Analyzing Aadhar Cards Data

Problem Statement -

1. Find out the total number of cards approved by States.
2. Find out the total number of cards rejected by states.
3. Find out the total number of cards approved by cities.
4. Find out the total number of cards rejected by cities.

Data Set Link

https://drive.google.com/file/d/1Uo_SNJGYXCbt2PVJrZFy8RzJGTco9ABk/view?usp=sharing

Data Set Description:

The data set consists of the following fields.

State: This field consists of the state names from all over India
City: This field consists of city names in all states
Approved: This fields consists of the total count of approved cards in numbers
Rejected: This field consists of the total count of rejected cards in numbers

Codes and Explanation:

First we need to create a directory in HDFS. Creating a directory called **pig** in hdfs.

```
antrixsh@antrixsh-VirtualBox:~/hadoop-2.7.3$ bin/hdfs dfs -mkdir /user/antrixsh/pig
```

Usecase1:

In this use case we are finding the total number of cards approved by States.

```
Usecase1:

    1. Find out the total number of cards approved by States.

cards = load '/pig/Dataset/aadhar' as (state:chararray,city:chararray,approved:int,rejected:int);

state_grouped = group cards by state;

state_count = foreach state_grouped generate group, SUM(cards.approved);

store state_count into '/pig/stateapproved';
```

Explanation for usecase1:

- Load Aadhar details
- group them by states
- summing up the values of cards approved by each state
- Finally storing the output into HDFS.

Usecase1 Output:

Below is the sample output screen for usecase1

```
Goa   30
Assam 832
Bihar 162152
Delhi 3303
Kerala      4092
Odisha      46612
Others      33
Punjab      5092
Sikkim      17
Gujarat     31178
Haryana     12972
```

Usecase2:

In this use case we are finding total number of cards rejected by each states.

Usecase2:

2. Find out the total number of cards rejected by states.

```
cards = load '/pig/Dataset/aadhar' as (state:chararray,city:chararray,approved:int,rejected:int);

state_grouped = group cards by state;

state_count = foreach state_grouped generate group, SUM(cards.rejected);

store state_count into '/pig/staterejected';
```

Explanation for usecase2:

- Load Aadhar details
- group them by states
- summing up the values of cards rejected by each state
- Finally storing the output into HDFS.

Usecase2 Output:

```
Goa   7
Assam 3
Bihar 10521
Delhi 512
Kerala      187
Odisha      2788
Others      660
Punjab      572
Sikkim      0
Gujarat     877
Haryana     2577
Manipur     12
```

Usecase3:

In this use case we are finding the total number of cards approved by cities.

```
Usecase3:

    3. Find out the total number of cards approved by cities.

cards2 = load '/pig/Dataset/aadhar' as (state:chararray,city:chararray,approved:int,rejected:int);

city_grouped = group cards2 by city;

city_count = foreach city_grouped generate group, SUM(cards2.approved);

store city_count into '/pig/cityapproved';
```

Explanation for usecase3:

- Load Aadhar details
- group them by states
- summing up the values of cards approved by cities
- Finally storing the output into HDFS.

Usecase3 Output:

```
Diu   42
Leh   1
Mau   8204
Una   3
Agra  4458
Beed  1526
Dhar  487
Doda  93
Durg  474
Etah  3990
Gaya  10977
```

Usecase 4:

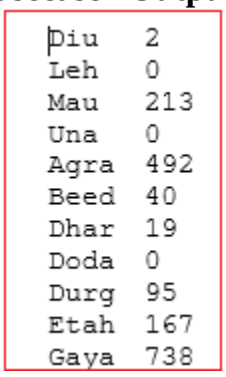
In this use case we are finding the total number of cards rejected by cities.

```
Usecase4:

    4. Find out the total number of cards rejected by cities.

cards2 = load '/pig/Dataset/aadhar' as (state:chararray,city:chararray,approved:int,rejected:int);

city_grouped = group cards2 by city;

city_count = foreach city_grouped generate group, SUM(cards2.rejected);

store city_count into '/pig/cityrejected';
```

Explanation for usecase4:

- Load Aadhar details
- Group them by states
- Summing up the values of cards rejected by cities
- Finally storing the output into HDFS.

Usecase4 Output:



```
Diu   2
Leh   0
Mau   213
Una   0
Agra  492
Beed  40
Dhar  19
Doda  0
Durg  95
Etah  167
Gaya  738
```