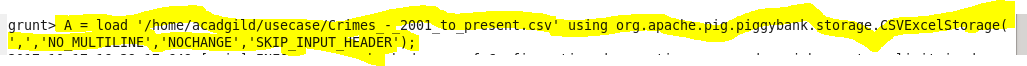


**Explanation:-**

First we need to register piggybank.jar



We have created reference named A below and we have loaded the file **Crimes\_-2001\_to\_present.csv**. and we have loaded it using **CSVExcelStorage()** function. Now relation is referring the file named **Crimes\_-2001\_to\_present.csv**.



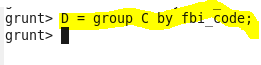
Totally there are 22 columns in **Crimes\_-2001\_to\_present.csv**. We can call them as $0 to $21 depending on the column position. Here we took 2 columns and named $14 as fbi\_code, $1 as case\_id. Now we have **typecasted.** For each and every row of A, these 2 columns will be generated(retrieved) and it will be referred by **B**.



We have filtered relation B by **fbi\_code as “not null”.**



Now we have grouped relation **C** by fbi\_code($14) column and Is referred by **D**.



Now for each group in D, we are counting the number of case\_id. So that we can get the no of cases investigated under each fbi\_code and is **referred by relation E.**



We have loaded the file that is referred by Relation E using **dump command.**



**OUTPUT:-**

