## **Problem 1:**

Create an HBase table named 'clicks' with a column family 'hits' such that it should be able to

store last 5 values of qualifiers inside 'hits' column family.

## **Output:**

```
hbase(main):056:0> create 'clicks', 'hits'
0 row(s) in 0.3820 seconds
   Hbase::Table
                     - clicks
hbase(main):057:0> alter 'clicks',{NAME=>'hits',VERSIONS=>5}
Updating all regions with the new schema...
0/1 regions updated.
1/1 regions updated.
Done.
0 row(s) in 2.1780 seconds
hbase(main):058:0> put 'clicks','192.0.0.1','hits','xiaomi'
0 row(s) in 0.0340 seconds
hbase(main):059:0> put 'clicks','192.0.0.2','hits','samsung'
0 row(s) in 0.0150 seconds
hbase(main):060:0> put 'clicks','192.0.0.3','hits','moto'
0 row(s) in 0.0310 seconds
hbase(main):061:0> put 'clicks','192.0.0.3','hits','moto'
0 row(s) in 0.0220 seconds
hbase(main):062:0> put 'clicks','192.0.0.4','hits','iphone'0 row(s) in 0.0130 seconds
hbase(main):063:0> put 'clicks','192.0.0.4','hits','oneplus'
0 row(s) in 0.0130 seconds
hbase(main):064:0> put 'clicks','192.0.0.5','hits','lenovo'
0 row(s) in 0.0290 seconds
hbase(main):065:0> put 'clicks','192.0.0.5','hits','iphone'
0 row(s) in 0.0150 seconds
hbase(main):066:0> put 'clicks','192.0.0.5','hits','samsung'
0 row(s) in 0.0160 seconds
hbase(main):067:0> put 'clicks','192.0.0.5','hits','moto'
0 row(s) in 0.0310 seconds
hbase(main):068:0> put 'clicks','192.0.0.5','hits','xiaomi'
0 row(s) in 0.0150 seconds
hbase(main):069:0> scan 'clicks'
ROW
                                       COLUMN+CELL
 192.0.0.1
                                       column=hits:, timestamp=1507742327861, value=xiaomi
 192.0.0.2
                                       column=hits:, timestamp=1507742347018, value=samsung
 192.0.0.3
                                      column=hits:, timestamp=1507742365824, value=moto
                                      column=hits:, timestamp=1507742397156, value=oneplus
column=hits:, timestamp=1507742450057, value=xiaomi
 192.0.0.4
 192.0.0.5
5 row(s) in 0.0520 seconds
```

\_\_\_\_\_\_

## **Problem 2:**

Add few records in the table and update some of them. Use IP Address as row-key. Scan the

table to view if all the previous versions are getting displayed.

## **Output:**

```
hbase(main):071:0> scan 'clicks',{NAME => 'hits',VERSIONS => 1}
ROW
                                  COLUMN+CELL
                                  column=hits:, timestamp=1507742327861, value=xiaomi
 1972.0.0.1
 192.0.0.2
                                  column=hits:, timestamp=1507742347018, value=samsung
                                   column=hits:, timestamp=1507742365824, value=moto
 192.0.0.3
 192.0.0.4
                                   column=hits:, timestamp=1507742397156, value=oneplus
 192.0.0.5
                                   column=hits:, timestamp=1507742450057, value=xiaomi
5 row(s) in 0.0400 seconds
hbase(main):072:0> scan 'clicks',{NAME => 'hits',VERSIONS => 2}
                                  COLUMN+CELL
ROW
 192.0.0.1
                                  column=hits:, timestamp=1507742327861, value=xiaomi
 192.0.0.2
                                   column=hits:, timestamp=1507742347018, value=samsung
 192.0.0.3
                                   column=hits:, timestamp=1507742365824, value=moto
 192.0.0.3
                                   column=hits:, timestamp=1507742363868, value=moto
                                  column=hits:, timestamp=1507742397156, value=oneplus
 192.0.0.4
 192.0.0.4
                                  column=hits:, timestamp=1507742387554, value=iphone
                                  column=hits:, timestamp=1507742450057, value=xiaomi
 192.0.0.5
                                  column=hits:, timestamp=1507742441804, value=moto
192.0.0.5
5 row(s) in 0.0350 seconds
hbase(main):073:0> scan 'clicks',{NAME => 'hits',VERSIONS => 3}
                                  COLUMN+CELL
 192.0.0.1
                                  column=hits:, timestamp=1507742327861, value=xiaomi
 192.0.0.2
                                  column=hits:, timestamp=1507742347018, value=samsung
 192.0.0.3
                                   column=hits:, timestamp=1507742365824, value=moto
 192.0.0.3
                                  column=hits:, timestamp=1507742363868, value=moto
 192.0.0.4
                                   column=hits:, timestamp=1507742397156, value=oneplus
 192.0.0.4
                                   column=hits:, timestamp=1507742387554, value=iphone
                                  column=hits:, timestamp=1507742450057, value=xiaomi
 192.0.0.5
                                  column=hits:, timestamp=1507742441804, value=moto
column=hits:, timestamp=1507742434287, value=samsung
 192.0.0.5
 192.0.0.5
5 row(s) in 0.1000 seconds
hbase(main):074:0> scan 'clicks',{NAME => 'hits',VERSIONS => 4}
ROW
                                  COLUMN+CELL
                                  column=hits:, timestamp=1507742327861, value=xiaomi
192.0.0.1
 192.0.0.2
                                   column=hits:, timestamp=1507742347018, value=samsung
                                  column=hits:, timestamp=1507742365824, value=moto
 192.0.0.3
 192.0.0.3
                                  column=hits:, timestamp=1507742363868, value=moto
 192.0.0.4
                                  column=hits:, timestamp=1507742397156, value=oneplus
 192.0.0.4
                                  column=hits:, timestamp=1507742387554, value=iphone
 192.0.0.5
                                  column=hits:, timestamp=1507742450057, value=xiaomi
 192.0.0.5
                                  column=hits:, timestamp=1507742441804, value=moto
                                  column=hits:, timestamp=1507742434287, value=samsung
column=hits:, timestamp=1507742429772, value=iphone
 192.0.0.5
192.0.0.5
5 row(s) in 0.0360 seconds
hbase(main):075:0> scan 'clicks',{NAME => 'hits',VERSIONS => 5}
ROW
                                  COLUMN+CELL
                                   column=hits:, timestamp=1507742327861, value=xiaomi
 192.0.0.1
 192.0.0.2
                                  column=hits:, timestamp=1507742347018, value=samsung
 192.0.0.3
                                  column=hits:, timestamp=1507742365824, value=moto
 192.0.0.3
                                  column=hits:, timestamp=1507742363868, value=moto
                                  column=hits:, timestamp=1507742397156, value=oneplus
 192.0.0.4
 192.0.0.4
                                  column=hits:, timestamp=1507742387554, value=iphone
 192.0.0.5
                                  column=hits:, timestamp=1507742450057, value=xiaomi
                                  column=hits:, timestamp=1507742441804, value=moto
 192.0.0.5
 192.0.0.5
                                  column=hits:, timestamp=1507742434287, value=samsung
 192.0.0.5
                                  column=hits:, timestamp=1507742429772, value=iphone
                                  column=hits:, timestamp=1507742419925, value=lenovo
192.0.0.5
5 row(s) in 0.0290 seconds
```

\_\_\_\_\_\_

hbase(main):076:0>