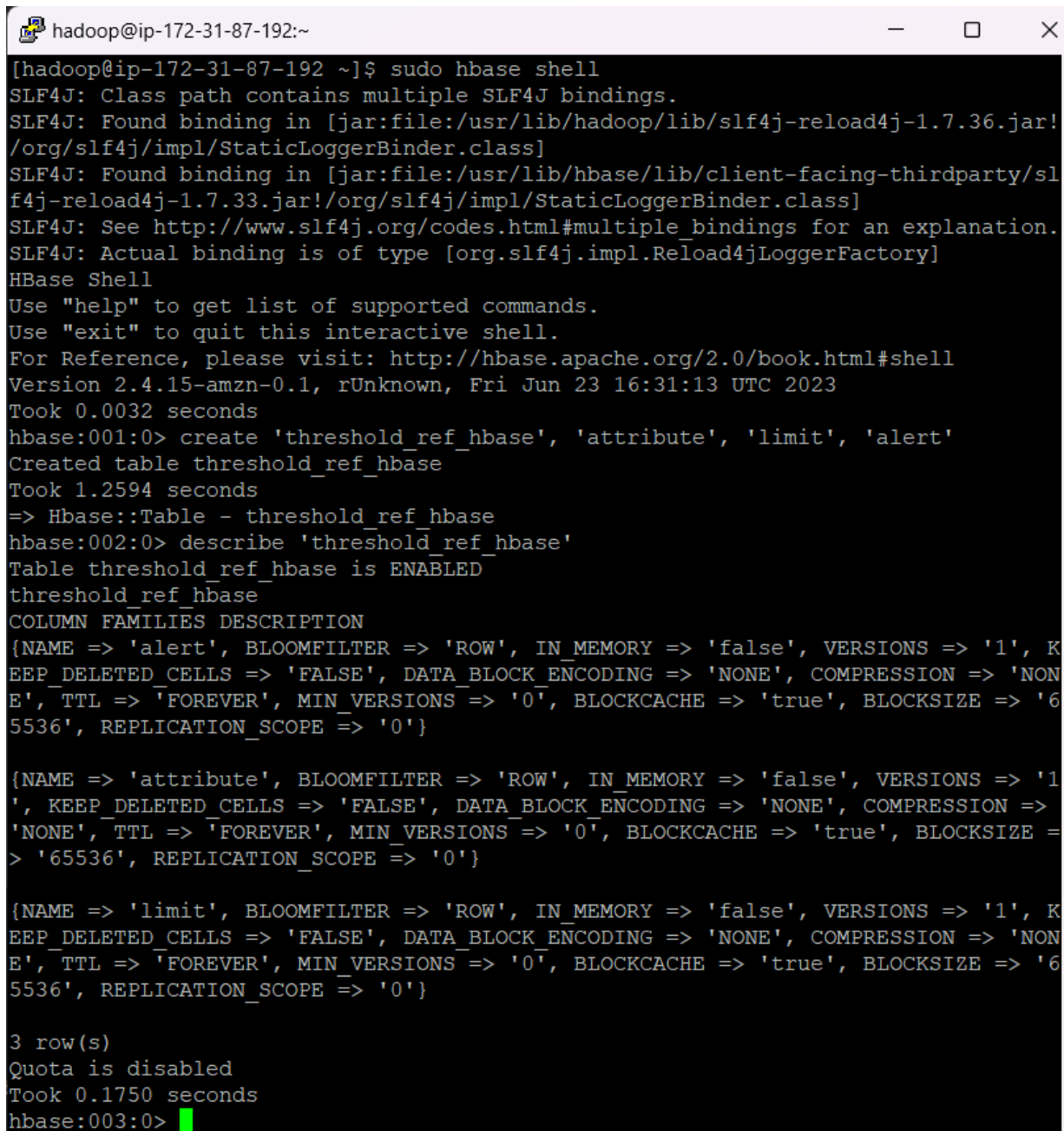


STATEMENTS TO CREATE HBASE THRESHOLD TABLE

```
create 'threshold_ref_hbase', 'attribute', 'limit', 'alert'
```

STATEMENTS TO VIEW HBASE THRESHOLD TABLE ABOVE MENTIONED 3 FAMILIES:

```
describe 'threshold_ref_hbase'
```



```
hadoop@ip-172-31-87-192:~  
[hadoop@ip-172-31-87-192 ~]$ sudo hbase shell  
SLF4J: Class path contains multiple SLF4J bindings.  
SLF4J: Found binding in [jar:file:/usr/lib/hadoop/lib/slf4j-reload4j-1.7.36.jar!/org/slf4j/impl/StaticLoggerBinder.class]  
SLF4J: Found binding in [jar:file:/usr/lib/hbase/lib/client-facing-thirdparty/slf4j-reload4j-1.7.33.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.Reload4jLoggerFactory]  
HBase Shell  
Use "help" to get list of supported commands.  
Use "exit" to quit this interactive shell.  
For Reference, please visit: http://hbase.apache.org/2.0/book.html#shell  
Version 2.4.15-amzn-0.1, rUnknown, Fri Jun 23 16:31:13 UTC 2023  
Took 0.0032 seconds  
hbase:001:0> create 'threshold_ref_hbase', 'attribute', 'limit', 'alert'  
Created table threshold_ref_hbase  
Took 1.2594 seconds  
=> Hbase::Table - threshold_ref hbase  
hbase:002:0> describe 'threshold_ref_hbase'  
Table threshold_ref_hbase is ENABLED  
threshold_ref_hbase  
COLUMN FAMILIES DESCRIPTION  
{NAME => 'alert', BLOOMFILTER => 'ROW', IN_MEMORY => 'false', VERSIONS => '1', KEEP_DELETED_CELLS => 'FALSE', DATA_BLOCK_ENCODING => 'NONE', COMPRESSION => 'NONE', TTL => 'FOREVER', MIN_VERSIONS => '0', BLOCKCACHE => 'true', BLOCKSIZE => '65536', REPLICATION_SCOPE => '0'}  
  
{NAME => 'attribute', BLOOMFILTER => 'ROW', IN_MEMORY => 'false', VERSIONS => '1', KEEP_DELETED_CELLS => 'FALSE', DATA_BLOCK_ENCODING => 'NONE', COMPRESSION => 'NONE', TTL => 'FOREVER', MIN_VERSIONS => '0', BLOCKCACHE => 'true', BLOCKSIZE => '65536', REPLICATION_SCOPE => '0'}  
  
{NAME => 'limit', BLOOMFILTER => 'ROW', IN_MEMORY => 'false', VERSIONS => '1', KEEP_DELETED_CELLS => 'FALSE', DATA_BLOCK_ENCODING => 'NONE', COMPRESSION => 'NONE', TTL => 'FOREVER', MIN_VERSIONS => '0', BLOCKCACHE => 'true', BLOCKSIZE => '65536', REPLICATION_SCOPE => '0'}  
  
3 row(s)  
Quota is disabled  
Took 0.1750 seconds  
hbase:003:0> █
```

STATEMENTS TO INSERT THRESHOLD PARAMETERS INTO HBASE THRESHOLD TABLE:

```
put 'threshold_ref_hbase', '1', 'attribute:attribute', 'heartBeat'
put 'threshold_ref_hbase', '1', 'limit:low_age_limit', '0'
put 'threshold_ref_hbase', '1', 'limit:high_age_limit', '40'
put 'threshold_ref_hbase', '1', 'limit:low_range_value', '0'
put 'threshold_ref_hbase', '1', 'limit:high_range_value', '69'
put 'threshold_ref_hbase', '1', 'alert:alert_flag', '1'
put 'threshold_ref_hbase', '1', 'alert:alert_message', 'Low Heart Rate than Normal'
```

```
put 'threshold_ref_hbase', '2', 'attribute:attribute', 'heartBeat'
put 'threshold_ref_hbase', '2', 'limit:low_age_limit', '0'
put 'threshold_ref_hbase', '2', 'limit:high_age_limit', '40'
put 'threshold_ref_hbase', '2', 'limit:low_range_value', '70'
put 'threshold_ref_hbase', '2', 'limit:high_range_value', '78'
put 'threshold_ref_hbase', '2', 'alert:alert_flag', '0'
put 'threshold_ref_hbase', '2', 'alert:alert_message', 'Normal'
```

```
put 'threshold_ref_hbase', '3', 'attribute:attribute', 'heartBeat'
put 'threshold_ref_hbase', '3', 'limit:low_age_limit', '0'
put 'threshold_ref_hbase', '3', 'limit:high_age_limit', '40'
put 'threshold_ref_hbase', '3', 'limit:low_range_value', '79'
put 'threshold_ref_hbase', '3', 'limit:high_range_value', '9999'
put 'threshold_ref_hbase', '3', 'alert:alert_flag', '1'
put 'threshold_ref_hbase', '3', 'alert:alert_message', 'Higher Heart Rate than Normal'
```

```
put 'threshold_ref_hbase', '4', 'attribute:attribute', 'bp'
put 'threshold_ref_hbase', '4', 'limit:low_age_limit', '0'
put 'threshold_ref_hbase', '4', 'limit:high_age_limit', '40'
put 'threshold_ref_hbase', '4', 'limit:low_range_value', '0'
put 'threshold_ref_hbase', '4', 'limit:high_range_value', '160'
put 'threshold_ref_hbase', '4', 'alert:alert_flag', '1'
put 'threshold_ref_hbase', '4', 'alert:alert_message', 'Low BP than Normal'
```

```
put 'threshold_ref_hbase', '5', 'attribute:attribute', 'bp'
put 'threshold_ref_hbase', '5', 'limit:low_age_limit', '0'
put 'threshold_ref_hbase', '5', 'limit:high_age_limit', '40'
put 'threshold_ref_hbase', '5', 'limit:low_range_value', '161'
put 'threshold_ref_hbase', '5', 'limit:high_range_value', '220'
put 'threshold_ref_hbase', '5', 'alert:alert_flag', '0'
put 'threshold_ref_hbase', '5', 'alert:alert_message', 'Normal'
```

```
put 'threshold_ref_hbase', '6', 'attribute:attribute', 'bp'  
put 'threshold_ref_hbase', '6', 'limit:low_age_limit', '0'  
put 'threshold_ref_hbase', '6', 'limit:high_age_limit', '40'  
put 'threshold_ref_hbase', '6', 'limit:low_range_value', '221'  
put 'threshold_ref_hbase', '6', 'limit:high_range_value', '9999'  
put 'threshold_ref_hbase', '6', 'alert:alert_flag', '1'  
put 'threshold_ref_hbase', '6', 'alert:alert_message', 'Higher BP than Normal'
```

```
put 'threshold_ref_hbase', '7', 'attribute:attribute', 'heartBeat'  
put 'threshold_ref_hbase', '7', 'limit:low_age_limit', '41'  
put 'threshold_ref_hbase', '7', 'limit:high_age_limit', '100'  
put 'threshold_ref_hbase', '7', 'limit:low_range_value', '0'  
put 'threshold_ref_hbase', '7', 'limit:high_range_value', '65'  
put 'threshold_ref_hbase', '7', 'alert:alert_flag', '1'  
put 'threshold_ref_hbase', '7', 'alert:alert_message', 'Low Heart Rate than Normal'
```

```
put 'threshold_ref_hbase', '8', 'attribute:attribute', 'heartBeat'  
put 'threshold_ref_hbase', '8', 'limit:low_age_limit', '41'  
put 'threshold_ref_hbase', '8', 'limit:high_age_limit', '100'  
put 'threshold_ref_hbase', '8', 'limit:low_range_value', '66'  
put 'threshold_ref_hbase', '8', 'limit:high_range_value', '73'  
put 'threshold_ref_hbase', '8', 'alert:alert_flag', '0'  
put 'threshold_ref_hbase', '8', 'alert:alert_message', 'Normal'
```

```
put 'threshold_ref_hbase', '9', 'attribute:attribute', 'heartBeat'  
put 'threshold_ref_hbase', '9', 'limit:low_age_limit', '41'  
put 'threshold_ref_hbase', '9', 'limit:high_age_limit', '100'  
put 'threshold_ref_hbase', '9', 'limit:low_range_value', '74'  
put 'threshold_ref_hbase', '9', 'limit:high_range_value', '9999'  
put 'threshold_ref_hbase', '9', 'alert:alert_flag', '1'  
put 'threshold_ref_hbase', '9', 'alert:alert_message', 'Higher Heart Rate than Normal'
```

```
put 'threshold_ref_hbase', '10', 'attribute:attribute', 'bp'  
put 'threshold_ref_hbase', '10', 'limit:low_age_limit', '41'  
put 'threshold_ref_hbase', '10', 'limit:high_age_limit', '100'  
put 'threshold_ref_hbase', '10', 'limit:low_range_value', '0'  
put 'threshold_ref_hbase', '10', 'limit:high_range_value', '150'  
put 'threshold_ref_hbase', '10', 'alert:alert_flag', '1'  
put 'threshold_ref_hbase', '10', 'alert:alert_message', 'Low BP than Normal'
```

```
put 'threshold_ref_hbase', '11', 'attribute:attribute', 'bp'  
put 'threshold_ref_hbase', '11', 'limit:low_age_limit', '41'  
put 'threshold_ref_hbase', '11', 'limit:high_age_limit', '100'  
put 'threshold_ref_hbase', '11', 'limit:low_range_value', '151'
```

```
put 'threshold_ref_hbase', '11', 'limit:high_range_value', '180'
put 'threshold_ref_hbase', '11', 'alert:alert_flag', '0'
put 'threshold_ref_hbase', '11', 'alert:alert_message', 'Normal'
```

```
put 'threshold_ref_hbase', '12', 'attribute:attribute', 'bp'
put 'threshold_ref_hbase', '12', 'limit:low_age_limit', '41'
put 'threshold_ref_hbase', '12', 'limit:high_age_limit', '100'
put 'threshold_ref_hbase', '12', 'limit:low_range_value', '181'hive
put 'threshold_ref_hbase', '12', 'limit:high_range_value', '9999'
put 'threshold_ref_hbase', '12', 'alert:alert_flag', '1'
put 'threshold_ref_hbase', '12', 'alert:alert_message', 'Higher BP than Normal'
```

```
hadoop@ip-172-31-87-192:~
hbase:001:0> put 'threshold_ref_hbase', '1', 'attribute:attribute', 'heartBeat'
Took 0.9445 seconds
hbase:002:0> put 'threshold_ref_hbase', '1', 'limit:low_age_limit', '0'
Took 0.0076 seconds
hbase:003:0> put 'threshold_ref_hbase', '1', 'limit:high_age_limit', '40'
Took 0.0041 seconds
hbase:004:0> put 'threshold_ref_hbase', '1', 'limit:low_range_value', '0'
Took 0.0083 seconds
hbase:005:0> put 'threshold_ref_hbase', '1', 'limit:high_range_value', '69'
Took 0.0069 seconds
hbase:006:0> put 'threshold_ref_hbase', '1', 'alert:alert_flag', '1'
Took 0.0082 seconds
hbase:007:0> put 'threshold_ref_hbase', '1', 'alert:alert_message', 'Low Heart Rate than Normal'
Took 0.0100 seconds
hbase:008:0> put 'threshold_ref_hbase', '2', 'attribute:attribute', 'heartBeat'
Took 0.0096 seconds
hbase:009:0> put 'threshold_ref_hbase', '2', 'limit:low_age_limit', '0'
Took 0.0075 seconds
hbase:010:0> put 'threshold_ref_hbase', '2', 'limit:high_age_limit', '40'
Took 0.0041 seconds
hbase:011:0> put 'threshold_ref_hbase', '2', 'limit:low_range_value', '70'
Took 0.0054 seconds
hbase:012:0> put 'threshold_ref_hbase', '2', 'limit:high_range_value', '78'
Took 0.0080 seconds
hbase:013:0> put 'threshold_ref_hbase', '2', 'alert:alert_flag', '0'
Took 0.0072 seconds
hbase:014:0> put 'threshold_ref_hbase', '2', 'alert:alert_message', 'Normal'
Took 0.0050 seconds
hbase:015:0> put 'threshold_ref_hbase', '3', 'attribute:attribute', 'heartBeat'
Took 0.0044 seconds
hbase:016:0> put 'threshold_ref_hbase', '3', 'limit:low_age_limit', '0'
Took 0.0053 seconds
hbase:017:0> put 'threshold_ref_hbase', '3', 'limit:high_age_limit', '40'
Took 0.0099 seconds
hbase:018:0> put 'threshold_ref_hbase', '3', 'limit:low_range_value', '79'
Took 0.0096 seconds
hbase:019:0> put 'threshold_ref_hbase', '3', 'limit:high_range_value', '9999'
Took 0.0092 seconds
hbase:020:0> put 'threshold_ref_hbase', '3', 'alert:alert_flag', '1'
Took 0.0162 seconds
hbase:021:0> put 'threshold_ref_hbase', '3', 'alert:alert_message', 'Higher Heart Rate than Normal'
Took 0.0057 seconds
```

```
hadoop@ip-172-31-87-192:~  
hbase:068:0> put 'threshold_ref_hbase', '10', 'limit:high_range_value', '150'  
Took 0.0068 seconds  
hbase:069:0> put 'threshold_ref_hbase', '10', 'alert:alert_flag', '1'  
Took 0.0047 seconds  
hbase:070:0> put 'threshold_ref_hbase', '10', 'alert:alert_message', 'Low BP than Normal'  
Took 0.0041 seconds  
hbase:071:0> put 'threshold_ref_hbase', '11', 'attribute:attribute', 'bp'  
Took 0.0055 seconds  
hbase:072:0> put 'threshold_ref_hbase', '11', 'limit:low_age_limit', '41'  
Took 0.0049 seconds  
hbase:073:0> put 'threshold_ref_hbase', '11', 'limit:high_age_limit', '100'  
Took 0.0060 seconds  
hbase:074:0> put 'threshold_ref_hbase', '11', 'limit:low_range_value', '151'  
Took 0.0043 seconds  
hbase:075:0> put 'threshold_ref_hbase', '11', 'limit:high_range_value', '180'  
Took 0.0084 seconds  
hbase:076:0> put 'threshold_ref_hbase', '11', 'alert:alert_flag', '0'  
Took 0.0047 seconds  
hbase:077:0> put 'threshold_ref_hbase', '11', 'alert:alert_message', 'Normal'  
Took 0.0055 seconds  
hbase:078:0> put 'threshold_ref_hbase', '12', 'attribute:attribute', 'bp'  
Took 0.0054 seconds  
hbase:079:0> put 'threshold_ref_hbase', '12', 'limit:low_age_limit', '41'  
Took 0.0054 seconds  
hbase:080:0> put 'threshold_ref_hbase', '12', 'limit:high_age_limit', '100'  
Took 0.0041 seconds  
hbase:081:0> put 'threshold_ref_hbase', '12', 'limit:low_range_value', '181'  
Took 0.0048 seconds  
hbase:082:0> put 'threshold_ref_hbase', '12', 'limit:high_range_value', '9999'  
Took 0.0041 seconds  
hbase:083:0> put 'threshold_ref_hbase', '12', 'alert:alert_flag', '1'  
Took 0.0052 seconds  
hbase:084:0> put 'threshold_ref_hbase', '12', 'alert:alert_message', 'Higher BP than Normal'  
hbase:085:0> quit  
hbase:086:0> ^C  
hbase:086:0> put 'threshold_ref_hbase', '12', 'alert:alert_message', 'Higher BP than Normal'  
hbase:087:0> ^C  
hbase:087:0> put 'threshold_ref_hbase', '12', 'alert:alert_message', 'Higher BP than Normal'  
Took 0.0177 seconds  
hbase:088:0> █
```

STATEMENTS TO VIEW HBASE THRESHOLD TABLE ABOVE MENTIONED AFTER DATA INSERTION:

scan 'threshold_ref_hbase'

```
hadoop@ip-172-31-87-192:~
hbase:088:0> scan 'threshold_ref_hbase'
ROW      COLUMN+CELL
1        column=alert:alert_flag, timestamp=2024-07-29T05:45:27.008
, value=1
1        column=alert:alert_message, timestamp=2024-07-29T05:45:32.
111, value=Low Heart Rate than Normal
1        column=attribute:attribute, timestamp=2024-07-29T05:45:01.
331, value=heartBeat
1        column=limit:high_age_limit, timestamp=2024-07-29T05:45:10
.898, value=40
1        column=limit:high_range_value, timestamp=2024-07-29T05:45:
21.236, value=69
1        column=limit:low_age_limit, timestamp=2024-07-29T05:45:06.
484, value=0
1        column=limit:low_range_value, timestamp=2024-07-29T05:45:1
4.592, value=0
10       column=alert:alert_flag, timestamp=2024-07-29T05:52:19.102
, value=1
10       column=alert:alert_message, timestamp=2024-07-29T05:52:22.
798, value=Low BP than Normal
10       column=attribute:attribute, timestamp=2024-07-29T05:51:42.
614, value=bp
10       column=limit:high_age_limit, timestamp=2024-07-29T05:51:53
.020, value=100
10       column=limit:high_range_value, timestamp=2024-07-29T05:52:
07.010, value=150
10       column=limit:low_age_limit, timestamp=2024-07-29T05:51:48.
268, value=41
10       column=limit:low_range_value, timestamp=2024-07-29T05:51:5
8.277, value=0
11       column=alert:alert_flag, timestamp=2024-07-29T05:52:51.239
, value=0
11       column=alert:alert_message, timestamp=2024-07-29T05:52:57.
202, value=Normal
11       column=attribute:attribute, timestamp=2024-07-29T05:52:28.
900, value=bp
11       column=limit:high_age_limit, timestamp=2024-07-29T05:52:37
.886, value=100
11       column=limit:high_range_value, timestamp=2024-07-29T05:52:
47.286, value=180
11       column=limit:low_age_limit, timestamp=2024-07-29T05:52:33.
750, value=41
11       column=limit:low_range_value, timestamp=2024-07-29T05:52:4
2.849, value=151
```