_table;

```
MapReduce Total cumulative CPU time: 2 seconds 350 msec
Ended Job = job_1531634350797_0001
Stage-4 is selected by condition resolver.
Stage-3 is filtered out by condition resolver.
Stage-5 is filtered out by condition resolver.
Moving data to: hdfs://quickstart.cloudera:8020/user/hive/orc/cloudera/.hive-staging_hive_2018-07-14_23-20-10_737_59917569213112149-1/-ext-10000
Loading data to table default.key_indicative_orc_sub_table
Table default.key_indicative_orc_sub_table stats: [numFiles=1, numRows=284, totalSize=9288, rawDataSize=63900]
MapReduce Jobs Launched:
Stage-Stage-1: Map: 1 Cumulative CPU: 2.35 sec HDFS Read: 1180062 HDFS Write: 9384 SUCCESS
Total MapReduce CPU Time Spent: 2 seconds 350 msec
OK
Time taken: 19.767 seconds
hive> select count(*) from key_indicative_orc_sub_table;
Query ID = cloudera_20180714232323_9e87160f-e601-4746-8d81-28c37e6aba2e
Total jobs = 1
Launching Job 1 out of 1
Number of reduce tasks determined at compile time: 1
In order to change the average load for a reducer (in bytes):
set hive.exec.reducers.bytes.per.reducer=<number>
In order to limit the maximum number of reducers:
set hive.exec.reducers.max=<number>
In order to set a constant number of reducers:
set mapreduce.job.reduces=<number>
Starting Job = job_1531634350797_0002, Tracking URL = http://quickstart.cloudera:8088/proxy/application_1531634350797_0002/
Kill Command = /usr/lib/hadoop/bin/hadoop job -kill job_1531634350797_0002
Hadoop job information for Stage-1: number of mappers: 1; number of reducers: 1
2018-07-14 23:23:44,811 Stage-1 map = 0%, reduce = 0%
2018-07-14 23:23:51,028 Stage-1 map = 100%, reduce = 0%, Cumulative CPU 1.2 sec
2018-07-14 23:23:58,296 Stage-1 map = 100%, reduce = 100%, Cumulative CPU 2.52 sec
MapReduce Total cumulative CPU time: 2 seconds 520 msec
Ended Job = job_1531634350797_0002
MapReduce Jobs Launched:
Stage-Stage-1: Map: 1 Reduce: 1 Cumulative CPU: 2.52 sec HDFS Read: 24786 HDFS Write: 4 SUCCESS
Total MapReduce CPU Time Spent: 2 seconds 520 msec
OK
284
Time taken: 21.086 seconds, Fetched: 1 row(s)
hive>
```

2. **hive> select state_name, count(*) from key_indicative_orc_sub_table group by state_name;**

```
cloudera@quickstart:~  
Stage-Stage-1: Map: 1 Reduce: 1 Cumulative CPU: 2.52 sec HDFS Read: 24786 HDFS Write: 4 SUCCESS  
Total MapReduce CPU Time Spent: 2 seconds 520 msec  
OK  
284  
Time taken: 21.086 seconds, Fetched: 1 row(s)  
hive> select state_name, count(*) from key_indicative_orc_sub_table group by state_name;  
Query ID = cloudera_20180714232626_eba2bc1b-215b-4dea-9dd2-7f6fd017a0d9  
Total jobs = 1  
Launching Job 1 out of 1  
Number of reduce tasks not specified. Estimated from input data size: 1  
In order to change the average load for a reducer (in bytes):  
  set hive.exec.reducers.bytes.per.reducer=<number>  
In order to limit the maximum number of reducers:  
  set hive.exec.reducers.max=<number>  
In order to set a constant number of reducers:  
  set mapreduce.job.reduces=<number>  
Starting Job = job_1531634350797_0003, Tracking URL = http://quickstart.cloudera:8080/proxy/application_1531634350797_0003/  
Kill Command = /usr/lib/hadoop/bin/hadoop job -kill job_1531634350797_0003  
Hadoop job information for Stage-1: number of mappers: 1; number of reducers: 1  
2018-07-14 23:27:03,380 Stage-1 map = 0%, reduce = 0%  
2018-07-14 23:27:08,591 Stage-1 map = 100%, reduce = 0%, Cumulative CPU 1.16 sec  
2018-07-14 23:27:14,808 Stage-1 map = 100%, reduce = 100%, Cumulative CPU 2.48 sec  
MapReduce Total cumulative CPU time: 2 seconds 480 msec  
Ended Job = job_1531634350797_0003  
MapReduce Jobs Launched:  
Stage-Stage-1: Map: 1 Reduce: 1 Cumulative CPU: 2.48 sec HDFS Read: 25871 HDFS Write: 120 SUCCESS  
Total MapReduce CPU Time Spent: 2 seconds 480 msec  
OK  
Assam 23  
Bihar 37  
Chhattisgarh 16  
Jharkhand 18  
Madhya Pradesh 45  
Odisha 30  
Rajasthan 32  
Uttar Pradesh 70  
Uttarakhand 43  
Time taken: 19.563 seconds, Fetched: 9 row(s)  
hive>
```

3. **hive> select * from key_indicative_orc_sub_table where state_name = 'Uttar Pradesh';**

```
cloudera@quickstart:~  
Uttar Pradesh Hathras 78.0 3.2 55062.0 9779.0 868.83  
Uttar Pradesh Jalaun 97.0 3.1 53505.0 10675.0 880.57  
Uttar Pradesh Jaunpur 91.0 2.87 43285.0 7272.0 1037.06  
Uttar Pradesh Jhansi 59.0 2.3 73590.0 16295.0 875.12  
Uttar Pradesh Jyotiba Phule Nagar 92.0 3.51 37927.0 6546.0 930.23  
Uttar Pradesh Kannauj 102.0 3.28 156432.0 27431.0 893.92  
Uttar Pradesh Kanpur Dehat 94.0 2.84 50626.0 10543.0 873.47  
Uttar Pradesh Kanpur Nagar 50.0 2.11 144182.0 29525.0 875.09  
Uttar Pradesh Kaushambi 113.0 3.89 67572.0 13179.0 1032.4  
Uttar Pradesh Kheri 117.0 3.88 60900.0 12004.0 888.43  
Uttar Pradesh Kushinagar 99.0 3.33 48371.0 8608.0 1136.58  
Uttar Pradesh Lalitpur 114.0 3.4 39529.0 8108.0 889.05  
Uttar Pradesh Lucknow 58.0 2.23 105538.0 21138.0 898.35  
Uttar Pradesh Maharajganj 96.0 3.23 68263.0 12950.0 1133.13  
Uttar Pradesh Mahoba 73.0 3.55 63537.0 13461.0 887.27  
Uttar Pradesh Mainpuri 78.0 3.37 60823.0 10727.0 885.2  
Uttar Pradesh Mathura 58.0 2.98 59930.0 10406.0 876.42  
Uttar Pradesh Mau 86.0 2.86 74750.0 12606.0 1038.26  
Uttar Pradesh Meerut 59.0 3.07 77688.0 12884.0 900.55  
Uttar Pradesh Mirzapur 105.0 2.57 38180.0 6709.0 962.7  
Uttar Pradesh Moradabad 80.0 3.61 66632.0 11054.0 902.28  
Uttar Pradesh Muzaffarnagar 71.0 3.22 75749.0 12812.0 888.14  
Uttar Pradesh Pilibhit 91.0 3.56 43038.0 7773.0 880.49  
Uttar Pradesh Pratapgarh 104.0 2.9 86770.0 15695.0 1142.93  
Uttar Pradesh Rae Bareilly 80.0 3.29 66935.0 12981.0 946.64  
Uttar Pradesh Rampur 86.0 3.48 66460.0 11435.0 904.74  
Uttar Pradesh Saharanpur 99.0 3.31 58510.0 10259.0 919.02  
Uttar Pradesh Sant Kabir Nagar 91.0 3.84 43549.0 8028.0 1174.95  
Uttar Pradesh Sant Ravidas Nagar (Bhadohi) 106.0 2.88 55736.0 8974.0 998.61  
Uttar Pradesh Shahjahanpur 100.0 4.17 55307.0 9822.0 853.67  
Uttar Pradesh Shravasti 130.0 5.52 38131.0 7483.0 983.63  
Uttar Pradesh Siddharthnagar 116.0 4.82 56238.0 9919.0 1178.11  
Uttar Pradesh Sitapur 114.0 4.42 50237.0 9323.0 882.49  
Uttar Pradesh Sonbhadra 99.0 3.78 33562.0 6838.0 952.06  
Uttar Pradesh Sultanpur 66.0 3.03 61923.0 11251.0 984.1  
Uttar Pradesh Unnao 83.0 3.08 69686.0 14128.0 887.85  
Uttar Pradesh Varanasi 90.0 2.32 86266.0 14974.0 921.53  
Time taken: 13.4 seconds, Fetched: 70 row(s)  
hive>
```

6. **Create and insert command for the partition table for analyses 1 & 2.**

```
create table key_indicator_orc_sub_part_table (  
  state_district_name string,  
  mortality_rate DOUBLE,  
  fertility_rate DOUBLE,  
  population_total DOUBLE,  
  household_total DOUBLE,  
  sex_ratio DOUBLE)  
partitioned by (state_name string)  
STORED AS ORC  
LOCATION '/user/hive/orc/'  
TBLPROPERTIES ("orc.compress"="SNAPPY")
```



```

insert into table key_indicator_orc_sub_part_table
partition (state_name)
select state_district_name,
mortality_rate,
fertility_rate,
population_total,
household_total,
sex_ration,
state_name
from key_indicator_orc_sub_table;

```

The result of each analysis along with the query and the corresponding chart generated in Hue. Keep optimizations in mind

1. State wise child mortality rate

Query: select state_name, AVG(mortality_rate) as mortality_rate
from key_indicator_orc_sub_part_table
group by state_name;

Result:

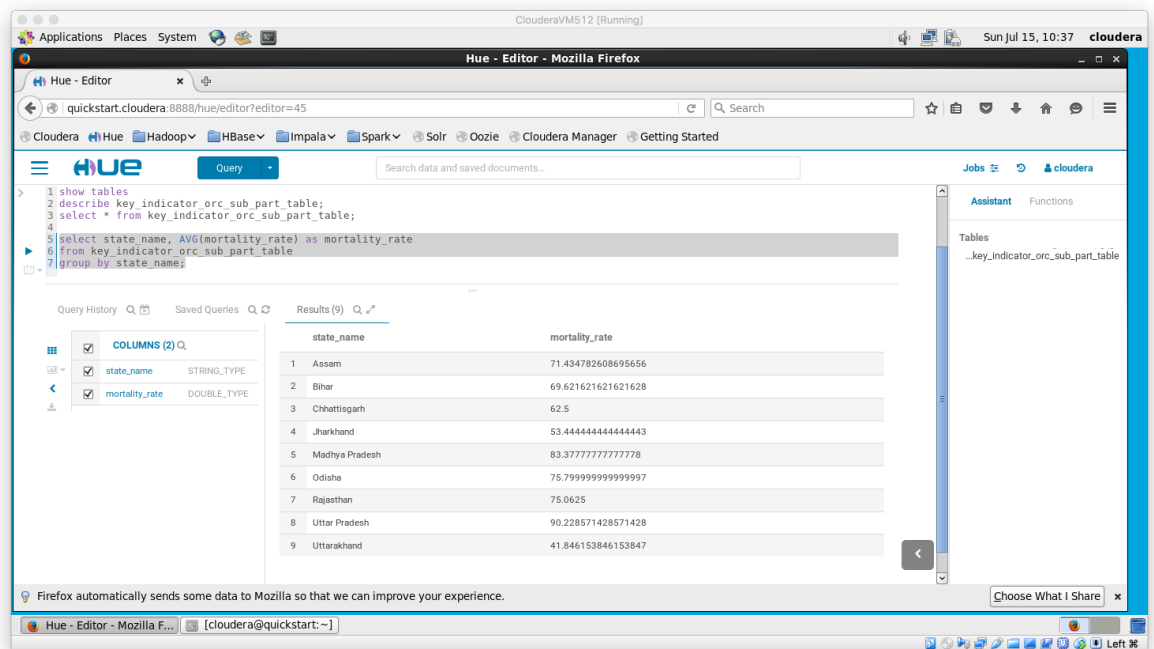
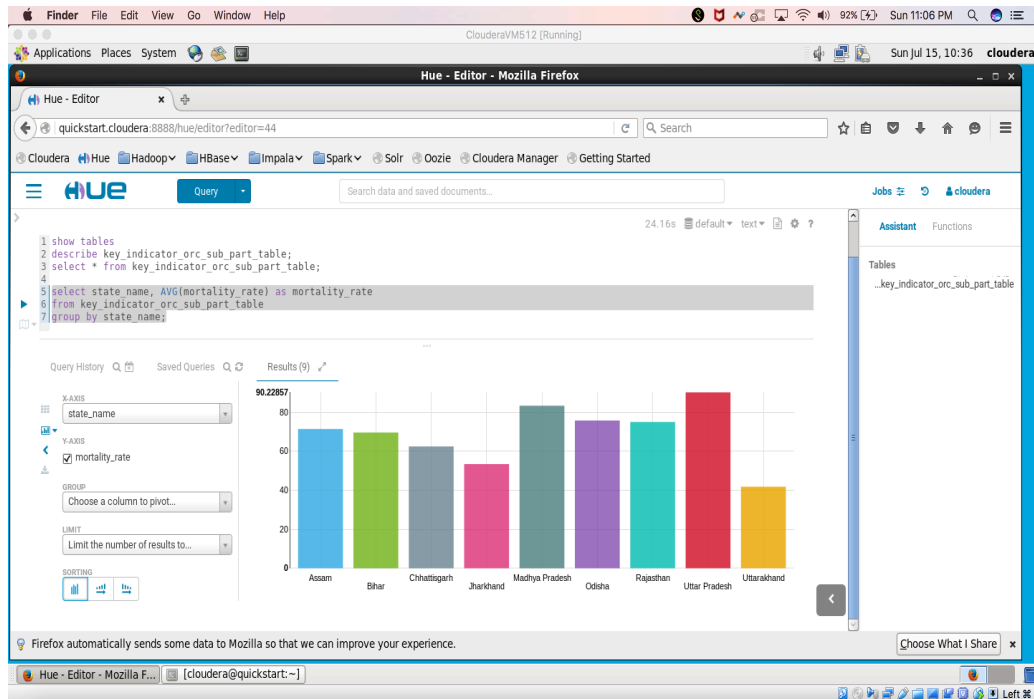


Chart:



2. State wise fertility rate

QUERY: select state_Name, AVG(fertility_rate) as fertility_rate
from key_indicator_orc_sub_part_table
group by State_Name;

Result:

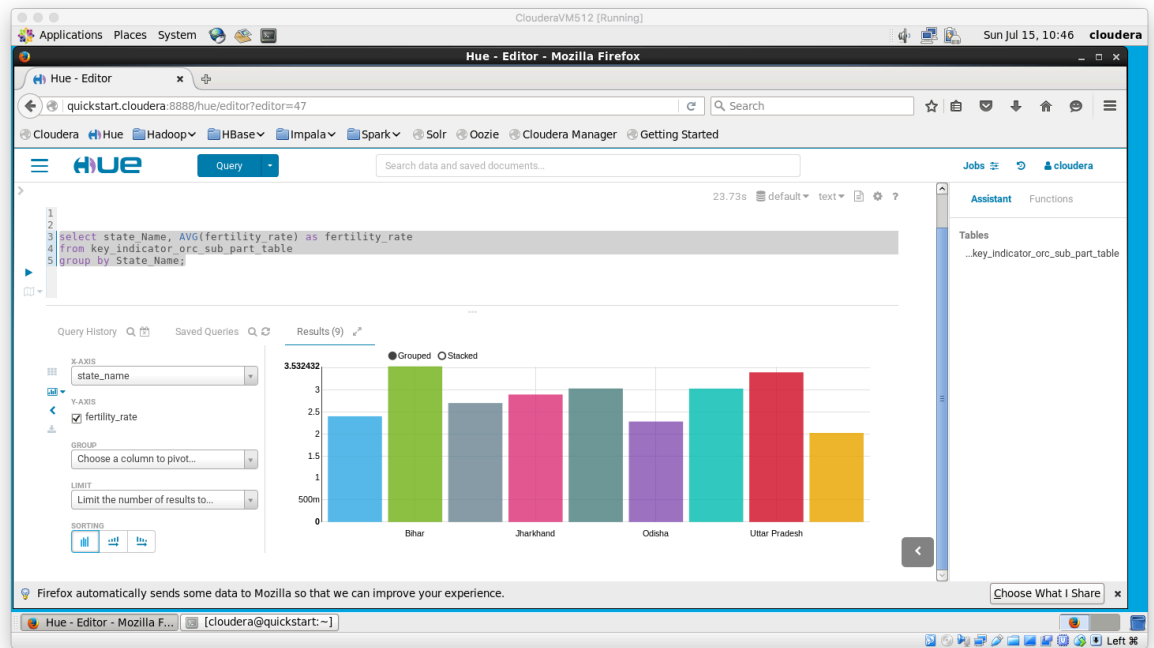
Query:

```
3 select state_Name, AVG(fertility_rate) as fertility_rate
4 from key_indicator_orc_sub_part_table
5 group by State_Name;
```

Results (9)

state_name	fertility_rate
1 Assam	2.3999999999999999
2 Bihar	3.5324324324324321
3 Chhattisgarh	2.7012499999999999
4 Jharkhand	2.8944444444444444
5 Madhya Pradesh	3.0311111111111111
6 Odisha	2.2799999999999998
7 Rajasthan	3.0281250000000002
8 Uttar Pradesh	3.3978571428571427
9 Uttarakhand	2.0223076923076921

Chart:



3. Does high fertility correlate with high child mortality?

QUERY: select state_Name, corr(fertility_rate, mortality_rate) as correlate
from key_indicator_orc_sub_table
group by state_Name;

Result:

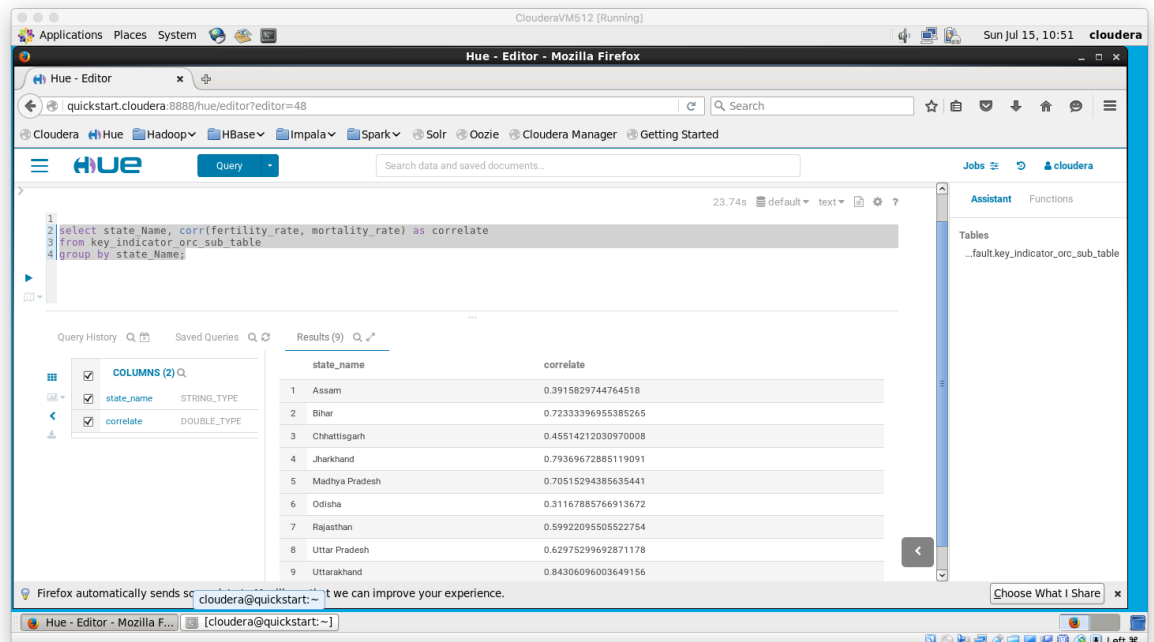
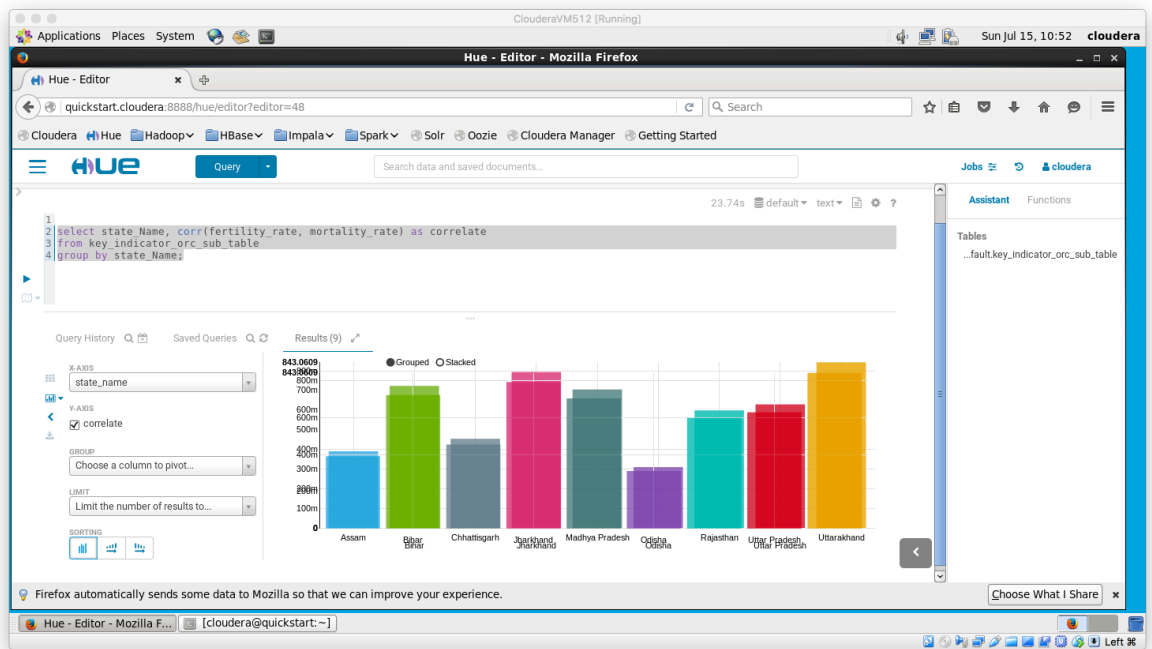


Chart:



- Find top 2 districts per state with the highest population per household

QUERY:

select * from

(select state_name, state_district_name, population_total/household_total as
population_per_household,

rank() OVER (PARTITION BY State_Name order by

(population_total/household_total) desc) as rank

from key_indicator_orc_sub_table)a

where a.rank IN (1,2);

Result:

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Search

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Query

Search data and saved documents...

COLUMNS (4) C

☒ a.state_name

STRING

☒ a.state_district_name

STRING

☒ a.population_per_household

DOUBLE

☒ a.rank

INT_TY

a.state_name

a.state_district_name

a.population_per_household

a.rank

1	Assam	Dhemaj	5.2103445894620535	1
2	Assam	Marigaon	4.9784451264065472	2
3	Bihar	Gopalganj	5.9791953017618393	1
4	Bihar	Nawada	5.9449784554192906	2
5	Chhattisgarh	Durg	4.7164080168447322	1
6	Chhattisgarh	Rajnandgaon	4.6511627906976747	2
7	Jharkhand	Kodarma	5.8681674629524654	1
8	Jharkhand	Girdih	5.7871069648057656	2
9	Madhya Pradesh	Jhabua	5.5903925014645575	1
10	Madhya Pradesh	Sehore	5.3667741323724636	2
11	Odisha	Bhadrak	4.7659507430551908	1
12	Odisha	Jajapur	4.4941458678393973	2
13	Rajasthan	Dhaulpur	5.8109722222222224	1
14	Rajasthan	Barmer	5.629192111322455	2
15	Uttar Pradesh	Sant Ravidas Nagar (Bhadohi)	6.2108312903944727	1
16	Uttar Pradesh	Baghpat	6.1195679959100202	2
17	Uttarakhand	Udhm Singh Nagar	5.1164532900989546	1
18	Uttarakhand	Nainital	4.7489136595503494	2

Jobs

Assistant

Functions

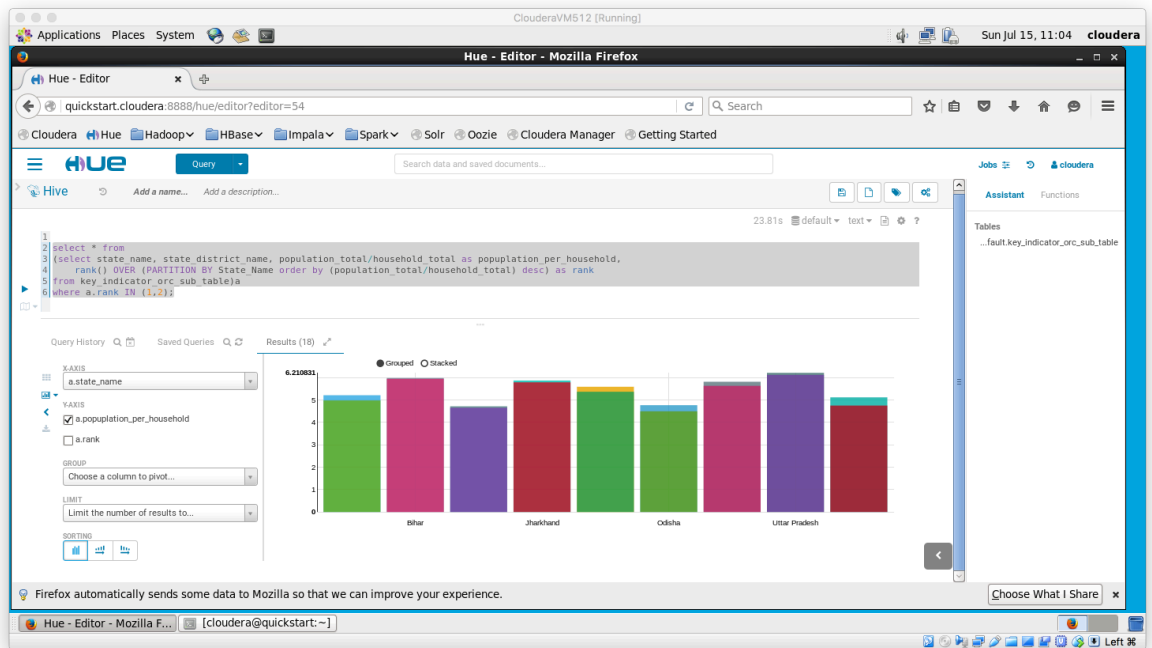
Tables

...fault_indicator_orc_sub_table

Firefox automatically sends some data to Mozilla so that we can improve your experience.

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Chart:



- Find top 2 districts per state with the lowest sex ratios

Query: select * from

(select state_name, state_district_Name, sex_ratio,
RANK() OVER (PARTITION BY state_name order by sex_ratio) as rank
from key_indicator_orc_sub_table)a
where a.rank IN (1,2);

Result:

The screenshot shows the Hue Editor interface with the result of a Hive query. The query is:

```
1 select * from
2 (select state_name, state_district_Name, sex_ratio,
3  RANK() OVER (PARTITION BY state_name order by sex_ratio) as rank
4  from key_indicator_orc_sub_table)a
5 where a.rank IN (1,2);
```

The result is a table with 4 columns: a.state_name, a.state_district_name, a.sex_ratio, and a.rank. The table contains 18 rows, showing the top 2 districts per state with the lowest sex ratios.

a.state_name	a.state_district_name	a.sex_ratio	a.rank
1 Assam	Kamrup	925	1
2 Assam	North Cachar Hills	941	2
3 Bihar	Pashchim Champaran	894	1
4 Bihar	Khagaria	900	2
5 Chhattisgarh	Koriya	937.2999999999995	1
6 Chhattisgarh	Bilaspur	948.4299999999995	2
7 Jharkhand	Dhanbad	913	1
8 Jharkhand	Bokaro	917	2
9 Madhya Pradesh	Morena	833.13	1
10 Madhya Pradesh	Datia	852.12	2
11 Odisha	Sonapur	941	1
12 Odisha	Jharsuguda	944	2
13 Rajasthan	Karauli	837	1
14 Rajasthan	Dhaulpur	838	2
15 Uttar Pradesh	Gautam Buddha Nagar	836.8200000000005	1
16 Uttar Pradesh	Shahjahanpur	853.6699999999996	2
17 Uttarakhand	Haridwar	884.5299999999995	1
18 Uttarakhand	Udham Singh Nagar	914.3099999999995	2

Chart:

