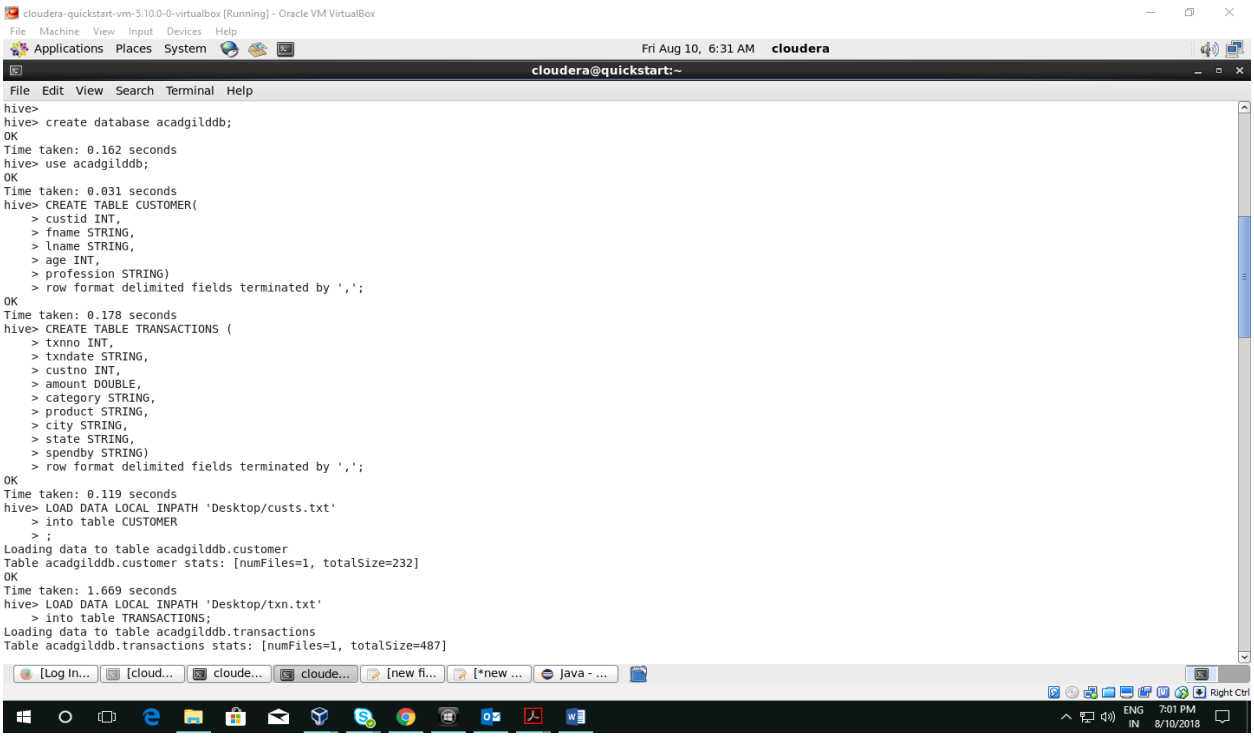
CASE STUDY – II

WORKING CUSTOMER & TRANSACTION DATA(HIVE , HBASE)

Case Study Description

Let us take up the CUSTOMER and TRANSACTIONS table we have created in the Let's Do Together section.

- Created Acadgild DB.
- Using acadgild DB as default data base
- Created CUSTOMER,TRANSACTIONS tables as below
- Loaded custs.txt,txn.txt data into tables as shown in below screenshots

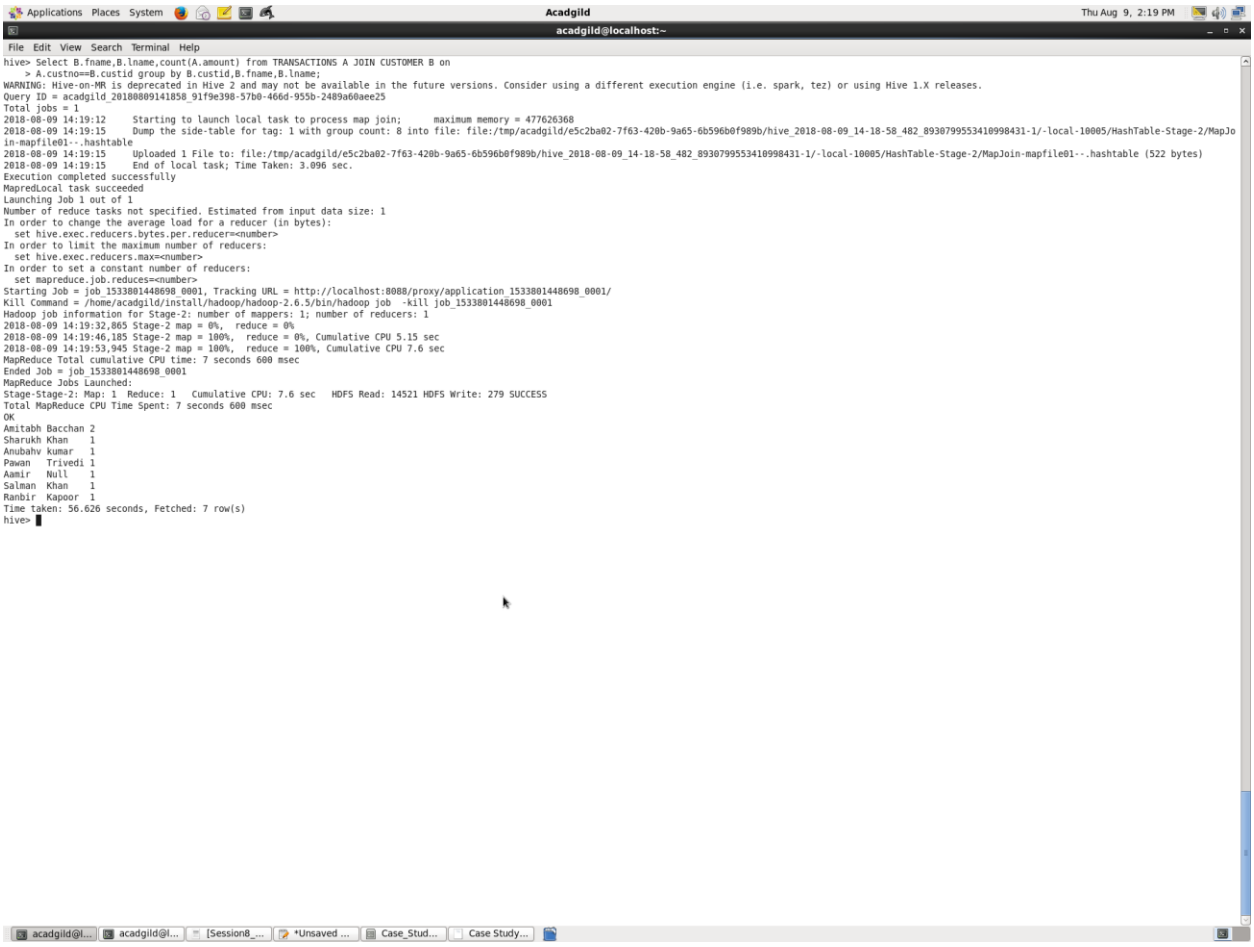


CASE STUDY – II

WORKING CUSTOMER & TRANSACTION DATA(HIVE , HBASE)

1. Find out the number of transaction done by each customer as shown below screenshot using below query.

Select C.fname,C.lname,count(T.amount) from Transactions T JOIN customer C on T.custno==C.custid group by C.custid,C.fnam e,C.lname;

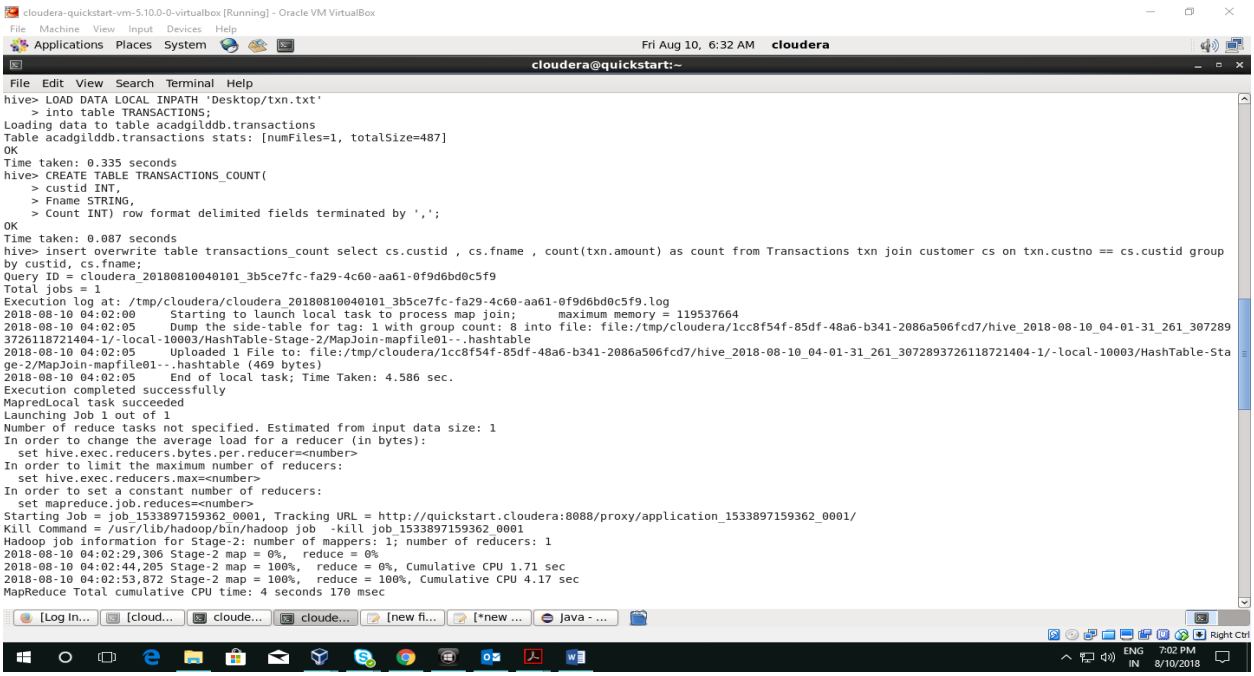


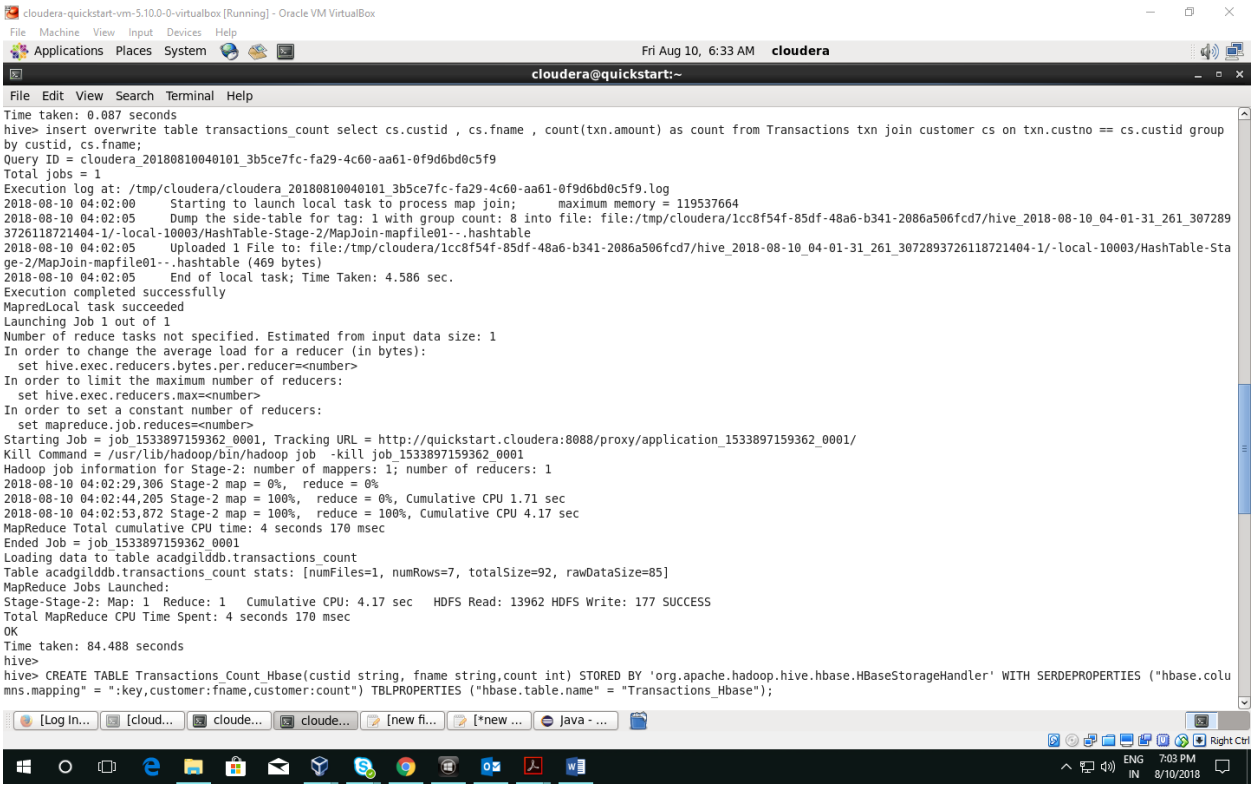
CASE STUDY – II
WORKING CUSTOMER & TRANSACTION DATA(HIVE , HBASE)

2. Create a new table called TRANSACTIONS_COUNT. This table should have 3 fields - custid, fname and count.

3. Now write a hive query in such a way that the query populates the data obtained in Step 1 above and populate the table in step 2 above.

- Please find the screenshot below for answers & I have ran query in hive





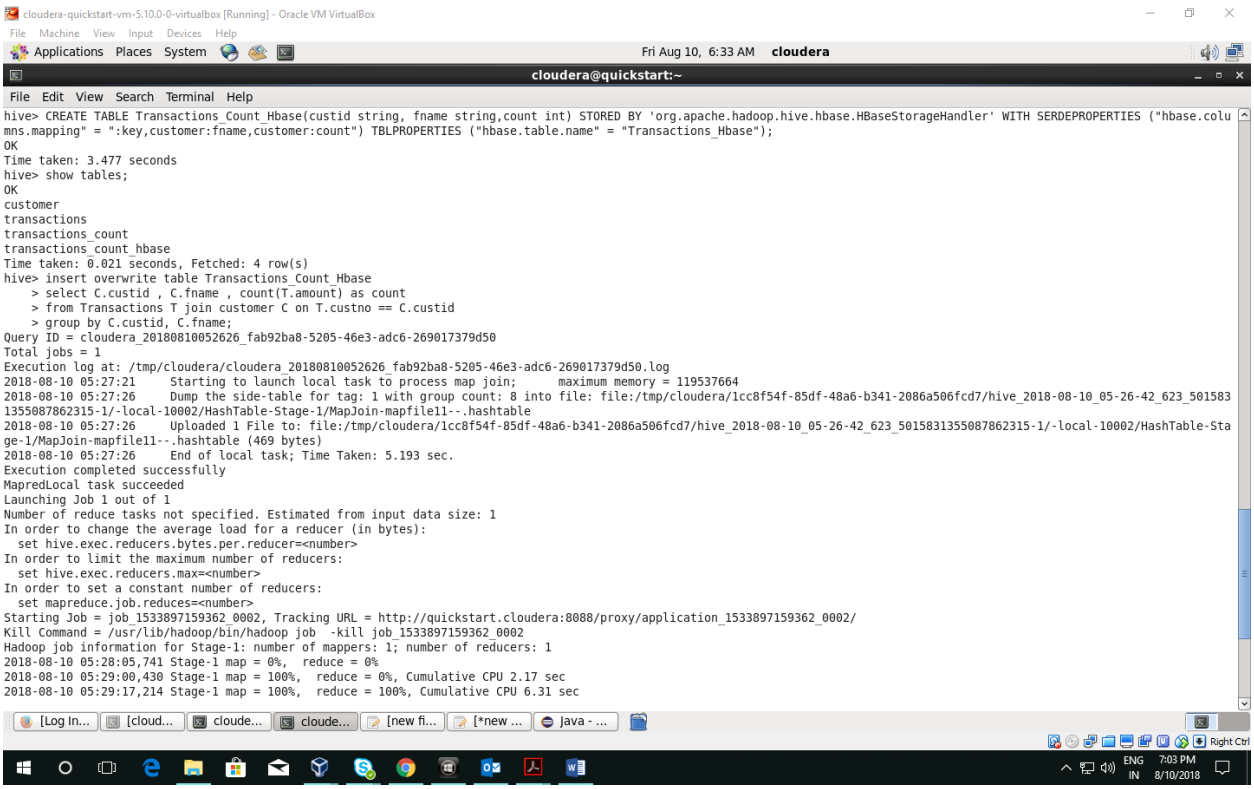
CASE STUDY – II

WORKING CUSTOMER & TRANSACTION DATA(HIVE , HBASE)

4. Now lets make the TRANSACTIONS_COUNT table Hbase complaint. In the sence, use Ser Des And Storate handler features of hive to change the TRANSACTIONS_COUNT table to be able to create a TRANSACTIONS table in Hbase.

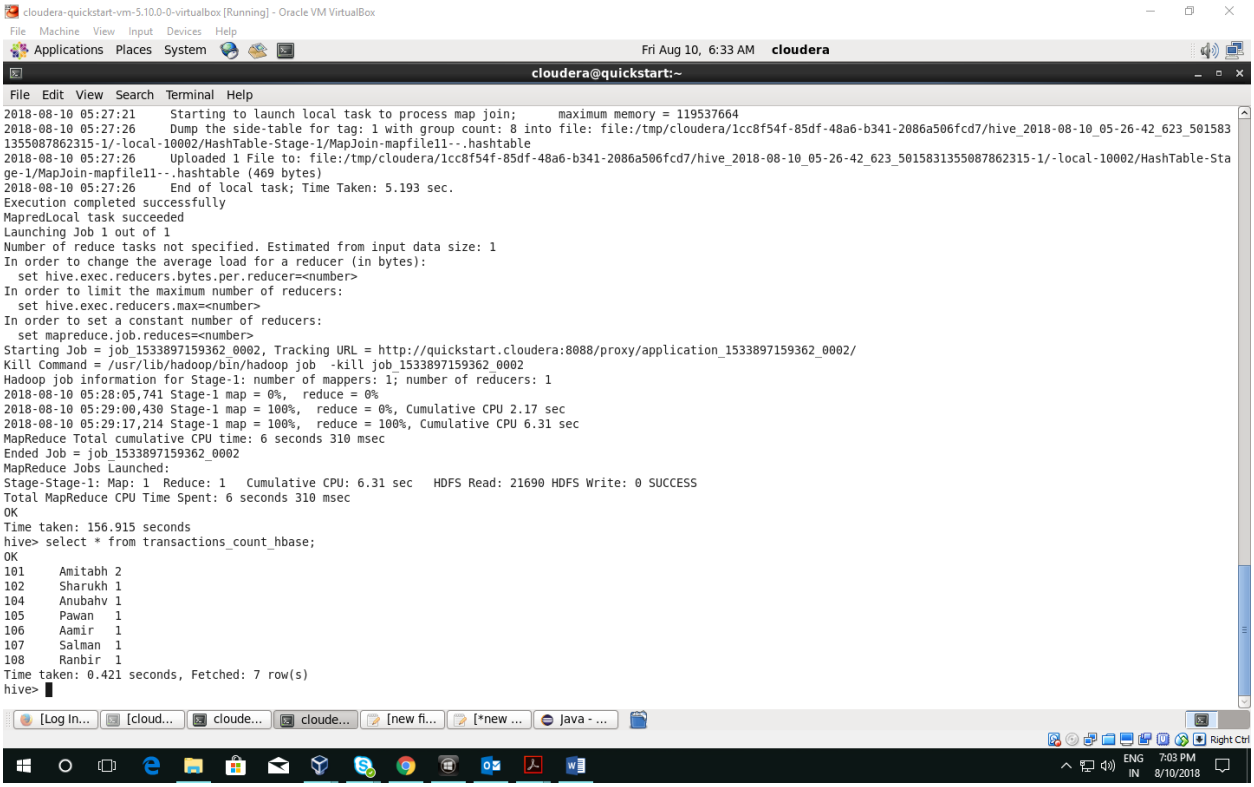
ınsert the data in TRANSACTIONS_COUNT table using the query in step 3 again, this should populate the Hbase TRANSACTIONS table automatically

- As shown in below picture TRASACTION_COUNT_HBASE & TRASACTION_ _HBASE tables are created.
- Data is inserted using below query in picture



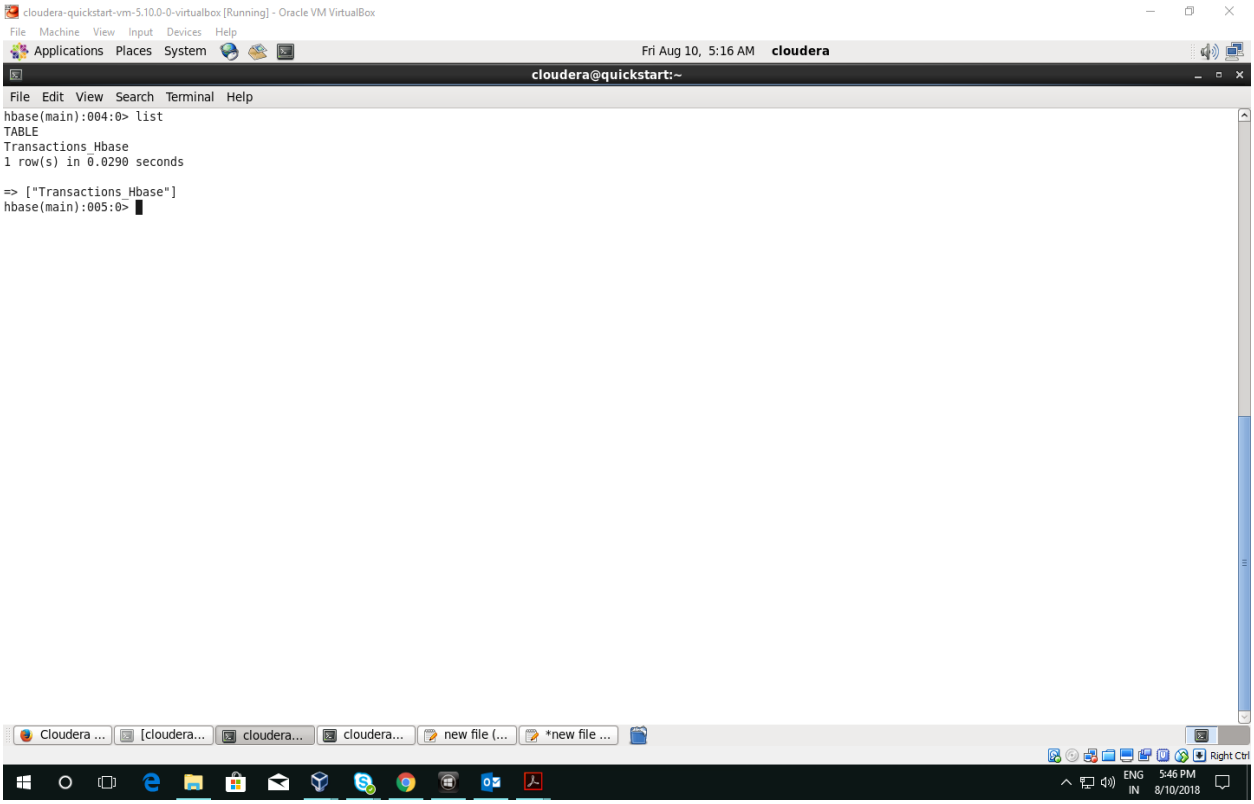
CASE STUDY – II
WORKING CUSTOMER & TRANSACTION DATA(HIVE , HBASE)

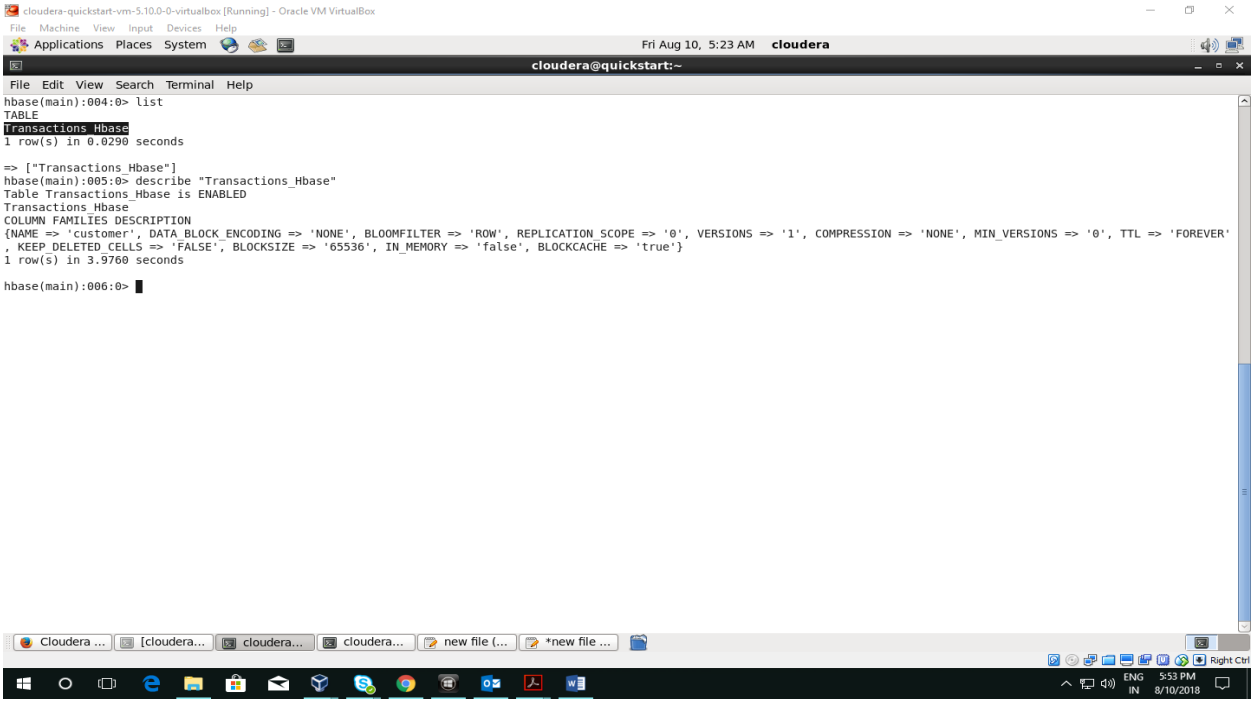
- Please find the data inserted into transactions_count_hbase hive table



CASE STUDY – II
WORKING CUSTOMER & TRANSACTION DATA(HIVE , HBASE)

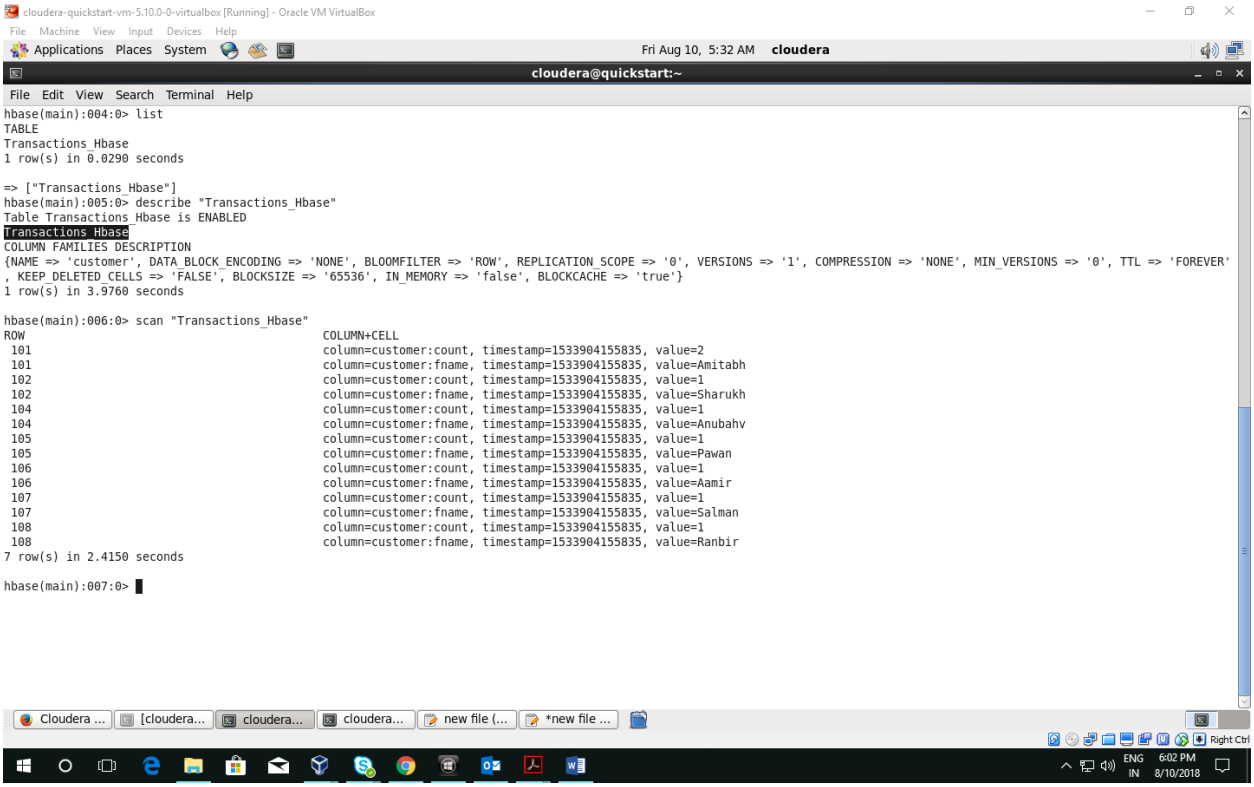
- Please find the hbase table created out of the query
- Please find the description of table

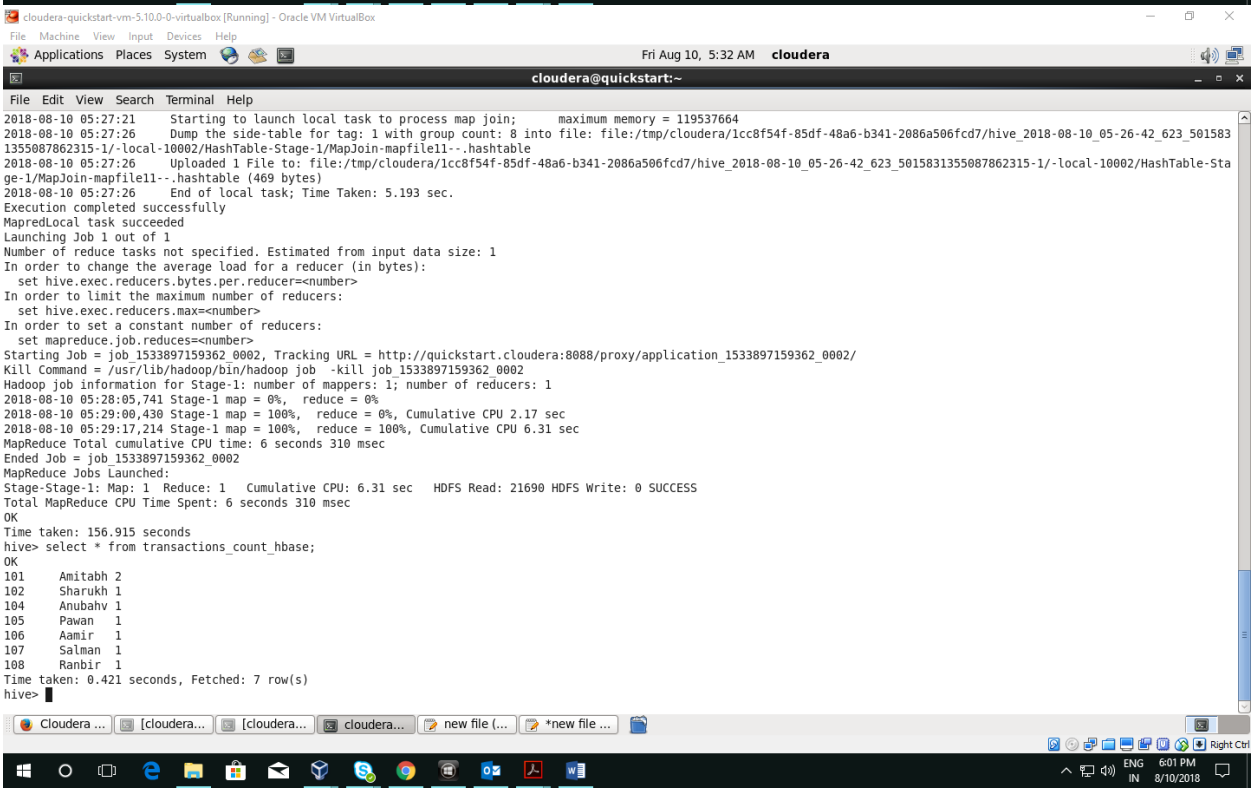




CASE STUDY – II
WORKING CUSTOMER & TRANSACTION DATA(HIVE , HBASE)

- Scanned table to make sure the data is loaded properly.





CASE STUDY – II

WORKING CUSTOMER & TRANSACTION DATA(HIVE , HBASE)

6. Now from the Hbase level, write the Hbase java API code to access and scan the TRANSACTIONS table data from java level

- Executed below code in java eclipse in same acadgild vm, connected to Hbase table scanned table from java code displayed code in console.

```java
import java.io.IOException;
import org.apache.hadoop.conf.Configuration;
import org.apache.hadoop.hbase.HBaseConfiguration;
import org.apache.hadoop.hbase.client.HTable;
import org.apache.hadoop.hbase.client.Result;
import org.apache.hadoop.hbase.client.ResultScanner;
import org.apache.hadoop.hbase.client.Scan;
import org.apache.hadoop.hbase.util.Bytes;

public class HiveHbase {
    public static void main(String args[]) throws IOException{
        System.out.println("Scanning the HBASE Table");
        Configuration c = HBaseConfiguration.create(); // Instantiate configuration class
        HTable table = new HTable(c, "Transactions_Hbase");        // Instantiate HTable class
        Scan scan = new Scan();      // Instantiate the Scan class
         // Scanning the required columns
          scan.addColumn(Bytes.toBytes("customer"), Bytes.toBytes("fname")); //First parameter indicates column family and second parameter is column name
          scan.addColumn(Bytes.toBytes("customer"), Bytes.toBytes("count")); //Add all the required columns

        ResultScanner scanner = table.getScanner(scan);      // Get scan result
        // Reading values from scan result
        for (Result result = scanner.next(); result != null; result = scanner.next())
        {
            System.out.println("Result Found: " + result);
            //Convert Bytes to String

            System.out.println("Result Found (fname): " + Bytes.toString(result.getValue(Bytes.toBytes("customer"),Bytes.toBytes("fname"))));
            System.out.println("Result Found (count): " + Bytes.toString(result.getValue(Bytes.toBytes("customer"),Bytes.toBytes("count"))));
        }
        scanner.close();      //close the scanner
        System.out.println("Scanning finished");
    }
}
```