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Course code: DJ19CEELG011

EXPERIMENT 05

AIM: To implement commands in HBase shell
scripting.

THEORY:
→ HBase is a data model that is similar to
Google's big table.
→ It is an open source, distributed database
developed by Apache software foundation
written in Java.
→ HBase is an essential part of our
Hadoop Ecosystem.
→ HBase runs on top of HDFS (Hadoop
Distributed File system).
→ It can store massive amounts of data
from tetrabytes to petabytes.
→ It is column oriented & horizontally scalable
→ features:
1) It provides easy to use Java API for
client access
2) HBase provides consistent read and writes.
3) It doesn't enforce relationship within
your data.

COMMANDS: (hbase shell)

1) CREATE

The 'create' command is used to create table within HBase Shell.

⇒ create 'product', 'shoe', 'tshirt'

2) LIST

It is used to list all tables

⇒ list

3) PUT

Add or update only one column

⇒ put 'product', '1', 'shoe: size', '28'

4) SCAN

It applies to all rowkey & in turn all column within specified table

⇒ scan 'product'   ⇒ scan 'product', {limit ⇒ 1}

5) GET

It is used to fetch data associated with a particular row key.

⇒ get 'product', '1'

6) DELETE TABLE

first we need to disable table then drop it.

⇒ disable 'product'

⇒ drop 'product'

CONCLUSION : Hence we FOR EDUCATIONAL USE implemented the above command

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AIM: Execute HBase Commands.

OUTPUT:

```
sandbox login: root
root@sandbox.hortonworks.com's password:
Last login: Wed Feb 14 03:11:34 2024 from 172.17.0.2
[root@sandbox ~]# hbase shell
HBase Shell; enter 'help<RETURN>' for list of supported commands.
Type "exit<RETURN>" to leave the HBase Shell
Version 1.1.2.2.5.0.0-1245, r53538b8ab6749cbb6fdc0fe448b89aa82495fb3f, Fri Aug 26 01:32:27 UTC 2016

hbase(main):001:0> create 'product','shoe','tshirt'
0 row(s) in 3.5020 seconds

=> Hbase::Table - product
hbase(main):002:0> list
TABLE
ATLAS_ENTITY_AUDIT_EVENTS
atlas_titan
iemployee
product
4 row(s) in 0.0570 seconds

=> ["ATLAS_ENTITY_AUDIT_EVENTS", "atlas_titan", "iemployee", "product"]
```

```
hbase(main):003:0> put 'product', '1', 'shoe:title', 'Adidas Shoe'
0 row(s) in 0.3420 seconds

hbase(main):004:0> put 'product', '1', 'shoe:description', 'Running Shoes For Men'
0 row(s) in 0.1120 seconds

hbase(main):005:0> put 'product', '1', 'shoe:color', 'black'
0 row(s) in 0.0830 seconds

hbase(main):006:0> put 'product', '1', 'shoe:price', '40'
0 row(s) in 0.0270 seconds

hbase(main):007:0> put 'product', '1', 'shoe:currency', 'USD'
0 row(s) in 0.0220 seconds

hbase(main):008:0> put 'product', '1', 'shoe:size', '28'
0 row(s) in 0.0220 seconds

hbase(main):009:0> put 'product', '2', 'tshirt:title', 'Puma Tshirt'
0 row(s) in 0.0290 seconds

hbase(main):010:0> put 'product', '2', 'tshirt:description', 'Graphic Print Men Round Neck Pink T-Shir
0 row(s) in 0.0190 seconds

hbase(main):011:0> put 'product', '2', 'tshirt:color', 'pink'
0 row(s) in 0.0200 seconds

hbase(main):012:0> put 'product', '2', 'tshirt:price', '20'
0 row(s) in 0.0210 seconds

hbase(main):013:0> put 'product', '2', 'tshirt:currency', 'USD'
0 row(s) in 0.0220 seconds

hbase(main):014:0> put 'product', '2', 'tshirt:size', 'M'
0 row(s) in 0.0250 seconds
```

```
hbase(main):015:0> get 'product','1'
COLUMN                        CELL
 shoe:color                   timestamp=1708484818137, value=black
 shoe:currency                timestamp=1708484849126, value=USD
 shoe:description             timestamp=1708484809517, value=Running Shoes For Men
 shoe:price                   timestamp=1708484827894, value=40
 shoe:size                    timestamp=1708484861763, value=28
 shoe:title                   timestamp=1708484801101, value=Adidas Shoe
6 row(s) in 0.1350 seconds

hbase(main):016:0> get 'product','2'
COLUMN                        CELL
 tshirt:color                 timestamp=1708484896191, value=pink
 tshirt:currency              timestamp=1708484929185, value=USD
 tshirt:description           timestamp=1708484886158, value=Graphic Print Men Round Neck Pink T-Shirt
 tshirt:price                 timestamp=1708484906505, value=20
 tshirt:size                  timestamp=1708484944594, value=M
 tshirt:title                 timestamp=1708484874200, value=Puma Tshirt
6 row(s) in 0.0180 seconds

hbase(main):017:0> put 'product','1','shoe:color','white'
0 row(s) in 0.0250 seconds

hbase(main):018:0> get 'product','1'
COLUMN                        CELL
 shoe:color                   timestamp=1708485037341, value=white
 shoe:currency                timestamp=1708484849126, value=USD
 shoe:description             timestamp=1708484809517, value=Running Shoes For Men
 shoe:price                   timestamp=1708484827894, value=40
 shoe:size                    timestamp=1708484861763, value=28
 shoe:title                   timestamp=1708484801101, value=Adidas Shoe
6 row(s) in 0.0310 seconds
```

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```
hbase(main):019:0> scan 'product'
ROW                     COLUMN+CELL
 1                      column=shoe:color, timestamp=1708485037341, value=white
 1                      column=shoe:currency, timestamp=1708484849126, value=USD
 1                      column=shoe:description, timestamp=1708484809517, value=Running Shoes For
                        n
 1                      column=shoe:price, timestamp=1708484827894, value=40
 1                      column=shoe:size, timestamp=1708484861763, value=28
 1                      column=shoe:title, timestamp=1708484801101, value=Adidas Shoe
 2                      column=tshirt:color, timestamp=1708484896191, value=pink
 2                      column=tshirt:currency, timestamp=1708484929185, value=USD
 2                      column=tshirt:description, timestamp=1708484886158, value=Graphic Print Me
                        Round Neck Pink T-Shirt
 2                      column=tshirt:price, timestamp=1708484906505, value=20
 2                      column=tshirt:size, timestamp=1708484944594, value=M
 2                      column=tshirt:title, timestamp=1708484874200, value=Puma Tshirt
2 row(s) in 0.0740 seconds

hbase(main):020:0> scan 'product',{LIMIT => 1}
ROW                     COLUMN+CELL
 1                      column=shoe:color, timestamp=1708485037341, value=white
 1                      column=shoe:currency, timestamp=1708484849126, value=USD
 1                      column=shoe:description, timestamp=1708484809517, value=Running Shoes For M
                        en
 1                      column=shoe:price, timestamp=1708484827894, value=40
 1                      column=shoe:size, timestamp=1708484861763, value=28
 1                      column=shoe:title, timestamp=1708484801101, value=Adidas Shoe
1 row(s) in 0.0430 seconds

hbase(main):021:0> disable 'product'
0 row(s) in 2.4440 seconds

hbase(main):022:0> drop 'product'
0 row(s) in 1.3160 seconds

hbase(main):023:0>
```