Hive Assignment - 1

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ISE -A

- Create database called customer
- Create table bank(tid, bname, cname, amount)
- Insert values using insert statement
- Import the values using csv
- Query operation, group by, aggregate, order by and having clause, views
- Create one more table
- Experiment with join operation, Alter operations

Create table bank(tid, bname, cname, amount).

Insert values using insert statement.

```
hdoop@ubuntu:-/apach-hive-3.1.2-bin

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Fine taken: 0.256 seconds
hive- Insert into bank values(501, "Axis", "Adarsh", 30000.00), (502, "SBI", "Narayan", 50000.00);
Query ID = hdoop_20210702024255_dcs12eb-168e-4602-85be-a00178ef73e8

Total jobs = 3
Launching job 1 out of 3
Number of reduce tasks determined at compile time: 1
In order to change the average load for a reducer (in bytes);
set hive.exec.reducers.bytes.per.reducer=number>
In order to thint the maximum number of reducers:
set norder to tast a constant number of reducers:
set norder to set a constant number of reducers:
set norder to set a constant number of reducers:
set norder to set a constant number of reducers:
set norder to set a constant number of mappers:
tarting Job = job | 1625216497416, 0808, Tracking URL = http://ubuntu:8088/proxy/application_1625216497416_0808/
Kill Command = /homey.hdoopy.hadoop.s2.1./jbin/napred job - kill job_1625216497416_0808

Kall Command = /homey.hdoopy.hdoopy.s2.1./jbin/napred job - kill job - job - job_1625216497416_0808

Kall Command = /homey.hdoopy.s2.1./jbin/napred job - kill job - job
```

```
hdoop@ubuntu: ~/apache-hive-3.1.2-bin
 Query ID = hdoop_20210702024621_aac46b1e-2fc6-4e1c-9bea-60d8648547dc
Total jobs = 3
 Launching Job 1 out of 3
Number of reduce tasks determined at compile time: 1
In order to change the average load for a reducer (in bytes):
      set hive.exec.reducers.bytes.per.reducer=<number>
 In order to limit the maximum number of reducers:
    set hive.exec.reducers.max=<number>
set hive.exec.reducers.max=<number>
In order to set a constant number of reducers:
    set mapreduce.job.reduces=<number>
Starting Job = job_1625216497416_0009, Tracking URL = http://ubuntu:8088/proxy/application_1625216497416_0009/
Kill Command = /home/hdoop/hadoop-3.2.1/bin/mapred job -kill job_1625216497416_0009
Hadoop job information for Stage-1: number of mappers: 1; number of reducers: 1
2021-07-02 02:46:30,791 Stage-1 map = 0%, reduce = 0%, Cumulative CPU 2.5 sec
2021-07-02 02:46:37,034 Stage-1 map = 100%, reduce = 0%, Cumulative CPU 4.39 sec
MapReduce Total cumulative CPU time: 4 seconds 390 msec
Ended Job = job_1625216497416_0009
Stage-4 is selected by condition resolver.
Stage-3 is filtered out by condition resolver.
Stage-5 is filtered out by condition resolver.
Moving data to directory hdfs://127.0.0.1:9000/user/hive/warehouse/customer.db/bank/.hive-staging_hive_2021-07-02_02-46-21_695_643472262717298
29-1/-ext-10000
 29-1/-ext-10000
 Loading data to table customer.bank
 MapReduce Jobs Launched:
Stage-Stage-1: Map: 1 Reduce: 1 Cumulative CPU: 4.39 sec HDFS Read: 19932 HDFS Write: 467 SUCCESS
Total MapReduce CPU Time Spent: 4 seconds 390 msec
 Time taken: 21.709 seconds
 hive> select * from bank;
 OK
501
                   Axis
                                      Adarsh 30000.0
 502
                   SBI
                                      Narayan 50000.0
 503
                    Canara Venkat 40000.0
                   KDCC Vijay 25000.0
YesBank Naveen 45000.0
 504
 Time taken: 0.184 seconds, Fetched: 5 row(s)
```

Import the values using csv

```
hdoop@ubuntu:-/apache-hive-3.1.2-bin

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at org.-spache.hadoop.htve.ql.Driver.compileAndRespond(Driver.java:1773)
at org.-spache.hadoop.htve.ql.Driver.compileAndRespond(Driver.java:1773)
at org.-spache.hadoop.htve.ql.Driver.compileAndRespond(Driver.java:1773)
at org.-spache.hadoop.htve.ql.compileAndRespond(Driver.java:1780)
at org.-spache.hadoop.htve.compileAndRespond(Driver.java:1780)
at org.-spache.hadoop.htve.compileAndRespond(Driver.java:1780)
at org.-spache.hadoop.htve.compileAndRespond(Driver.java:1881)
at org.-spache.hadoop.htve.compileAndRespond(CliDriver.java:1882)
at org.-spache.hadoop.htve.compileAndRespond(CliDriver.java:1882)
at org.-spache.hadoop.htve.compileAndRespond(Driver.java:1782)
at org.-spache.hadoop.htve.compileAndRespo
```

Query using group by clause

```
hdoop@ubuntu:-/epache-hive-3.1.2-bin

at sun.reflect.NativeMethodAccessorImpl.invokee(NativeMethodAccessorImpl.java:62)
at sun.reflect.NativeMethodAccessorImpl.invokee(NativeMethodAccessorImpl.java:62)
at sun.reflect.NativeMethodAccessorImpl.invokee(NativeMethodAccessorImpl.java:62)
at siyax_lang.reflect.Method.invoke(Method.java:490)
at org.apache.hadoop.util.RunJar.run(ManJar.java:233)
at org.apache.hadoop.util.RunJar.run(ManJar.java:233)
at org.apache.hadoop.util.RunJar.run(ManJar.java:233)
at org.apache.hadoop.util.RunJar.run(RunJar.java:233)
at org.apache.hadoop.util.RunJar.rund(RunJar.java:233)
at org.apache.hadoop.util.RunJar.rund(RunJar.java:233)
at org.apache.hadoop.util.RunJar.rund(RunJar.java:236)
FAILED:.Parsexception line.157 cannot recognize input near 'group' 'by' 'cname' in expression specification
htves select cname_amount from bank where amount=30000.00 group by cname_amount;
Query ID = hdoop_20210702030214_f28b19a6-975f-4f68-9443-dabGaaa54f7
Total jobs = 1
Launching Job 1 out of 1
Number of reduce tasks not specified. Estimated from input data size: 1
In order to change the average load for a reducer (in bytes):
set hive.exec.reducers.bytes.per.reducer=-numbers
In order to tange the average load for a reducer (in bytes):
set hive.exec.reducers.max=number of reducers:
set mapreduce.job.reduces=-numbers
In order to set a constant number of reducers:
set mapreduce.job.reduces=-numbers
Starting_Job = job_10252104097416_0010, job.reduces=1000.com
kill Command = /home/hdoop/hadoop-3.2.1/bin/mapred job -kill job_1625216497416_0010
Hadoop_job Information for stage-1: number of mappers: 1; number of freducers:
2021-07-02_03:02:33,075_Stage-1 map = 1000, reduce = 0%, Cumulative CPU 15.99 sec
2021-07-02_03:02:33,075_Stage-1 map = 1000, reduce = 0%, Cumulative CPU 17.86 sec
Mappleduce Total cumulative CPU tine Spent: 17 seconds 860 msec
Command Spent Co
```

Query using order by clause

Query using having clause

```
hdoop@ubuntu: ~/apache-hive-3.1.2-bin
 File Edit View Search Terminal Help
506
                  Chaitra 35000.0
Time taken: 18.766 seconds, Fetched: 6 row(s)

National Research Fetched: 6 row(s)

Nive> select tid,cname,amount from bank group by tid having amount>40000;

FAILED: SemanticException [Error 10025]: Line 1:54 Expression not in GROUP BY key '40000' hive> select tid,cname,sum(amount) from bank group by tid having sum(amount)>40000;

FAILED: SemanticException [Error 10025]: Line 1:11 Expression not in GROUP BY key 'cname' hive> select tid,cname,sum(amount) from bank group by tid,cname having sum(amount)>40000;
Query ID = hdoop_20210702033442_c459c41d-5e85-4014-8250-a0963096ecc1
Total jobs = 1
Launching Job 1 out of 1
Number of reduce tasks not specified. Estimated from input data size: 1
In order to change the average load for a reducer (in bytes):
set hive.exec.reducers.bytes.per.reducer=<number>
In order to limit the maximum number of reducers:
set hive.exec.reducers.max=<number>
In order to set a constant number of reducers:
set mapreduce.job.reduces=cnumber>
Starting Job = job_1625216497416_0014, Tracking URL = http://ubuntu:8088/proxy/application_1625216497416_0014/
Kill Command = /home/hdoop/hadoop-3.2.1/bin/mapred job -kill job_1625216497416_0014
Hadoop job information for Stage-1: number of mappers: 1; number of reducers: 1
2021-07-02 03:35:17,556 Stage-1 number of mappers. 1, humber of reducers. 1 2021-07-02 03:35:17,556 Stage-1 map = 0%, reduce = 0% 2021-07-02 03:35:43,198 Stage-1 map = 100%, reduce = 0%, Cumulative CPU 10.09 sec 2021-07-02 03:35:57,917 Stage-1 map = 100%, reduce = 100%, Cumulative CPU 13.42 sec MapReduce Total cumulative CPU time: 13 seconds 420 msec Ended Job = job_1625216497416_0014
MapReduce Jobs Launched:
Stage-Stage-1: Map: 1 Reduce: 1 Cumulative CPU:
Total MapReduce CPU Time Spent: 13 seconds 420 msec
                                                                               Cumulative CPU: 13.42 sec HDFS Read: 14758 HDFS Write: 180 SUCCESS
502
                   Narayan 50000.0
505
                  Naveen 45000.0
Gagan 60000.0
 Time taken: 77.601 seconds, Fetched: 3 row(s)
```

Query on aggregate functions

```
hdoop@ubuntu:-/apache-hive-3.1.2-bin

Description of the service o
```

Construction of view

```
hdoop@ubuntu: ~/apache-hive-3.1.2-bin
In order to limit the maximum number of reducers:
  set hive.exec.reducers.max=<number>
In order to set a constant number of reducers:
In order to set a constant number of reducers:
set mapreduce.job.reduces=cnumber>
Starting Job = job_1625216497416_0014, Tracking URL = http://ubuntu:8088/proxy/application_1625216497416_0014/
Kill Command = /home/hdoop/hadoop-3.2.1/bin/mapred job -kill job_1625216497416_0014
Hadoop job information for Stage-1: number of mappers: 1; number of reducers: 1
2021-07-02 03:35:17,556 Stage-1 map = 0%, reduce = 0%
2021-07-02 03:35:43,198 Stage-1 map = 100%, reduce = 0%, Cumulative CPU 10.09 sec
2021-07-02 03:35:57,917 Stage-1 map = 100%, reduce = 100%, Cumulative CPU 13.42 sec
MapReduce Total cumulative CPU time: 13 seconds 420 msec
Forded Job = job_165216497416 0014
MapReduce Job = job_1625216497416_0014

MapReduce Jobs Launched:

Stage-Stage-1: Map: 1 Reduce: 1 Cumulative CPU: 13.42 sec HDFS Read: 14758 HDFS Write: 180 SUCCESS Total MapReduce CPU Time Spent: 13 seconds 420 msec
502
                Narayan 50000.0
505
               Naveen 45000.0
Gagan 60000.0
508
Time taken: 77.601 seconds, Fetched: 3 row(s)
hive> create view Cust_Transac as select tid,cname from bank;
Time taken: 0.466 seconds hive> select * from Cust_Transac;
OK
501
502
                Narayan
503
                Venkat
504
                Vijav
505
                Naveen
506
                Chaitra
                Nitya
507
508
                Gagan
Time taken: 0.139 seconds, Fetched: 8 row(s)
hive> show databases;
```

Creating one more table called customer(cust_id int,tid int,loc string) And importing values from csv file

```
hdoop@ubuntu: ~/apache-hive-3.1.2-bin
Time taken: 0.162 seconds, Fetched: 3 row(s)
hive> use customer:
Time taken: 0.074 seconds
hive> show tables;
bank
cust_transac
Time taken: 0.089 seconds, Fetched: 2 row(s)
hive> select * from bank;
          SBI Narayan 50000.0
Canara Venkat 40000.0
KDCC Vijay 25000.0
YesBank Naveen 45000.0
503
506
          BOB
                    Chaitra 35000.0
          Urban Nitya 15000.0
PNB Gagan 60000.0
507
Time taken: 0.147 seconds, Fetched: 8 row(s)
hive> create table customer(cust_id int,tid int,loc string)row format delimited fields terminated by ",";
hive> load data local inpath'/home/hdoop/customer2.csv' into table customer;
Loading data to table customer.customer
Time taken: 0.143 seconds hive> select * from customer;
                     Bangalore
                     Mysore
102
          503
          502
103
                     Hubli
          505
                     Dharwad
Time taken: 0.302 seconds, Fetched: 4 row(s)
```

Experimenting on join operation

Experimenting on alter operation

```
hdoop@ubuntu: ~/apache-hive-3.1.2-bin
 File Edit View Search Terminal Help
Venkat Mysore
Naveen Dharwad
Time taken: 51.363 seconds, Fetched: 4 row(s) hive> alter table customer rename to cust;
Time taken: 0.237 seconds
hive> show tables;
bank
cust
cust_transac

Time taken: 0.02 seconds, Fetched: 3 row(s)
hive> alter table customer add columns(phno int);

FAILED: SemanticException [Error 10001]: Table not found customer.customer
hive> alter table cust add columns(phno int);
Time taken: 0.371 seconds
hive> desc cust;
cust_id
tid
                                           int
loc
                                           string
                                          int
Int
Time taken: 0.032 seconds, Fetched: 4 row(s)
hive> insert into cust values(207,103,"Sirsi",9998877665);
Query ID = hdoop_20210702040140_48dc6854-6c6f-4a39-9523-f1a5fee85be8
Total jobs = 3
ohno
Number of reduce tasks determined at compile time: 1
In order to change the average load for a reducer (in bytes):
set hive.exec.reducers.bytes.per.reducer=<number>
In order to limit the maximum number of reducers:
   set hive.exec.reducers.max=<number>
In order to set a constant number of reducers:
    set mapreduce.job.reduces=<number>
```

```
hdoop@ubuntu: ~/apache-hive-3.1.2-bin
hive> insert into cust values(207,103,"Sirsi",9998877665);
Query ID = hdoop_20210702040140_48dc6854-6c6f-4a39-9523-f1a5fee85be8
Total jobs = 3
Launching Job 1 out of 3
Number of reduce tasks determined at compile time: 1
In order to change the average load for a reducer (in bytes):
  set hive.exec.reducers.bytes.per.reducer=<number>
In order to limit the maximum number of reducers:
  set hive.exec.reducers.max=<number>
In order to set a constant number of reducers:
 set mapreduce.job.reduces=<number>
Starting Job = job_1625216497416_0016, Tracking URL = http://ubuntu:8088/proxy/application_1625216497416_0016/
Kill Command = /home/hdoop/hadoop-3.2.1/bin/mapred job -kill job_1625216497416_0016
Hadoop job information for Stage-1: number of mappers: 1; number of reducers: 1
2021-07-02 04:01:52,191 Stage-1 map = 0%, reduce = 0%
2021-07-02 04:02:20,244 Stage-1 map = 100%, reduce = 0%, Cumulative CPU 11.34 sec
2021-07-02 04:02:33,604 Stage-1 map = 100%, reduce = 100%, Cumulative CPU 13.95 sec
MapReduce Total cumulative CPU time: 13 seconds 950 msec
Ended Job = job_1625216497416_0016
Stage-4 is selected by condition resolver.
Stage-3 is filtered out by condition resolver.
Stage-5 is filtered out by condition resolver.
Stage-5 is filtered out by condition resolver.
Moving data to directory hdfs://127.0.0.1:9000/user/hive/warehouse/customer.db/cust/.hive-staging_hive_2021-07-02_04-01-40_904_200087144685990
7234-1/-ext-10000
Loading data to table customer.cust
MapReduce Jobs Launched:
Stage-Stage-1: Map: 1 Reduce: 1 Cumulative CPU: 13.95 sec HDFS Read: 17826 HDFS Write: 344 SUCCESS
Total MapReduce CPU Time Spent: 13 seconds 950 msec
Time taken: 55.071 seconds
hive> select * from cust;
207
           103
                      Sirsi 1408943073
101
                      Bangalore
                      Mysore NULL
```

```
hdoop@ubuntu: ~/apache-hive-3.1.2-bin
Number of reduce tasks determined at compile time: 1
In order to change the average load for a reducer (in bytes):
set hive.exec.reducers.bytes.per.reducer=<number>
In order to limit the maximum number of reducers:
  set hive.exec.reducers.max=<number>
In order to set a constant number of reducers:
    set mapreduce.job.reduces=<number>
set mapreduce.joo.reduces=cnumber>
Starting Job = job_1625216497416_0016, Tracking URL = http://ubuntu:8088/proxy/application_1625216497416_0016/
Kill Command = /home/hdoop/hadoop-3.2.1/bin/mapred job -kill job_1625216497416_0016
Hadoop job information for Stage-1: number of mappers: 1; number of reducers: 1
2021-07-02 04:01:52,191 Stage-1 map = 0%, reduce = 0%
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MapReduce Total cumulative CPU time: 13 seconds 950 msec
Ended Job = job_1625216497416_0016
Stage-4 is selected by condition resolver.
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Moving data to directory hdfs://127.0.0.1:9000/user/hive/warehouse/customer.db/cust/.hive-staging_hive_2021-07-02_04-01-40_904_200087144685990
7234-1/-ext-10000
Loading data to table customer.cust
MapReduce Jobs Launched:
Stage-Stage-1: Map: 1 Reduce: 1 Cumulative CPU: 13.95 sec HDFS Read: 17826 HDFS Write: 344 SUCCESS Total MapReduce CPU Time Spent: 13 seconds 950 msec
Time taken: 55.071 seconds
hive> select * from cust;
207
               103
                               Sirsi 1408943073
101
                               Bangalore
                               Mysore NULL
Hubli NULL
102
               503
103
104 505 Dharwad NULL
Time taken: 0.175 seconds, Fetched: 5 row(s)
```