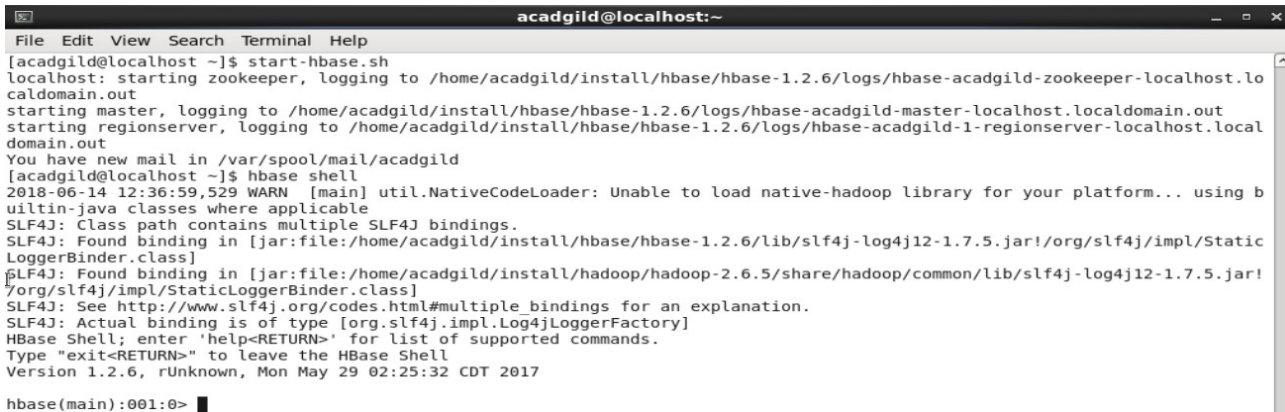


Bigdata Assignment 3.8

Started the Hbase shell :

start-hbase.sh

hbase shell



```
acadmild@localhost:~  
File Edit View Search Terminal Help  
[acadmild@localhost ~]$ start-hbase.sh  
localhost: starting zookeeper, logging to /home/acadmild/install/hbase/hbase-1.2.6/logs/hbase-acadmild-zookeeper-localhost.localdomain.out  
starting master, logging to /home/acadmild/install/hbase/hbase-1.2.6/logs/hbase-acadmild-master-localhost.localdomain.out  
starting regionserver, logging to /home/acadmild/install/hbase/hbase-1.2.6/logs/hbase-acadmild-1-regionserver-localhost.localdomain.out  
You have new mail in /var/spool/mail/acadmild  
[acadmild@localhost ~]$ hbase shell  
2018-06-14 12:36:59,529 WARN [main] util.NativeCodeLoader: Unable to load native-hadoop library for your platform... using builtin-java classes where applicable  
SLF4J: Class path contains multiple SLF4J bindings.  
SLF4J: Found binding in [jar:file:/home/acadmild/install/hbase/hbase-1.2.6/lib/slf4j-log4j12-1.7.5.jar!/org/slf4j/impl/StaticLoggerBinder.class]  
SLF4J: Found binding in [jar:file:/home/acadmild/install/hadoop/hadoop-2.6.5/share/hadoop/common/lib/slf4j-log4j12-1.7.5.jar!/org/slf4j/impl/StaticLoggerBinder.class]  
SLF4J: See http://www.slf4j.org/codes.html#multiple_bindings for an explanation.  
SLF4J: Actual binding is of type [org.slf4j.impl.Log4jLoggerFactory]  
HBase Shell; enter 'help<RETURN>' for list of supported commands.  
Type "exit<RETURN>" to leave the HBase Shell  
Version 1.2.6, rUnknown, Mon May 29 02:25:32 CDT 2017  
hbase(main):001:0>
```

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.

Solution -

- Table 'clicks' was created and values were inserted

create 'clicks', {NAME='hits',VERSIONS=>5}

put 'clicks', '192.168.1.1', 'hits:user1', '1st'

put 'clicks', '192.168.1.1', 'hits:user1', '2nd'

put 'clicks', '192.168.1.1', 'hits:user1', '3rd'

put 'clicks', '192.168.1.1', 'hits:user1', '4th'

put 'clicks', '192.168.1.1', 'hits:user1', '5th'

```
acadgild@localhost:~  
File Edit View Search Terminal Help  
hbase(main):012:0> create 'clicks',{NAME=>'hits',VERSIONS=>5}  
0 row(s) in 1.2260 seconds  
  
=> Hbase::Table - clicks  
hbase(main):013:0> put 'clicks', '192.168.1.1','hits:user1','1st'  
0 row(s) in 0.0220 seconds  
  
hbase(main):014:0> put 'clicks', '192.168.1.1','hits:user1','2nd'  
0 row(s) in 0.0170 seconds  
  
hbase(main):015:0> put 'clicks', '192.168.1.1','hits:user1','3rd'  
0 row(s) in 0.0120 seconds  
  
hbase(main):016:0> put 'clicks', '192.168.1.1','hits:user1','4th'  
0 row(s) in 0.0110 seconds  
  
hbase(main):017:0> put 'clicks', '192.168.1.1','hits:user1','5th'  
0 row(s) in 0.0150 seconds  
  
hbase(main):018:0> █
```

- To display the values
scan 'clicks' , {COLUMN=>'hits:user1',VERSIONS=>5}

```
hbase(main):018:0> scan 'clicks',{COLUMN=>'hits:user1',VERSIONS=>5}  
ROW COLUMN+CELL  
192.168.1.1 column=hits:user1, timestamp=1528960482898, value=5th  
192.168.1.1 column=hits:user1, timestamp=1528960477866, value=4th  
192.168.1.1 column=hits:user1, timestamp=1528960472612, value=3rd  
192.168.1.1 column=hits:user1, timestamp=1528960467254, value=2nd  
192.168.1.1 column=hits:user1, timestamp=1528960461701, value=1st  
1 row(s) in 0.0160 seconds
```

In the above screenshot it is evident that we got the previous 5 values for the particular column

- We added different columns

```
hbase(main):041:0> put 'clicks', '192.168.1.1','hits:user2','5th'  
0 row(s) in 0.0300 seconds  
  
hbase(main):042:0> put 'clicks', '192.168.1.1','hits:user3','6th'  
0 row(s) in 0.0110 seconds
```

- To display the values
scan 'clicks' , {NAME=>'hits',VERSIONS=>5}

```
hbase(main):044:0> scan 'clicks',{NAME=>'hits',VERSIONS=>5}
ROW                                COLUMN+CELL
192.168.1.1                        column=hits:user1, timestamp=1528963839109, value=5th
192.168.1.1                        column=hits:user1, timestamp=1528963827293, value=4th
192.168.1.1                        column=hits:user1, timestamp=1528963816399, value=3rd
192.168.1.1                        column=hits:user1, timestamp=1528963806540, value=2nd
192.168.1.1                        column=hits:user1, timestamp=1528963792740, value=1st
192.168.1.1                        column=hits:user2, timestamp=1528964197536, value=5th
192.168.1.1                        column=hits:user3, timestamp=1528964210048, value=6th
1 row(s) in 0.0170 seconds
```

In the above screenshot , we observe that for each particular hits column we can retrieve 5 previous values

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.

Solution -

- We updated some records

put 'clicks' , '192.168.1.1' , 'hits:user2', '7th'

put 'clicks' , '192.168.1.1' , 'hits:user3', '4th'

```
hbase(main):045:0> put 'clicks', '192.168.1.1','hits:user2','7th'
0 row(s) in 0.0230 seconds
```

```
hbase(main):046:0> put 'clicks', '192.168.1.1','hits:user3','4th'
0 row(s) in 0.0110 seconds
```

- The content of the table is displayed containing previous 5 versions.
scan 'clicks',{NAME=>'hits',VERSIONS=>5}

```
hbase(main):048:0> scan 'clicks',{NAME=>'hits',VERSIONS=>5}
ROW                                COLUMN+CELL
192.168.1.1                        column=hits:user1, timestamp=1528963839109, value=5th
192.168.1.1                        column=hits:user1, timestamp=1528963827293, value=4th
192.168.1.1                        column=hits:user1, timestamp=1528963816399, value=3rd
192.168.1.1                        column=hits:user1, timestamp=1528963806540, value=2nd
192.168.1.1                        column=hits:user1, timestamp=1528963792740, value=1st
192.168.1.1                        column=hits:user2, timestamp=1528964377137, value=7th
192.168.1.1                        column=hits:user2, timestamp=1528964197536, value=5th
192.168.1.1                        column=hits:user3, timestamp=1528964384114, value=4th
192.168.1.1                        column=hits:user3, timestamp=1528964210048, value=6th
1 row(s) in 0.0740 seconds
```

In the above screenshot it is evident that as we have set versions to 5 , after updating some records , we are getting its previous value and the current values.