BIG DATA APPLICATION AND ANALYTICS PRACTICAL

Activity: HBase Table Creation

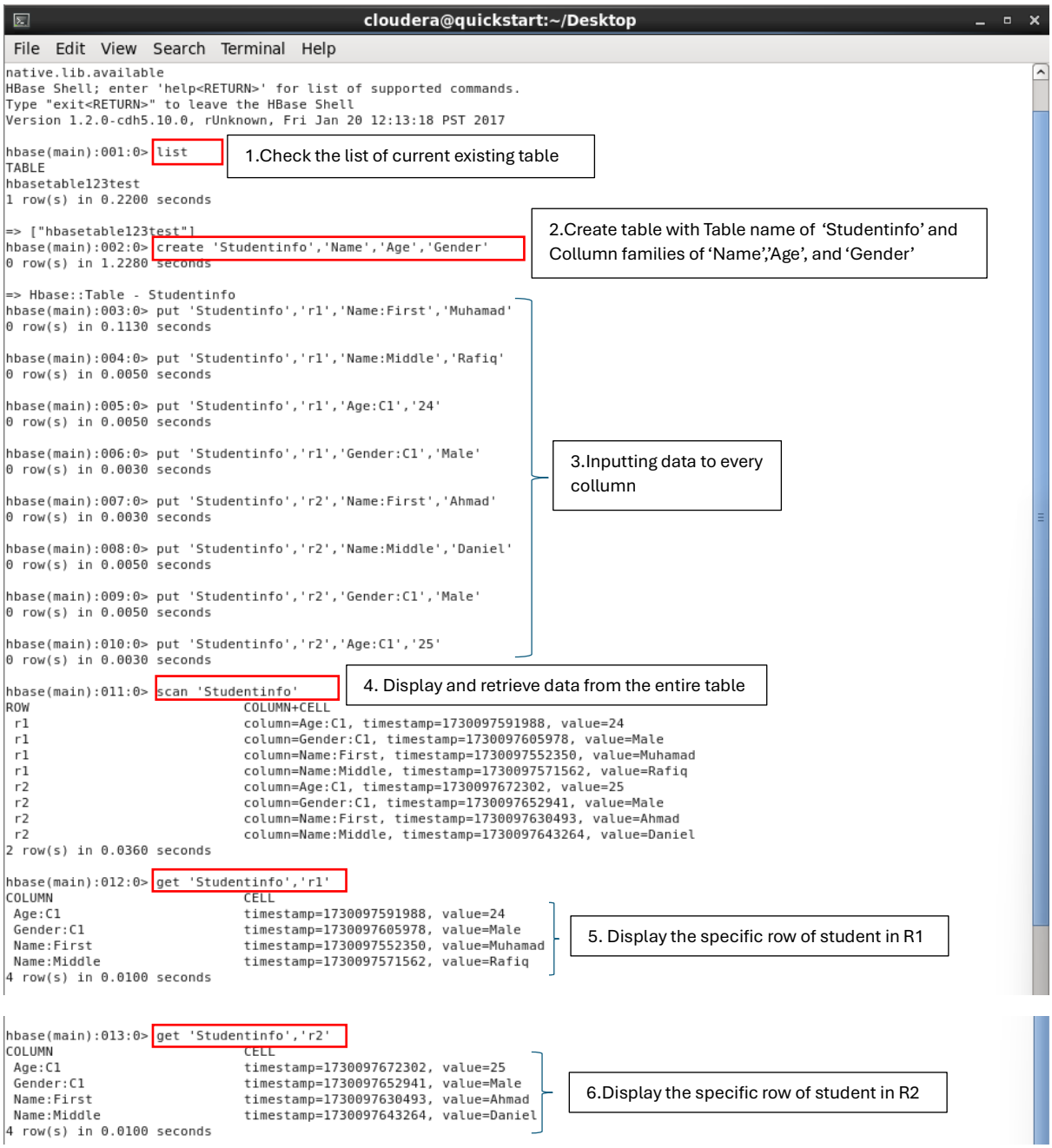
Name: Muhamad Rafiq Iqbal Bin Samsudin (17206926)

Objective: Create an HBase table with the following column families: personal, name, age, and gender.

Execute five HBase commands to manage the table.

1. Open your HBase shell or client.

2. Create an HBase table named "student_info" with the specified column families: personal, name, age, and gender.



3. Update Records

- Update Age for both students.

```
hbase(main):014:0> put 'Studentinfo','r1','Age:C1','26'
0 row(s) in 0.0050 seconds

hbase(main):015:0> put 'Studentinfo','r2','Age:C1','26'
0 row(s) in 0.0040 seconds

hbase(main):016:0> get 'Studentinfo','r1'
COLUMN                          CELL
 Age:C1                         timestamp=1730098264638, value=26
 Gender:C1                      timestamp=1730097605978, value=Male
 Name:First                     timestamp=1730097552350, value=Muhamad
 Name:Middle                    timestamp=1730097571562, value=Rafiq
4 row(s) in 0.0290 seconds

hbase(main):017:0> get 'Studentinfo','r2'
COLUMN                          CELL
 Age:C1                         timestamp=1730098273195, value=26
 Gender:C1                      timestamp=1730097652941, value=Male
 Name:First                     timestamp=1730097630493, value=Ahmad
 Name:Middle                    timestamp=1730097643264, value=Daniel
4 row(s) in 0.0070 seconds
```

7. Update age using same command 'put'

8. Both age change to '26'

4. Delete Records

- For example, we want to delete the first name

```
hbase(main):018:0> delete 'Studentinfo','r1','Name:First'
0 row(s) in 0.0170 seconds

hbase(main):019:0> delete 'Studentinfo','r2','Name:First'
0 row(s) in 0.0020 seconds

hbase(main):020:0> get 'Studentinfo','r1'
COLUMN                          CELL
 Age:C1                         timestamp=1730098264638, value=26
 Gender:C1                      timestamp=1730097605978, value=Male
 Name:Middle                    timestamp=1730097571562, value=Rafiq
3 row(s) in 0.0050 seconds

hbase(main):021:0> get 'Studentinfo','r2'
COLUMN                          CELL
 Age:C1                         timestamp=1730098273195, value=26
 Gender:C1                      timestamp=1730097652941, value=Male
 Name:Middle                    timestamp=1730097643264, value=Daniel
3 row(s) in 0.0060 seconds
```

9. Delete 'First name' from the table

10. First name collumn no longer existed

5. Insert New Data

- Add 1 more student to the table.

```
hbase(main):022:0> put 'Studentinfo','r3','Name:Middle','Khairah'
0 row(s) in 0.0060 seconds

hbase(main):023:0> put 'Studentinfo','r3','Age:C1','24'
0 row(s) in 0.0030 seconds

hbase(main):024:0> put 'Studentinfo','r3','Gender:C1','Female'
0 row(s) in 0.0030 seconds

hbase(main):025:0> scan 'Studentinfo'
ROW                             COLUMN+CELL
 r1                             column=Age:C1, timestamp=1730098264638, value=26
 r1                             column=Gender:C1, timestamp=1730097605978, value=Male
 r1                             column=Name:Middle, timestamp=1730097571562, value=Rafiq
 r2                             column=Age:C1, timestamp=1730098273195, value=26
 r2                             column=Gender:C1, timestamp=1730097652941, value=Male
 r2                             column=Name:Middle, timestamp=1730097643264, value=Daniel
 r3                             column=Age:C1, timestamp=1730098792879, value=24
 r3                             column=Gender:C1, timestamp=1730098812003, value=Female
 r3                             column=Name:Middle, timestamp=1730098780204, value=Khairah
3 row(s) in 0.0150 seconds
```

11. Repeat same command 'put' to add new data

12. Data added to the same table

6. Drop a table (Additional)