HIVE PROJECT 1

- Q1) Create a schema based on the given dataset
- Q2) Dump the data inside the hdfs in the given schema location.
- Q1,2) Solution

Make directory at hdfs location.

[cloudera@quickstart ~]\$ hdfs dfs -mkdir Agent

Put files (AgentLogingReport.csv Agent, AgentPerformance.csv Agent) into Agent directory in hdfs location.

[cloudera@quickstart ~]\$ hdfs dfs -put /tmp/Agent_data/AgentLogingReport.csv Agent/

[cloudera@quickstart ~]\$ hdfs dfs -put /tmp/Agent_data/AgentPerformance.csv Agent/

Check the files inside hdfs location.

[cloudera@quickstart ~]\$ hdfs dfs -ls Agent

```
Found 2 items

-rw-r--r-- 1 cloudera cloudera 55351 2022-11-01 08:58 Agent/AgentLogingReport.csv

-rw-r--r-- 1 cloudera cloudera 109853 2022-11-01 08:59 Agent/AgentPerformance.csv
```

Go to hive and use agent database.

```
hive> use agent;
```

Time taken: 1.25 seconds

Create tables:

> (

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hive> create table agent_loging

```
> s_no int,
> agent string,
> date date,
```

- > login_time string,
- > logout_time string,
- > duration string
- >)
- > row format delimited
- > fields terminated by ','
- > tblproperties("skip.header.line.count"="1");

```
hive> create table agent_performance
  > (
  > s_no int,
  > date date,
  > agent_name string,
  > total_chats int,
  > average_response_time string,
  > average_resolution_time string,
  > average_rating float,
  > total_feedback int
  >)
  > row format delimited
  > fields terminated by ','
  > tblproperties("skip.header.line.count"="1");
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Time taken: 0.218 seconds
Load data inside above created tables.
hive> load data inpath 'Agent/AgentLogingReport.csv' into table agent_loging;
Loading data to table agent.agent_loging
Table agent.agent_loging stats: [numFiles=1, totalSize=56353]
Time taken: 1.581 seconds
hive> load data inpath 'Agent/AgentPerformance.csv' into table agent_performance;
Loading data to table agent.agent_performance
Table agent.agent_performance stats: [numFiles=1, totalSize=116159]
OK
Time taken: 0.837 seconds
```

Fetch some records from tables.

hive> select * from agent_loging limit 3;

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```
1 Shivananda Sonwane 2022-07-30 15:35:29 17:39:39 02:04:10
```

2 Khushboo Priya 2022-07-30 15:06:59 15:07:16 00:00:17

3 Nandani Gupta 2022-07-30 15:04:24 17:31:07 02:26:42

Time taken: 0.971 seconds, Fetched: 3 row(s)

hive> select * from agent_performance limit 3;

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```
1 2022-07-30 Prerna Singh 11 00:00:38 00:04:20 4.11 9
```

2 2022-07-30 Nandani Gupta 11 00:01:15 00:28:25 3.14 7

3 2022-07-30 Ameya Jain 14 00:00:30 00:11:36 4.55 11

Time taken: 0.118 seconds, Fetched: 3 row(s)

Q3) List of all agents' names.

Solution:

hive> select distinct agent from agent_loging;

Query ID = cloudera_20221101210404_30dc2792-6a5d-46e6-95d7-61106454adf0

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=<number>

Starting Job = job_1667316033891_0002, Tracking URL = http://quickstart.cloudera:8088/proxy/application_1667316033891_0002/

Kill Command = /usr/lib/hadoop/bin/hadoop job -kill job_1667316033891_0002

 ${\it Hadoop\ job\ information\ for\ Stage-1: number\ of\ mappers:\ 1;\ number\ of\ reducers:\ 1}$

2022-11-01 21:05:23,698 Stage-1 map = 100%, reduce = 0%, Cumulative CPU 2.81 sec

2022-11-01 21:05:37,446 Stage-1 map = 100%, reduce = 100%, Cumulative CPU 6.11 sec

 ${\sf MapReduce\ Total\ cumulative\ CPU\ time:\ 6\ seconds\ 110\ msec}$

Ended Job = job_1667316033891_0002

MapReduce Jobs Launched:

Stage-Stage-1: Map: 1 Reduce: 1 Cumulative CPU: 6.11 sec HDFS Read: 64055 HDFS Write: 638 SUCCESS

Total MapReduce CPU Time Spent: 6 seconds 110 msec
ОК
Aditya Shinde
Aditya_iot
Amersh
Ameya Jain
Ankitjha
Anurag Tiwari
Aravind
Ayushi Mishra
Bharath
Boktiar Ahmed Bappy
Chaitra K Hiremath
Deepranjan Gupta
Dibyanshu
Harikrishnan Shaji
Hrisikesh Neogi
Hyder Abbas
Ineuron Intelligence
Ishawant Kumar
Jawala Prakash
Jaydeep Dixit
Khushboo Priya
Madhulika G
Mahesh Sarade
Maitry
Manjunatha A
Mithun S
Mukesh
Muskan Garg
Nandani Gupta
Nishtha Jain
Nitin M
Prabir Kumar Satapathy
Prateek_iot
Prerna Singh
Rishav Dash

Saikumarreddy N

Sanjeev Kumar Saurabh Shukla Shiva Srivastava Shivan K Shivananda Sonwane Shubham Sharma Sowmiya Sivakumar Sudhanshu Kumar Suraj S Bilgi Swati Tarun Wasim Zeeshan Time taken: 60.25 seconds, Fetched: 49 row(s) hive> select distinct agent_name from agent_performance; Query ID = cloudera_20221101210606_286d5cfa-e577-47db-9828-045875c5505f 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=<number> Starting Job = job_1667316033891_0003, Tracking URL = http://quickstart.cloudera:8088/proxy/application_1667316033891_0003/ $\label{eq:command} \mbox{Kill Command} = \mbox{/usr/lib/hadoop/bin/hadoop job -kill job_1667316033891_0003$ ${\it Hadoop\ job\ information\ for\ Stage-1: number\ of\ mappers:\ 1;\ number\ of\ reducers:\ 1}$ 2022-11-01 21:06:19,465 Stage-1 map = 0%, reduce = 0% 2022-11-01 21:06:32,624 Stage-1 map = 100%, reduce = 0%, Cumulative CPU 2.81 sec 2022-11-01 21:06:48,642 Stage-1 map = 100%, reduce = 100%, Cumulative CPU 6.63 sec MapReduce Total cumulative CPU time: 6 seconds 630 msec Ended Job = job_1667316033891_0003 MapReduce Jobs Launched:

Stage-Stage-1: Map: 1 Reduce: 1 Cumulative CPU: 6.63 sec HDFS Read: 124583 HDFS Write: 841 SUCCESS

Total MapReduce CPU Time Spent: 6 seconds 630 msec

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Ankitjha
Anurag Tiwari
Aravind
Ashad Nasim
Ashish
Ayushi Mishra
Bharath
Boktiar Ahmed Bappy
Chaitra K Hiremath
Deepranjan Gupta
Dibyanshu
Harikrishnan Shaji
Hitesh Choudhary
Hrisikesh Neogi
Hyder Abbas
Ineuron Intelligence
Ishawant Kumar
Jawala Prakash
Jayant Kumar
Jaydeep Dixit
Khushboo Priya
Madhulika G
Mahak
Mahesh Sarade
Maitry
Maneesh
Manjunatha A
Mithun S
Mukesh

Abhishek Aditya

Aditya_iot
Amersh

Ameya Jain Anirudh

Ankit Sharma

Mukesh Rao
Muskan Garg
Nandani Gupta
Nishtha Jain
Nitin M
Prabir Kumar Satapathy
Prateek _iot
Prerna Singh
Rishav Dash
Rohan
Saif Khan
Saikumarreddy N
Samprit
Sandipan Saha
Sanjeev Kumar
Sanjeevan
Saurabh Shukla
Shiva Srivastava
Shivan K
Shivan_S
Shivananda Sonwane
Shubham Sharma
Sowmiya Sivakumar
Spuri
Sudhanshu Kumar
Suraj S Bilgi
Swati
Tarun
Uday Mishra
Vasanth P
Vivek
Wasim
Zeeshan

Q4) Find out agent average rating.

Time taken: 46.158 seconds, Fetched: 71 row(s)

Solution:

hive> set hive.cli.print.header = true;

hive> select agent_name as agent, avg(average_rating) as average_rating from agent_performance group by agent_name;

```
Query ID = cloudera_20221101211111_d3477195-298c-4632-97c5-05e0bc981a44
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=<number>
Kill Command = /usr/lib/hadoop/bin/hadoop job -kill job_1667316033891_0006
Hadoop job information for Stage-1: number of mappers: 1; number of reducers: 1
2022-11-01 21:11:37,012 Stage-1 map = 0%, reduce = 0%
2022-11-01 21:11:44,688 Stage-1 map = 100%, reduce = 0%, Cumulative CPU 2.33 sec
2022-11-01 21:11:57,761 Stage-1 map = 100%, reduce = 100%, Cumulative CPU 4.79 sec
MapReduce Total cumulative CPU time: 4 seconds 790 msec
Ended Job = job_1667316033891_0006
MapReduce Jobs Launched:
Stage-Stage-1: Map: 1 Reduce: 1 Cumulative CPU: 4.79 sec HDFS Read: 125817 HDFS Write: 1881 SUCCESS
Total MapReduce CPU Time Spent: 4 seconds 790 msec
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agent average_rating
Abhishek
           0.0
Aditya 0.0
Aditya Shinde 1.8003333409627278
Aditya_iot 2.3453333377838135
Amersh 0.0
Ameya Jain 2.21966667175293
Anirudh 0.6449999968210857
Ankit Sharma 0.0
         0.2666666666666666
Ankitjha
Anurag Tiwari 0.18333333333333333
```

Aravind 2.1813333511352537

Ashad Nasim 0.1666666666666666

Ashish 0.0

Ayushi Mishra 3.481999969482422

Bharath 2.9836666584014893

Boktiar Ahmed Bappy 3.567999982833862

Chaitra K Hiremath 0.8646666606267294

Deepranjan Gupta 2.88666695276896

Dibyanshu 0.0

Harikrishnan Shaji 2.639666526794434

Hitesh Choudhary 0.0

Hrisikesh Neogi 3.1363333304723104

Hyder Abbas 0.0

Ineuron Intelligence 0.0

Ishawant Kumar 3.543333347638448

Jawala Prakash 3.472000018755595

Jayant Kumar 1.068666664759318

Jaydeep Dixit 3.1670000314712525

Khushboo Priya 3.70366663169861

Madhulika G 3.498666520436605

Mahak 0.1

Mahesh Sarade 2.4003333330154417

Maitry 2.9270000139872234

Maneesh 0.1666666666666666

Manjunatha A 3.5946666876475017

Mithun S 2.359000023206075

Mukesh 0.3096666653951009

Mukesh Rao 0.25566666523615517

Muskan Garg 0.712333329518636

Nandani Gupta 2.9236666679382326

Nishtha Jain 3.282333334287008

Nitin M 0.0

Prabir Kumar Satapathy 2.5103333314259846

Prateek_iot 2.4383333206176756

Prerna Singh 3.2326666434605915

Rishav Dash 1.4268333355585734

Rohan 0.0

Saif Khan 0.0

Saikumarreddy N 1.9803333441416422

Samprit 0.0

Sandipan Saha 0.4289999961853027

Sanjeev Kumar 3.3830000241597493

Sanjeevan 0.0

Saurabh Shukla 0.555666692097981

Shiva Srivastava 0.9446666717529297

Shivan K 2.841333341598511

Shivan_S 0.1416666666666666

Shivananda Sonwane 4.232666659355163

Shubham Sharma 3.2253333568572997

Sowmiya Sivakumar 1.259999984105428

Spuri 0.0

Sudhanshu Kumar 0.3333333333333333

Suraj S Bilgi 0.31200000445048015

Swati 2.4236666917800904

Tarun 0.05

Uday Mishra 0.0

Vasanth P 0.0

Vivek 0.5006666660308838

Wasim 2.40000015894572

Zeeshan 2.286999988555908

Time taken: 33.155 seconds, Fetched: 71 row(s)

Q5) Total working days for each agent

Solution:

hive> select agent_name as agent, count(distinct date) as number_of_working_days from agent_performance group by agent_name;

Query ID = cloudera_20221101211717_617f0d44-ffd7-46f9-b0a1-e8b032095df8

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=<number>
Starting Job = job_1667316033891_0008, Tracking URL = http://quickstart.cloudera:8088/proxy/application_1667316033891_0008/
\label{eq:command} \mbox{Kill Command} = \mbox{/usr/lib/hadoop/bin/hadoop job -kill job\_1667316033891\_0008}
{\it Hadoop\ job\ information\ for\ Stage-1: number\ of\ mappers:\ 1;\ number\ of\ reducers:\ 1}
2022-11-01 21:17:53,354 Stage-1 map = 0%, reduce = 0%
2022-11-01 21:18:01,959 Stage-1 map = 100%, reduce = 0%, Cumulative CPU 2.62 sec
2022-11-01 21:18:13,514 Stage-1 map = 100%, reduce = 100%, Cumulative CPU 5.15 sec
MapReduce Total cumulative CPU time: 5 seconds 150 msec
Ended Job = job_1667316033891_0008
MapReduce Jobs Launched:
Stage-Stage-1: Map: 1 Reduce: 1 Cumulative CPU: 5.15 sec HDFS Read: 125596 HDFS Write: 1053 SUCCESS
Total MapReduce CPU Time Spent: 5 seconds 150 msec
ОК
agent \ number\_of\_working\_days
    0
Abhishek
            30
Aditya 30
Aditya Shinde 30
Aditya_iot 30
Amersh 30
Ameya Jain 30
Anirudh 30
Ankit Sharma 30
Ankitjha 30
Anurag Tiwari 30
Aravind 30
Ashad Nasim 30
Ashish 30
Ayushi Mishra 30
Bharath 30
Boktiar Ahmed Bappy 30
Chaitra K Hiremath 30
Deepranjan Gupta
Dibyanshu
             30
```

Harikrishnan Shaji Hitesh Choudhary

Hrisikesh Neogi 30 Hyder Abbas 30 30

Ineuron Intelligence 30
Ishawant Kumar 30
Jawala Prakash 30
Jayant Kumar 30
Jaydeep Dixit 30
Khushboo Priya 30
Madhulika G 30
Mahak 30
Mahesh Sarade 30
Maitry 30
Maneesh 30
Manjunatha A 30
Mithun S 30
Mukesh 30

Mukesh Rao 30

......

Muskan Garg 30

Nandani Gupta 30

Nishtha Jain 30

Nitin M 30

Prabir Kumar Satapathy 30

Prateek_iot 30

Prerna Singh 30

Rishav Dash 30

Rohan 30

Saif Khan 30

Saikumarreddy N 30

Samprit 30

Sandipan Saha 30

Sanjeev Kumar 30

Sanjeevan 30

Saurabh Shukla 30

Shiva Srivastava 30

Shivan K 30

Shivan_S 30

Shivananda Sonwane 30

Shubham Sharma 30

Sowmiya Sivakumar 30

Spuri 30

```
Sudhanshu Kumar 30
Suraj S Bilgi 30
Swati 30
Tarun 30
Uday Mishra 30
Vasanth P 30
Vivek 30
Wasim 30
Zeeshan 30
```

Time taken: 31.571 seconds, Fetched: 71 row(s)

Q6) Total query that each agent has taken

Solution:

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hive> select agent_name as agent, sum(total_chats) as queries_taken from agent_performance group by agent_name;

```
Query ID = cloudera_20221101214848_5e4743f7-bfa2-437e-a8af-18d16fa84039
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=<number>
Kill Command = /usr/lib/hadoop/bin/hadoop job -kill job_1667316033891_0009
Hadoop job information for Stage-1: number of mappers: 1; number of reducers: 1
2022-11-01\ 21:48:24,468\ Stage-1\ map=0\%,\ reduce=0\%
2022-11-01 21:48:33,352 Stage-1 map = 100%, reduce = 0%, Cumulative CPU 2.17 sec
2022-11-01 21:48:44,544 Stage-1 map = 100%, reduce = 100%, Cumulative CPU 4.69 sec
MapReduce Total cumulative CPU time: 4 seconds 690 msec
Ended Job = job_1667316033891_0009
MapReduce Jobs Launched:
Stage-Stage-1: Map: 1 Reduce: 1 Cumulative CPU: 4.69 sec HDFS Read: 125339 HDFS Write: 1065 SUCCESS
Total MapReduce CPU Time Spent: 4 seconds 690 msec
```

agent queries_taken Abhishek Aditya 0 Aditya Shinde 277 Aditya_iot 231 Amersh 0 Ameya Jain 322 Anirudh 81 Ankit Sharma 0 Ankitjha 5 Anurag Tiwari 4 Aravind 366 Ashad Nasim 18 Ashish 0 Ayushi Mishra 514 Bharath 369 Boktiar Ahmed Bappy 452 Chaitra K Hiremath 64 493 Deepranjan Gupta Dibyanshu 381 Harikrishnan Shaji Hitesh Choudhary 1 Hrisikesh Neogi 578 Hyder Abbas 0 Ineuron Intelligence 0 Ishawant Kumar 338 Jawala Prakash 439 Jayant Kumar 127 Jaydeep Dixit 512 Khushboo Priya 446 Madhulika G 469 Mahak 7 Mahesh Sarade 364 Maitry 542 Maneesh 4 Manjunatha A 413

Mithun S

Mukesh 19

503

```
Mukesh Rao
```

Muskan Garg 56

Nandani Gupta 560

Nishtha Jain 373

Nitin M 0

Prabir Kumar Satapathy 299

Prateek_iot 190

Prerna Singh 401

Rishav Dash 409

Rohan 0

Saif Khan 0

Saikumarreddy N 364

Samprit 1

Sandipan Saha 30

Sanjeev Kumar 507

Sanjeevan 0

Saurabh Shukla 16

Shiva Srivastava 53

Shivan K 357

Shivan_S 7

Shivananda Sonwane 441

Shubham Sharma 510

Sowmiya Sivakumar 206

Spuri 0

Sudhanshu Kumar 2

Suraj S Bilgi 28

Swati 524

Tarun 22

Uday Mishra 0

Vasanth P 0

Vivek 44

Wasim 433

Zeeshan 542

Time taken: 30.731 seconds, Fetched: 71 row(s)

Q7) Total Feedback that each agent has received

Solution:

hive> select agent_name as agent, sum(total_feedback) as feedbacks_received from agent_performance group by agent_name;

```
Query ID = cloudera_20221101215656_81013437-bff7-447c-b446-3709c703263a
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=<number>
Starting\ Job=job\_1667316033891\_0012,\ Tracking\ URL=http://quickstart.cloudera:8088/proxy/application\_1667316033891\_0012/properties and the properties of the properties of
Kill Command = /usr/lib/hadoop/bin/hadoop job -kill job_1667316033891_0012
Hadoop job information for Stage-1: number of mappers: 1; number of reducers: 1
2022-11-01 21:56:17,193 Stage-1 map = 0%, reduce = 0%
2022-11-01 21:56:29,417 Stage-1 map = 100%, reduce = 0%, Cumulative CPU 3.06 sec
2022-11-01 21:56:42,782 Stage-1 map = 100%, reduce = 100%, Cumulative CPU 6.62 sec
MapReduce Total cumulative CPU time: 6 seconds 620 msec
Ended Job = job_1667316033891_0012
MapReduce Jobs Launched:
Stage-Stage-1: Map: 1 Reduce: 1 Cumulative CPU: 6.62 sec HDFS Read: 125346 HDFS Write: 1061 SUCCESS
Total MapReduce CPU Time Spent: 6 seconds 620 msec
ОК
agent feedbacks_received
Abhishek
Aditya 0
Aditya Shinde 153
Aditya_iot 131
Amersh 0
Ameya Jain 228
Anirudh 39
Ankit Sharma 0
Ankitjha
Anurag Tiwari 3
Aravind 233
```

Ashad Nasim 9

Ashish 0

Ayushi Mishra 329

Bharath 247

Boktiar Ahmed Bappy 311

Chaitra K Hiremath 37

Deepranjan Gupta 312

Dibyanshu 0

Harikrishnan Shaji 231

Hitesh Choudhary 0

Hrisikesh Neogi 367

Hyder Abbas 0

Ineuron Intelligence 0

Ishawant Kumar 202

Jawala Prakash 250

Jayant Kumar 70

Jaydeep Dixit 305

Khushboo Priya 289

Madhulika G 281

Mahak 5

Mahesh Sarade 216

Maitry 347

Maneesh 3

Manjunatha A 254

Mithun S 364

Mukesh 17

Mukesh Rao 5

Muskan Garg 37

Nandani Gupta 308

Nishtha Jain 257

Nitin M 0

Prabir Kumar Satapathy 222

Prateek_iot 107

Prerna Singh 235

Rishav Dash 264

Rohan 0

Saif Khan 0

Saikumarreddy N 290

Samprit 0

```
Sandipan Saha 18
Sanjeev Kumar 311
Sanjeevan 0
Saurabh Shukla 8
Shiva Srivastava
Shivan K
          243
Shivan_S
Shivananda Sonwane 263
Shubham Sharma 300
Sowmiya Sivakumar 141
Spuri 0
Sudhanshu Kumar 2
Suraj S Bilgi 15
Swati 302
Tarun 6
Uday Mishra 0
Vasanth P 0
Vivek 20
Wasim 284
Zeeshan 335
Time taken: 42.047 seconds, Fetched: 71 row(s)
```

Q8) Agent name who have average rating between 3.5 to 4

Solution:

hive> select agent_name as agent, avg(average_rating) as average_rating from agent_performance group by agent_name having average_rating between 3.5 and 4;

```
Query ID = cloudera_20221101220202_7dfde0dd-a9b0-4135-ab59-f4fa72fc5b7d

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=<number>

Starting Job = job_1667316033891_0013, Tracking URL = http://quickstart.cloudera:8088/proxy/application_1667316033891_0013/
```

```
Kill Command = /usr/lib/hadoop/bin/hadoop job -kill job_1667316033891_0013
Hadoop job information for Stage-1: number of mappers: 1; number of reducers: 1
2022-11-01 22:02:38,620 Stage-1 map = 0%, reduce = 0%
2022-11-01 22:02:48,489 Stage-1 map = 100%, reduce = 0%, Cumulative CPU 2.04 sec
2022-11-01 22:02:59,284 Stage-1 map = 100%, reduce = 100%, Cumulative CPU 4.85 sec
MapReduce Total cumulative CPU time: 4 seconds 850 msec
Ended Job = job_1667316033891_0013
MapReduce Jobs Launched:
Stage-Stage-1: Map: 1 Reduce: 1 Cumulative CPU: 4.85 sec HDFS Read: 126449 HDFS Write: 136 SUCCESS
Total MapReduce CPU Time Spent: 4 seconds 850 msec
OK
agent average rating
Boktiar Ahmed Bappy 3.567999982833862
Ishawant Kumar 3.543333347638448
Khushboo Priya 3.703666663169861
Manjunatha A 3.5946666876475017
Time taken: 33.547 seconds, Fetched: 4 row(s)
```

Q9) Agent name who have rating less than 3.5

Solution:

hive> select agent_name as agent, avg(average_rating) as average_rating from agent_performance group by agent_name having average_rating < 3.5;

```
Query ID = cloudera_20221101220404_673bfe50-feae-4738-b904-6f241f2aa822

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=<number>
Starting Job = job_1667316033891_0014, Tracking URL = http://quickstart.cloudera:8088/proxy/application_1667316033891_0014/
Kill Command = /usr/lib/hadoop/bin/hadoop job -kill job_1667316033891_0014

Hadoop job information for Stage-1: number of mappers: 1; number of reducers: 1
2022-11-01 22:04:34,295 Stage-1 map = 0%, reduce = 0%
2022-11-01 22:04:46,500 Stage-1 map = 100%, reduce = 0%, Cumulative CPU 2.71 sec
```

2022-11-01 22:05:03,498 Stage-1 map = 100%, reduce = 100%, Cumulative CPU 7.32 sec

MapReduce Total cumulative CPU time: 7 seconds 320 msec

Ended Job = job_1667316033891_0014

MapReduce Jobs Launched:

Stage-Stage-1: Map: 1 Reduce: 1 Cumulative CPU: 7.32 sec HDFS Read: 126252 HDFS Write: 1704 SUCCESS

Total MapReduce CPU Time Spent: 7 seconds 320 msec

ОК

agent average_rating

Abhishek 0.0

Aditya 0.0

Aditya Shinde 1.8003333409627278

Aditya_iot 2.3453333377838135

Amersh 0.0

Ameya Jain 2.21966667175293

Anirudh 0.6449999968210857

Ankit Sharma 0.0

Ankitjha 0.266666666666666

Anurag Tiwari 0.18333333333333333

Aravind 2.1813333511352537

Ashad Nasim 0.1666666666666666

Ashish 0.0

Ayushi Mishra 3.481999969482422

Bharath 2.9836666584014893

Chaitra K Hiremath 0.8646666606267294

Deepranjan Gupta 2.886666695276896

Dibyanshu 0.0

Harikrishnan Shaji 2.6396666526794434

Hitesh Choudhary 0.0

Hrisikesh Neogi 3.1363333304723104

Hyder Abbas 0.0

Ineuron Intelligence 0.0

Jawala Prakash 3.472000018755595

Jayant Kumar 1.068666664759318

Jaydeep Dixit 3.1670000314712525

Madhulika G 3.4986666520436605

Mahak 0.1

Mahesh Sarade 2.4003333330154417

Maitry 2.9270000139872234

Maneesh 0.1666666666666666

Mithun S 2.359000023206075

Mukesh 0.3096666653951009

Mukesh Rao 0.25566666523615517

Muskan Garg 0.712333329518636

Nandani Gupta 2.9236666679382326

Nishtha Jain 3.282333334287008

Nitin M 0.0

Prabir Kumar Satapathy 2.5103333314259846

Prateek_iot 2.4383333206176756

Prerna Singh 3.2326666434605915

Rishav Dash 1.4268333355585734

Rohan 0.0

Saif Khan 0.0

Saikumarreddy N 1.9803333441416422

Samprit 0.0

Sandipan Saha 0.4289999961853027

Sanjeev Kumar 3.3830000241597493

Sanjeevan 0.0

Saurabh Shukla 0.555666692097981

Shiva Srivastava 0.9446666717529297

Shivan K 2.841333341598511

Shivan_S 0.141666666666666

Shubham Sharma 3.2253333568572997

Sowmiya Sivakumar 1.2599999984105428

Spuri 0.0

Sudhanshu Kumar 0.3333333333333333

Suraj S Bilgi 0.31200000445048015

Swati 2.4236666917800904

Tarun 0.05

Uday Mishra 0.0

Vasanth P 0.0

Vivek 0.5006666660308838

Wasim 2.40000015894572

Zeeshan 2.286999988555908

Time taken: 45.33 seconds, Fetched: 65 row(s)

Q10) Agent name who have rating more than 4.5

Solution:

hive> select agent_name as agent, avg(average_rating) as average_rating from agent_performance group by agent_name having average_rating > 4.5;

```
Query ID = cloudera_20221101220505_cc78d0b4-99be-4cd0-8227-fe4d79e36f40
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=<number>
\label{eq:command} \mbox{Kill Command} = \mbox{/usr/lib/hadoop/bin/hadoop job -kill job\_1667316033891\_0015}
Hadoop job information for Stage-1: number of mappers: 1; number of reducers: 1
2022-11-01 22:05:30,465 Stage-1 map = 0%, reduce = 0%
2022-11-01 22:05:43,975 Stage-1 map = 100%, reduce = 0%, Cumulative CPU 2.94 sec
2022-11-01 22:05:59,236 Stage-1 map = 100%, reduce = 100%, Cumulative CPU 6.62 sec
MapReduce Total cumulative CPU time: 6 seconds 620 msec
Ended Job = job_1667316033891_0015
MapReduce Jobs Launched:
Stage-Stage-1: Map: 1 Reduce: 1 Cumulative CPU: 6.62 sec HDFS Read: 126251 HDFS Write: 0 SUCCESS
Total MapReduce CPU Time Spent: 6 seconds 620 msec
ΟK
agent average_rating
Time taken: 44.717 seconds
```

Q11) How many feedback agents have received more than 4.5 average

Solution:

hive> select count(*) from(select agent_name as agent, avg(total_feedback) as average_feedback from agent_performance group by agent_name having average_feedback > 4.5)t;

```
Query ID = cloudera_20221101221919_c687ebc1-ccb0-4d82-bd3b-2bb333af0f74

Total jobs = 2

Launching Job 1 out of 2

Number of reduce tasks not specified. Estimated from input data size: 1
```

```
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_1667316033891_0019, Tracking URL = http://quickstart.cloudera:8088/proxy/application_1667316033891_0019/
Kill Command = /usr/lib/hadoop/bin/hadoop job -kill job_1667316033891_0019
Hadoop job information for Stage-1: number of mappers: 1; number of reducers: 1
2022-11-01 22:20:02,892 Stage-1 map = 0%, reduce = 0%
2022-11-01 22:20:14,116 Stage-1 map = 100%, reduce = 0%, Cumulative CPU 2.71 sec
2022-11-01 22:20:27,703 Stage-1 map = 100%, reduce = 100%, Cumulative CPU 6.64 sec
MapReduce Total cumulative CPU time: 6 seconds 640 msec
Ended Job = job_1667316033891_0019
Launching Job 2 out of 2
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_1667316033891_0020, Tracking URL = http://quickstart.cloudera:8088/proxy/application_1667316033891_0020/
Kill Command = /usr/lib/hadoop/bin/hadoop job -kill job_1667316033891_0020
Hadoop job information for Stage-2: number of mappers: 1; number of reducers: 1
2022-11-01 22:20:42,088 Stage-2 map = 0%, reduce = 0%
2022-11-01 22:20:52,198 Stage-2 map = 100%, reduce = 0%, Cumulative CPU 2.39 sec
2022-11-01 22:21:04,433 Stage-2 map = 100%, reduce = 100%, Cumulative CPU 5.45 sec
MapReduce Total cumulative CPU time: 5 seconds 450 msec
Ended Job = job_1667316033891_0020
MapReduce Jobs Launched:
Stage-Stage-1: Map: 1 Reduce: 1 Cumulative CPU: 6.64 sec HDFS Read: 125695 HDFS Write: 114 SUCCESS
Stage-Stage-2: Map: 1 Reduce: 1 Cumulative CPU: 5.45 sec HDFS Read: 4550 HDFS Write: 3 SUCCESS
Total MapReduce CPU Time Spent: 12 seconds 90 msec
ОК
_c0
31
```

In order to change the average load for a reducer (in bytes):

Time taken: 77.471 seconds, Fetched: 1 row(s)

Q12) average weekly response time for each agent

Solution:

hive> select agent, avg(weekly_response_time_in_sec) as avg_weekly_response_time_in_sec from (select week, agent, sum((time[0]*3600+time[1]*60+time[2])) as weekly_response_time_in_sec from(select agent_name as agent, weekofyear(date) as week, split(average_response_time,':') as time from agent_performance) t group by agent, week)s group by agent;

```
Query ID = cloudera_20221101233535_4ba561a1-9387-4cca-a257-2a3de2da2ae0
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=<number>
Starting Job = job_1667316033891_0027, Tracking URL = http://quickstart.cloudera:8088/proxy/application_1667316033891_0027/
Kill Command = /usr/lib/hadoop/bin/hadoop job -kill job_1667316033891_0027
Hadoop job information for Stage-1: number of mappers: 1; number of reducers: 1
2022-11-01 23:35:17,893 Stage-1 map = 0%, reduce = 0%
2022-11-01 23:35:27,189 Stage-1 map = 100%, reduce = 0%, Cumulative CPU 3.21 sec
2022-11-01 23:35:37,351 Stage-1 map = 100%, reduce = 100%, Cumulative CPU 5.32 sec
MapReduce Total cumulative CPU time: 5 seconds 320 msec
Ended Job = job_1667316033891_0027
MapReduce Jobs Launched:
Stage-Stage-1: Map: 1 Reduce: 1 Cumulative CPU: 5.32 sec HDFS Read: 129398 HDFS Write: 1212 SUCCESS
Total MapReduce CPU Time Spent: 5 seconds 320 msec
agent avg_weekly_response_time_in_sec
Abhishek
Aditya 0.0
Aditya Shinde 178.4
Aditya_iot 203.8
Amersh 0.0
Ameya Jain 126.8
Anirudh 130.6
```

Ankit Sharma 0.0

Ankitjha 26.6

Anurag Tiwari 50.6

Aravind 128.2

Ashad Nasim 231.8

Ashish 0.0

Ayushi Mishra 362.0

Bharath 160.8

Boktiar Ahmed Bappy 396.2

Chaitra K Hiremath 90.8

Deepranjan Gupta 319.2

Dibyanshu 7.6

Harikrishnan Shaji 203.8

Hitesh Choudhary 0.0

Hrisikesh Neogi 303.0

Hyder Abbas 0.0

Ineuron Intelligence 0.0

Ishawant Kumar 300.8

Jawala Prakash 565.4

Jayant Kumar 110.6

Jaydeep Dixit 266.4

Khushboo Priya 367.8

Madhulika G 398.6

Mahak 0.0

Mahesh Sarade 278.6

Maitry 383.0

Maneesh 27.0

Manjunatha A 217.0

Mithun S 173.6

Mukesh 20.0

Mukesh Rao 78.8

Muskan Garg 35.6

Nandani Gupta 359.2

Nishtha Jain 364.8

Nitin M 0.0

Prabir Kumar Satapathy 228.0

Prateek_iot 135.0

Prerna Singh 286.0

Rishav Dash 363.8

Rohan 0.0

Saif Khan 0.0

Saikumarreddy N 151.0

Samprit 0.0

Sandipan Saha 35.4

Sanjeev Kumar 307.2

Sanjeevan 0.0

Saurabh Shukla 21.0

Shiva Srivastava 60.0

Shivan K 287.4

Shivan S 14.6

Shivananda Sonwane 336.0

Shubham Sharma 290.0

Sowmiya Sivakumar 157.0

Spuri 0.0

Sudhanshu Kumar 24.0

Suraj S Bilgi 36.4

Swati 346.8

Tarun 0.0

Uday Mishra 0.0

Vasanth P 0.0

Vivek 82.2

Wasim 178.2

Zeeshan 370.4

Time taken: 30.063 seconds, Fetched: 71 row(s)

Q13) average weekly resolution time for each agents

Solution:

hive> select agent, avg(weekly_resolution_time_in_sec) as avg_weekly_resolution_time_in_sec from (select week, agent, sum((time[0]*3600+time[1]*60+time[2])) as weekly_resolution_time_in_sec from(select agent_name as agent, weekofyear(date) as week, split(average_resolution_time,':') as time from agent_performance) t group by agent, week)s group by agent;

Query ID = cloudera_20221101234040_71190205-b2a4-41ad-b17e-5be389b17f6a

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):

```
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>
Kill Command = /usr/lib/hadoop/bin/hadoop job -kill job_1667316033891_0028
Hadoop job information for Stage-1: number of mappers: 1; number of reducers: 1
2022-11-01 23:40:16,339 Stage-1 map = 0%, reduce = 0%
2022-11-01 23:40:28,723 Stage-1 map = 100%, reduce = 0%, Cumulative CPU 4.64 sec
2022-11-01 23:40:49,453 Stage-1 map = 100%, reduce = 100%, Cumulative CPU 11.52 sec
MapReduce Total cumulative CPU time: 11 seconds 520 msec
Ended Job = job_1667316033891_0028
MapReduce Jobs Launched:
Stage-Stage-1: Map: 1 Reduce: 1 Cumulative CPU: 11.52 sec HDFS Read: 129404 HDFS Write: 1271 SUCCESS
Total MapReduce CPU Time Spent: 11 seconds 520 msec
OK
agent avg_weekly_resolution_time_in_sec
Abhishek 0.0
Aditya 0.0
Aditya Shinde 3723.8
Aditya_iot 3535.8
Amersh 0.0
Ameya Jain 1971.0
Anirudh 1112.8
Ankit Sharma 0.0
Ankitjha 326.8
Anurag Tiwari 443.6
Aravind 3213.4
Ashad Nasim 125.6
Ashish 0.0
Ayushi Mishra 5535.6
Bharath 3885.6
Boktiar Ahmed Bappy 6143.0
Chaitra K Hiremath 533.8
Deepranjan Gupta 7507.0
```

set hive.exec.reducers.bytes.per.reducer=<number>

Dibyanshu 148.0

Harikrishnan Shaji 4070.6

Hitesh Choudhary 17.0

Hrisikesh Neogi 5557.8

Hyder Abbas 0.0

Ineuron Intelligence 0.0

Ishawant Kumar 5190.6

Jawala Prakash 4682.6

Jayant Kumar 1769.6

Jaydeep Dixit 6486.4

Khushboo Priya 6026.6

Madhulika G 5595.4

Mahak 240.8

Mahesh Sarade 3297.0

Maitry 4602.4

Maneesh 250.0

Manjunatha A 6105.2

Mithun S 2080.0

Mukesh 455.6

Mukesh Rao 2763.4

Muskan Garg 691.2

Nandani Gupta 6538.2

Nishtha Jain 3350.4

Nitin M 0.0

Prabir Kumar Satapathy 2139.8

Prateek_iot 2917.4

Prerna Singh 5948.4

Rishav Dash 6114.6

Rohan 0.0

Saif Khan 0.0

Saikumarreddy N 2240.2

Samprit 20.6

Sandipan Saha 947.0

Sanjeev Kumar 6189.8

Sanjeevan 0.0

Saurabh Shukla 428.4

Shiva Srivastava 532.8

Shivan K 5709.6

Shivan_S 220.4

Shivananda Sonwane 7611.6

```
Shubham Sharma 6259.0

Sowmiya Sivakumar 2144.0

Spuri 0.0

Sudhanshu Kumar 701.8

Suraj S Bilgi 946.0

Swati 4419.4

Tarun 542.8

Uday Mishra 0.0

Vasanth P 0.0

Vivek 916.6

Wasim 4133.2
```

Time taken: 48.741 seconds, Fetched: 71 row(s)

Q14) Find the number of chats on which they have received a feedback

Solution:

MapReduce Jobs Launched:

Zeeshan 3870.4

hive> select agent_name as agent, sum(total_chats) as chats, sum(total_feedback) as chats_with_feedback_received from agent_performance group by agent_name;

```
Query ID = cloudera_20221101234747_993bf134-206c-4ae0-9001-cba22ef8a2a8
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=<number>
Starting Job = job_1667316033891_0029, Tracking URL = http://quickstart.cloudera:8088/proxy/application_1667316033891_0029/
Kill Command = /usr/lib/hadoop/bin/hadoop job -kill job_1667316033891_0029
Hadoop job information for Stage-1: number of mappers: 1; number of reducers: 1
2022-11-01 23:47:53,761 Stage-1 map = 0%, reduce = 0%
2022-11-01 23:48:06,087 Stage-1 map = 100%, reduce = 0%, Cumulative CPU 3.01 sec
2022-11-01 23:48:19,713 Stage-1 map = 100%, reduce = 100%, Cumulative CPU 6.5 sec
MapReduce Total cumulative CPU time: 6 seconds 500 msec
Ended Job = job_1667316033891_0029
```

Stage-Stage-1: Map: 1 Reduce: 1 Cumulative CPU: 6.5 sec HDFS Read: 125793 HDFS Write: 1285 SUCCESS

Total MapReduce CPU Time Spent: 6 seconds 500 msec

ОК

agent chats chats_with_feedback_received

Abhishek 0 0

Aditya 0 0

Aditya Shinde 277 153

Aditya_iot 231 131

Amersh 0 0

Ameya Jain 322 228

Anirudh 81 39

Ankit Sharma 0 0

Ankitjha 5 3

Anurag Tiwari 4 3

Aravind 366 233

Ashad Nasim 18 9

Ashish 0 0

Ayushi Mishra 514 329

Bharath 369 247

Boktiar Ahmed Bappy 452 311

Chaitra K Hiremath 64 37

Deepranjan Gupta 493 312

Dibyanshu 1 0

Harikrishnan Shaji 381 231

Hitesh Choudhary 1 0

Hrisikesh Neogi 578 367

Hyder Abbas 0 0

Ineuron Intelligence 0 0

Ishawant Kumar 338 202

Jawala Prakash 439 250

Jayant Kumar 127 70

Jaydeep Dixit 512 305

Khushboo Priya 446 289

Madhulika G 469 281

Mahak 7 5

Mahesh Sarade 364 216

Maitry 542 347

Maneesh 4 3

Manjunatha A 413 254

Mithun S 503 364

Mukesh 19 17

Mukesh Rao 5 5

Muskan Garg 56 37

Nandani Gupta 560 308

Nishtha Jain 373 257

Nitin M 0 0

Prabir Kumar Satapathy 299 222

Prateek_iot 190 107

Prerna Singh 401 235

Rishav Dash 409 264

Rohan 0 0

Saif Khan 0 0

Saikumarreddy N 364 290

Samprit 1 0

Sandipan Saha 30 18

Sanjeev Kumar 507 311

Sanjeevan 0 0

Saurabh Shukla 16 8

Shiva Srivastava 53 46

Shivan K 357 243

Shivan_S 7 4

Shivananda Sonwane 441 263

Shubham Sharma 510 300

Sowmiya Sivakumar 206 141

Spuri 0 0

Sudhanshu Kumar 2 2

Suraj S Bilgi 28 15

Swati 524 302

Tarun 22 6

Uday Mishra 0 0

Vasanth P 0 0

Vivek 44 20

Wasim 433 284

Zeeshan 542 335

Time taken: 41.182 seconds, Fetched: 71 row(s)

Q15) Total contribution hour for each and every agents weekly basis

Solution:

hive> select week, agent, sum((time[0]*3600+time[1]*60+time[2])/3600) as total_hrs_contributed from(select agent, weekofyear(date) as week, split(duration,':') as time from agent_loging) t group by agent, week;

```
Query ID = cloudera_20221102000303_0195e12e-5cf9-4ba2-9b71-195b9943d4ee
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=<number>
Starting Job = job_1667316033891_0032, Tracking URL = http://quickstart.cloudera:8088/proxy/application_1667316033891_0032/
Kill Command = /usr/lib/hadoop/bin/hadoop job -kill job_1667316033891_0032
Hadoop job information for Stage-1: number of mappers: 1; number of reducers: 1
2022-11-02 00:03:43,956 Stage-1 map = 0%, reduce = 0%
2022-11-02 00:03:58,926 Stage-1 map = 100%, reduce = 0%, Cumulative CPU 4.5 sec
2022-11-02 00:04:13,594 Stage-1 map = 100%, reduce = 100%, Cumulative CPU 9.45 sec
MapReduce Total cumulative CPU time: 9 seconds 450 msec
Ended Job = job_1667316033891_0032
MapReduce Jobs Launched:
Stage-Stage-1: Map: 1 Reduce: 1 Cumulative CPU: 9.45 sec HDFS Read: 68662 HDFS Write: 3068 SUCCESS
Total MapReduce CPU Time Spent: 9 seconds 450 msec
ОК
week agent total_hrs_contributed
30 Aditya Shinde 0.03611111111111111
29 Aditya_iot 6.0952777777778
   Aditya_iot 9.6358333333333334
30 Amersh 3.0638888888888887
29 Ameya Jain 24.083055555555553
30 Ameya Jain 17.9925
30 Ankitiha 2,2669444444444444
    Anurag Tiwari 0.26444444444444444
```

- 30 Anurag Tiwari 2.51444444444445
- 29 Aravind 24.2355555555555
- 30 Aravind 0.06361111111111112
- 29 Ayushi Mishra 17.7902777777778
- 30 Ayushi Mishra 20.33138888888889
- 29 Bharath 24.070833333333333
- 30 Bharath 24.005833333333335
- 29 Boktiar Ahmed Bappy 17.7502777777778
- 30 Boktiar Ahmed Bappy 22.518333333333334
- 29 Chaitra K Hiremath 2.23472222222225
- 30 Chaitra K Hiremath 32.09083333333336
- 29 Deepranjan Gupta 48.99638888888888
- 30 Deepranjan Gupta 57.27888888888887
- 29 Dibyanshu 27.74388888888907
- 30 Dibyanshu 24.85194444444474
- 29 Harikrishnan Shaji 21.438333333333333
- 30 Harikrishnan Shaji 32.27638888888889
- 29 Hrisikesh Neogi 26.89138888888889
- 30 Hrisikesh Neogi 30.67722222222223
- 29 Hyder Abbas 0.33611111111111114
- 30 Hyder Abbas 0.05194444444444446
- 29 Ineuron Intelligence 1.448611111111111
- 29 Ishawant Kumar 25.7208333333333
- 30 Ishawant Kumar 26.0580555555555
- 29 Jawala Prakash 24.340000000000003
- 30 Jawala Prakash 22.0622222222225
- 29 Jaydeep Dixit 41.9144444444444
- 30 Jaydeep Dixit 17.926111111111112
- 29 Khushboo Priya 21.715833333333336
- 30 Khushboo Priya 21.842777777778
- 29 Madhulika G 25.850833333333334
- 30 Madhulika G 20.20944444444447
- 29 Mahesh Sarade 25.48305555555552
- 30 Mahesh Sarade 17.438888888888888
- 29 Maitry 24.657777777778
- 30 Maitry 6.2872222222222
- 29 Manjunatha A 18.351111111111113
- 30 Manjunatha A 22.92361111111111

- 29 Mithun S 17.3797222222222
- 30 Mithun S 27.79388888888889
- 30 Mukesh 8.905
- 29 Muskan Garg 3.31861111111111
- 30 Muskan Garg 14.01694444444446
- 29 Nandani Gupta 17.33388888888889
- 30 Nandani Gupta 22.83833333333333
- 29 Nishtha Jain 22.1158333333333
- 30 Nishtha Jain 21.73694444444443
- 29 Nitin M 0.798888888888889
- 29 Prabir Kumar Satapathy 17.5244444444445
- 30 Prabir Kumar Satapathy 15.8527777777776
- 29 Prateek_iot 7.2697222222223
- 30 Prateek_iot 11.148333333333335
- 29 Prerna Singh 18.517500000000002
- 30 Prerna Singh 27.1980555555556
- 29 Rishav Dash 18.89388888888889
- 30 Rishav Dash 22.8816666666668
- 29 Saikumarreddy N 24.98055555555558
- 30 Saikumarreddy N 18.15694444444445
- 29 Sanjeev Kumar 19.36083333333332
- 30 Sanjeev Kumar 25.326388888888893
- 29 Saurabh Shukla 16.66305555555555
- 29 Shiva Srivastava 1.906111111111111
- 30 Shiva Srivastava 13.08805555555556
- 29 Shivan K 16.71388888888889
- 30 Shivan K 19.38833333333333
- 29 Shivananda Sonwane 20.8341666666667
- 30 Shivananda Sonwane 28.45361111111111
- 29 Shubham Sharma 30.51027777777784
- 30 Shubham Sharma 23.2880555555555
- 29 Sowmiya Sivakumar 17.065833333333334
- 30 Sowmiya Sivakumar 27.68833333333333
- 29 Sudhanshu Kumar 24.45472222222223
- 30 Sudhanshu Kumar 21.77638888888889
- 30 Suraj S Bilgi 12.55916666666666
- 29 Swati 18.85861111111111
- 30 Swati 6.1425

```
26 Tarun 10.13888888888889
```

- 29 Wasim 19.62555555555554
- 30 Wasim 28.553611111111113
- 29 Zeeshan 24.427500000000002
- 30 Zeeshan 24.661111111111115

Time taken: 45.08 seconds, Fetched: 89 row(s)

Q16) Perform inner join, left join and right join based on the agent column and after joining the table export that data into your local system.

```
Solution:
Inner Join:
hive> select I.*, p.*
       > from
       > agent_loging I
       > inner join
       > agent_performance p
       > on l.agent = p.agent_name
       > limit 5;
Query ID = cloudera_20221102012525_d501b321-d4d3-421b-8138-c772966267be
Total jobs = 1
Execution log at: /tmp/cloudera/cloudera_20221102012525_d501b321-d4d3-421b-8138-c772966267be.log
2022-11-02 01:25:37 Starting to launch local task to process map join; maximum memory = 932184064
2022-11-02 01:25:44 Dump the side-table for tag: 0 with group count: 49 into file: file:/tmp/cloudera/a7e5d834-a1dc-4221-bc58-
c45c9866afe5/hive\_2022-11-02\_01-25-18\_397\_2973530280533039045-1/-local-10003/HashTable-Stage-3/MapJoin-mapfile00--.hashtable-10003/HashTable-10003/HashTable-10003/HashTable-10003/HashTable-10003/HashTable-10003/HashTable-10003/HashTable-10003/HashTable-10003/HashTable-10003/HashTable-10003/HashTable-10003/HashTable-10003/HashTable-10003/HashTable-10003/HashTable-10003/HashTable-10003/HashTable-10003/HashTable-10003/HashTable-10003/HashTable-10003/HashTable-10003/HashTable-10003/HashTable-10003/HashTable-10003/HashTable-10003/HashTable-10003/HashTable-10003/HashTable-10003/HashTable-10003/HashTable-10003/HashTable-10003/HashTable-10003/HashTable-10003/HashTable-10003/HashTable-10003/HashTable-10003/HashTable-10003/HashTable-10003/HashTable-10003/HashTable-10003/HashTable-10003/HashTable-10003/HashTable-10003/HashTable-10003/HashTable-10003/HashTable-10003/HashTable-10003/HashTable-10003/HashTable-10003/HashTable-10003/HashTable-10003/HashTable-10003/HashTable-10003/HashTable-10003/HashTable-10003/HashTable-10003/HashTable-10003/HashTable-10003/HashTable-10003/HashTable-10003/HashTable-10003/HashTable-10003/HashTable-10003/HashTable-10003/HashTable-10003/HashTable-10003/HashTable-10003/HashTable-10003/HashTable-10003/HashTable-10003/HashTable-10003/HashTable-10003/HashTable-10003/HashTable-10003/HashTable-10003/HashTable-10003/HashTable-10003/HashTable-10003/HashTable-10003/HashTable-10003/HashTable-10003/HashTable-10003/HashTable-10003/HashTable-10003/HashTable-10003/HashTable-10003/HashTable-10003/HashTable-10003/HashTable-10003/HashTable-10003/HashTable-10003/HashTable-10003/HashTable-10003/HashTable-10003/HashTable-10003/HashTable-10003/HashTable-10003/HashTable-10003/HashTable-10003/HashTable-10003/HashTable-10003/HashTable-10003/HashTable-10003/HashTable-10003/HashTable-10003/HashTable-10003/HashTable-10003/HashTable-10003/HashTable-10003/HashTable-10003/HashTable-10003/HashTable-10003/HashTable-10003/HashTable-10003/HashTable-10003/HashTable-10003/HashTable-10003/HashTable-10003/HashTable-10003/HashTable
2022-11-02 01:25:44 Uploaded 1 File to: file:/tmp/cloudera/a7e5d834-a1dc-4221-bc58-c45c9866afe5/hive 2022-11-02 01-25-
18_397_2973530280533039045-1/-local-10003/HashTable-Stage-3/MapJoin-mapfile00--.hashtable (39341 bytes)
2022-11-02 01:25:44 End of local task; Time Taken: 6.518 sec.
Execution completed successfully
```

Number of reduce tasks is set to 0 since there's no reduce operator

MapredLocal task succeeded Launching Job 1 out of 1

 $\label{eq:Kill Command = /usr/lib/hadoop/bin/hadoop job -kill job_1667377030429_0001$

Hadoop job information for Stage-3: number of mappers: 1; number of reducers: 0

2022-11-02 01:26:19,004 Stage-3 map = 0%, reduce = 0%

2022-11-02 01:26:37,823 Stage-3 map = 100%, reduce = 0%, Cumulative CPU 4.27 sec

MapReduce Total cumulative CPU time: 4 seconds 270 msec

Ended Job = job_1667377030429_0001

MapReduce Jobs Launched:

Stage-Stage-3: Map: 1 Cumulative CPU: 4.27 sec HDFS Read: 13194 HDFS Write: 542 SUCCESS

Total MapReduce CPU Time Spent: 4 seconds 270 msec

ОК

l.s_no l.agent l.date l.login_time l.logout_time l.duration p.s_no p.date p.agent_name p.total_chats p.average_response_time 16 Prerna Singh 2022-07-30 12:32:28 14:10:08 01:37:40 1 2022-07-30 Prerna Singh 11 00:00:38 00:04:20 4.11 9 75 Prerna Singh 2022-07-29 17:47:06 21:03:44 03:16:37 1 2022-07-30 Prerna Singh 11 00:00:38 00.04.20 4.11 9 91 Prerna Singh 2022-07-29 15:08:22 17:20:49 02:12:27 1 2022-07-30 Prerna Singh 11 00:00:38 00:04:20 4.11 9 110 Prerna Singh 2022-07-29 12:08:23 12:11:35 00:03:11 1 2022-07-30 Prerna Singh 11 00:00:38 00:04:20 336 Prerna Singh 2022-07-27 13:11:06 20:58:35 07:47:29 1 2022-07-30 Prerna Singh 11 00:00:38 00:04:20 4.11 9

Time taken: 81.761 seconds, Fetched: 5 row(s)

Left Join:

hive> select I.*, p.*

- > from
- > agent_loging I
- > left join
- > agent_performance p
- > on l.agent = p.agent_name
- > limit 5;

Query ID = cloudera_20221102012727_6495894f-c7bf-444f-a20f-ab60098d710d

Total jobs = 1

Execution log at: /tmp/cloudera/cloudera_20221102012727_6495894f-c7bf-444f-a20f-ab60098d710d.log

2022-11-02 01:27:50 Starting to launch local task to process map join; maximum memory = 932184064

 $2022-11-02\ 01:27:52 \qquad Dump\ the\ side-table\ for\ tag:\ 1\ with\ group\ count:\ 71\ into\ file:\ file:/tmp/cloudera/a7e5d834-a1dc-4221-bc58-c45c9866afe5/hive_2022-11-02_01-27-41_896_8829501887617462410-1/-local-10003/HashTable-Stage-3/MapJoin-mapfile11--. hashtable for\ tag:\ 1\ with\ group\ count:\ 71\ into\ file:\ file:/tmp/cloudera/a7e5d834-a1dc-4221-bc58-c45c9866afe5/hive_2022-11-02_01-27-41_896_8829501887617462410-1/-local-10003/HashTable-Stage-3/MapJoin-mapfile11--. hashtable for\ tag:\ 1\ with\ group\ count:\ 71\ into\ file:\ file:/tmp/cloudera/a7e5d834-a1dc-4221-bc58-c45c9866afe5/hive_2022-11-02_01-27-41_896_8829501887617462410-1/-local-10003/HashTable-Stage-3/MapJoin-mapfile11--. hashtable for\ tag:\ 1\ with\ group\ count:\ 1\ with\ group\ count:\ 2\ w$

 $2022-11-02\ 01:27:53 \qquad Uploaded\ 1\ File\ to: file:/tmp/cloudera/a7e5d834-a1dc-4221-bc58-c45c9866afe5/hive_2022-11-02_01-27-41_896_8829501887617462410-1/-local-10003/HashTable-Stage-3/MapJoin-mapfile11--.hashtable\ (77631\ bytes)$

2022-11-02 01:27:53 $\,$ End of local task; Time Taken: 3.103 sec.

Execution completed successfully

MapredLocal task succeeded

Launching Job 1 out of 1

Number of reduce tasks is set to 0 since there's no reduce operator

 $Starting\ Job = job_1667377030429_0002,\ Tracking\ URL = http://quickstart.cloudera: 8088/proxy/application_1667377030429_0002/properties and the properties of the properti$

Kill Command = /usr/lib/hadoop/bin/hadoop job -kill job_1667377030429_0002

Hadoop job information for Stage-3: number of mappers: 1; number of reducers: 0

2022-11-02 01:28:10,612 Stage-3 map = 0%, reduce = 0%

2022-11-02 01:28:28,294 Stage-3 map = 100%, reduce = 0%, Cumulative CPU 4.95 sec

MapReduce Total cumulative CPU time: 4 seconds 950 msec

Ended Job = job_1667377030429_0002

MapReduce Jobs Launched:

Stage-Stage-3: Map: 1 Cumulative CPU: 4.95 sec HDFS Read: 13247 HDFS Write: 600 SUCCESS

Total MapReduce CPU Time Spent: 4 seconds 950 msec

ОК

I.s_no l.agent l.date l.login_time l.logout_time l.duration p.s_no p.date p.agent_name p.total_chats p.average_response_time p.average_resolution_time p.average_rating p.total_feedback

1 Shivananda Sonwane 2022-07-30 00:01:14 00:16:53 5.0 1	15:35:29	17:39:39	02:04:10	69	2022-07-30	Shivananda Sonwane	4
1 Shivananda Sonwane 2022-07-30 00:00:45 00:15:38 4.679	15:35:29	17:39:39	02:04:10	73	2022-07-29	Shivananda Sonwane	14
1 Shivananda Sonwane 2022-07-30 00:00:31 00:38:04 5.0 4	15:35:29	17:39:39	02:04:10	214	2022-07-28	Shivananda Sonwane	5
1 Shivananda Sonwane 2022-07-30 00:01:12 00:20:10 4.2218	15:35:29	17:39:39	02:04:10	285	2022-07-27	Shivananda Sonwane	26
1 Shivananda Sonwane 2022-07-30 00:00:51 00:22:28 5.0 14	15:35:29	17:39:39	02:04:10	360	2022-07-26	Shivananda Sonwane	24

Time taken: 47.602 seconds, Fetched: 5 row(s)

Right Join:

hive> select I.*, p.*

- > from
- > agent_loging I
- > right join
- > agent_performance p
- > on l.agent = p.agent_name
- > limit 3;

Query ID = cloudera_20221102013131_5a7932b2-a989-4ece-8444-63b3a7a724b6

Total jobs = 1

Execution log at: /tmp/cloudera/cloudera_20221102013131_5a7932b2-a989-4ece-8444-63b3a7a724b6.log

2022-11-02 01:31:28 Starting to launch local task to process map join; maximum memory = 932184064

 $2022-11-02\ 01:31:31 \qquad \text{Dump the side-table for tag: 0 with group count: 49 into file: file:/tmp/cloudera/a7e5d834-a1dc-4221-bc58-c45c9866afe5/hive_2022-11-02_01-31-18_589_6374086923008905591-1/-local-10003/HashTable-Stage-3/MapJoin-mapfile20--.hashtable}$

 $2022-11-02\ 01:31:31 \quad Uploaded\ 1\ File\ to: file:/tmp/cloudera/a7e5d834-a1dc-4221-bc58-c45c9866afe5/hive_2022-11-02_01-31-18_589_6374086923008905591-1/-local-10003/HashTable-Stage-3/MapJoin-mapfile20--.hashtable\ (39341\ bytes)$

Execution completed successfully

MapredLocal task succeeded

Launching Job 1 out of 1

Number of reduce tasks is set to 0 since there's no reduce operator

Starting Job = job_1667377030429_0003, Tracking URL = http://quickstart.cloudera:8088/proxy/application_1667377030429_0003/

Kill Command = /usr/lib/hadoop/bin/hadoop job -kill job_1667377030429_0003

 $Hadoop\ job\ information\ for\ Stage-3:\ number\ of\ mappers:\ 1;\ number\ of\ reducers:\ 0$

2022-11-02 01:31:46,028 Stage-3 map = 0%, reduce = 0%

2022-11-02 01:32:03,722 Stage-3 map = 100%, reduce = 0%, Cumulative CPU 3.86 sec

MapReduce Total cumulative CPU time: 3 seconds 860 msec

Ended Job = job_1667377030429_0003

MapReduce Jobs Launched:

Stage-Stage-3: Map: 1 Cumulative CPU: 3.86 sec HDFS Read: 13221 HDFS Write: 324 SUCCESS

Total MapReduce CPU Time Spent: 3 seconds 860 msec

OK

I.s_no l.agent l.date l.login_time l.logout_time l.duration p.s_no p.date p.agent_name p.total_chats p.average_response_time p.average_resolution_time p.average_rating p.total_feedback

16 4.11	O	2022-07-30	12:32:28	14:10:08	01:37:40	1	2022-07-30	Prerna Singh	11	00:00:38	00:04:20
75 4.11	O	2022-07-29	17:47:06	21:03:44	03:16:37	1	2022-07-30	Prerna Singh	11	00:00:38	00:04:20
91 4.11	O	2022-07-29	15:08:22	17:20:49	02:12:27	1	2022-07-30	Prerna Singh	11	00:00:38	00:04:20

Time taken: 46.342 seconds, Fetched: 3 row(s)

Export data into local system:

Inner Join:

[cloudera@quickstart ~]\$ hive -e 'select I.*, p.* from agent.agent_loging I inner join agent.agent_performance p on l.agent = p.agent_name limit 5' > /tmp/Agent_data/agent_inner_join.csv

Logging initialized using configuration in file:/etc/hive/conf.dist/hive-log4j.properties

Query ID = cloudera_20221102021313_3dbb874d-fdc2-49bd-b1d6-f3eb47b5c6d5

Total jobs = 1

Execution log at: /tmp/cloudera/cloudera_20221102021313_3dbb874d-fdc2-49bd-b1d6-f3eb47b5c6d5.log

2022-11-02 02:13:23 Starting to launch local task to process map join;

maximum memory = 932184064

2022-11-02 02:13:27 Dump the side-table for tag: 0 with group count: 49 into file: file:/tmp/cloudera/53d10f02-679f-4b61-918e-75477428efc2/hive 2022-11-02 02-13-11 168 5834537046314652500-1/-local-10003/HashTable-Stage-3/MapJoin-mapfile00--.hashtable

 $2022-11-02\ 02:13:27\ \ Uploaded\ 1\ File\ to: file:/tmp/cloudera/53d10f02-679f-4b61-918e-75477428efc2/hive_2022-11-02_02-13-11_168_5834537046314652500-1/-local-10003/HashTable-Stage-3/MapJoin-mapfile00--.hashtable\ (39341\ bytes)$

2022-11-02 02:13:27 End of local task; Time Taken: 4.238 sec.

Execution completed successfully

MapredLocal task succeeded

Launching Job 1 out of 1

Number of reduce tasks is set to 0 since there's no reduce operator

Kill Command = /usr/lib/hadoop/bin/hadoop job -kill job_1667377030429_0006

Hadoop job information for Stage-3: number of mappers: 1; number of reducers: 0

2022-11-02 02:13:47,531 Stage-3 map = 0%, reduce = 0%

2022-11-02 02:14:05,222 Stage-3 map = 100%, reduce = 0%, Cumulative CPU 5.09 sec

MapReduce Total cumulative CPU time: 5 seconds 90 msec

Ended Job = job_1667377030429_0006

MapReduce Jobs Launched:

Stage-Stage-3: Map: 1 Cumulative CPU: 5.09 sec HDFS Read: 13194 HDFS Write: 542 SUCCESS

Total MapReduce CPU Time Spent: 5 seconds 90 msec

ОК

Time taken: 56.553 seconds, Fetched: 5 row(s)

Left Join:

[cloudera@quickstart ~]\$ hive -e 'select I.*, p.* from agent.agent_loging I left join agent.agent_performance p on l.agent = p.agent_name limit 5' > /tmp/Agent_data/agent_left_join.csv

 $Logging\ initialized\ using\ configuration\ in\ file:/etc/hive/conf. dist/hive-log4j. properties$

Query ID = cloudera_20221102021414_f7ab8dd8-fdc3-448a-a846-512bbd2451c6

Total jobs = 1

2022-11-02 02:14:54 Starting to launch local task to process map join; maximum memory = 932184064

 $2022-11-02\ 02:14:57\ \ Dump\ the\ side-table\ for\ tag:\ 1\ with\ group\ count:\ 71\ into\ file:\ file:\ /tmp/cloudera/4cf935ee-290a-4387-bccc-1d023b332b07/hive_2022-11-02_02-14-43_629_6565383743414948191-1/-local-10003/HashTable-Stage-3/MapJoin-mapfile01--.hashtable$

 $2022-11-02\ 02:14:57\ \ Uploaded\ 1\ File\ to: file:/tmp/cloudera/4cf935ee-290a-4387-bccc-1d023b332b07/hive_2022-11-02_02-14-43_629_6565383743414948191-1/-local-10003/HashTable-Stage-3/MapJoin-mapfile01--.hashtable\ (77631\ bytes)$

2022-11-02 02:14:57 End of local task; Time Taken: 3.059 sec.

Execution completed successfully

MapredLocal task succeeded

Launching Job 1 out of 1

Number of reduce tasks is set to 0 since there's no reduce operator

Starting Job = job_1667377030429_0007, Tracking URL = http://quickstart.cloudera:8088/proxy/application_1667377030429_0007/

Kill Command = /usr/lib/hadoop/bin/hadoop job -kill job_1667377030429_0007

Hadoop job information for Stage-3: number of mappers: 1; number of reducers: 0

2022-11-02 02:15:14,314 Stage-3 map = 0%, reduce = 0%

2022-11-02 02:15:31,808 Stage-3 map = 100%, reduce = 0%, Cumulative CPU 4.5 sec

MapReduce Total cumulative CPU time: 4 seconds 500 msec

Ended Job = job_1667377030429_0007

MapReduce Jobs Launched:

Stage-Stage-3: Map: 1 Cumulative CPU: 4.5 sec HDFS Read: 13055 HDFS Write: 600 SUCCESS

Total MapReduce CPU Time Spent: 4 seconds 500 msec

OK

Time taken: 50.644 seconds, Fetched: 5 row(s)

Right Join:

[cloudera@quickstart ~]\$ hive -e 'select I.*, p.* from agent.agent_loging I right join agent.agent_performance p on l.agent = p.agent_name limit 5' > /tmp/Agent_data/agent_right_join.csv

Logging initialized using configuration in file:/etc/hive/conf.dist/hive-log4j.properties

Query ID = cloudera_20221102021616_6c0ea584-01f3-4d15-b707-8b2116b0307d

Total jobs = 1

Execution log at: /tmp/cloudera/cloudera_20221102021616_6c0ea584-01f3-4d15-b707-8b2116b0307d.log

2022-11-02 02:16:20 Starting to launch local task to process map join; maximum memory = 932184064

 $2022-11-02\ 02:16:22\ \ Dump\ the\ side-table\ for\ tag:\ 0\ with\ group\ count:\ 49\ into\ file:\ file:\$

 $2022-11-02\ 02:16:23\ \ Uploaded\ 1\ File\ to: file:/tmp/cloudera/7ef817ad-963c-4d3b-b113-e87e225620e4/hive_2022-11-02_02-16-08_907_5363628296010565902-1/-local-10003/HashTable-Stage-3/MapJoin-mapfile00--.hashtable\ (39341\ bytes)$

2022-11-02 02:16:23 $\,$ End of local task; Time Taken: 3.068 sec.

Execution completed successfully

MapredLocal task succeeded

Launching Job 1 out of 1 $\,$

Number of reduce tasks is set to 0 since there's no reduce operator

Starting Job = job_1667377030429_0008, Tracking URL = http://quickstart.cloudera:8088/proxy/application_1667377030429_0008/

Kill Command = /usr/lib/hadoop/bin/hadoop job -kill job_1667377030429_0008

Hadoop job information for Stage-3: number of mappers: 1; number of reducers: 0

 $2022-11-02\ 02:16:44,458\ Stage-3\ map=0\%,\ reduce=0\%$

2022-11-02 02:16:59,648 Stage-3 map = 100%, reduce = 0%, Cumulative CPU 4.45 sec

MapReduce Total cumulative CPU time: 4 seconds 450 msec

Ended Job = job_1667377030429_0008

MapReduce Jobs Launched:

Stage-Stage-3: Map: 1 Cumulative CPU: 4.45 sec HDFS Read: 13029 HDFS Write: 542 SUCCESS

Total MapReduce CPU Time Spent: 4 seconds 450 msec

ОК

Time taken: 53.231 seconds, Fetched: 5 row(s)

Check the exported data in local system:

[cloudera@quickstart ~]\$ ls /tmp/Agent_data

 $agent_inner_join.csv \ agent_left_join.csv \ AgentLogingReport.csv \ AgentPerformance.csv \ agent_right_join.csv$

[cloudera@quickstart ~]\$ cat /tmp/Agent_data/agent_inner_join.csv

16 4.11	Ü	2022-07-30	12:32:28	14:10:08	01:37:40	1	2022-07-30	Prerna Singh	11	00:00:38	00:04:20
75 4.11	O	2022-07-29	17:47:06	21:03:44	03:16:37	1	2022-07-30	Prerna Singh	11	00:00:38	00:04:20
91 4.11	0	2022-07-29	15:08:22	17:20:49	02:12:27	1	2022-07-30	Prerna Singh	11	00:00:38	00:04:20
110 4.11	J	2022-07-29	12:08:23	12:11:35	00:03:11	1	2022-07-30	Prerna Singh	11	00:00:38	00:04:20
336 4.11	J	2022-07-27	13:11:06	20:58:35	07:47:29	1	2022-07-30	Prerna Singh	11	00:00:38	00:04:20

[cloudera@quickstart ~]\$ cat /tmp/Agent_data/agent_left_join.csv

1 Shivananda Sonwane 2022-07-30 00:01:14 00:16:53 5.0 1	15:35:29	17:39:39	02:04:10	69	2022-07-30	Shivananda Sonwane	4
1 Shivananda Sonwane 2022-07-30 00:00:45 00:15:38 4.679	15:35:29	17:39:39	02:04:10	73	2022-07-29	Shivananda Sonwane	14
1 Shivananda Sonwane 2022-07-30 00:00:31 00:38:04 5.0 4	15:35:29	17:39:39	02:04:10	214	2022-07-28	Shivananda Sonwane	5
1 Shivananda Sonwane 2022-07-30 00:01:12 00:20:10 4.2218	15:35:29	17:39:39	02:04:10	285	2022-07-27	Shivananda Sonwane	26
1 Shivananda Sonwane 2022-07-30 00:00:51 00:22:28 5.0 14	15:35:29	17:39:39	02:04:10	360	2022-07-26	Shivananda Sonwane	24

[cloudera@quickstart ~]\$ cat /tmp/Agent_data/agent_right_join.csv

16 4.11	J	2022-07-30	12:32:28	14:10:08	01:37:40	1	2022-07-30	Prerna Singh	11	00:00:38	00:04:20
75 4.11	J	2022-07-29	17:47:06	21:03:44	03:16:37	1	2022-07-30	Prerna Singh	11	00:00:38	00:04:20
91 4.11	J	2022-07-29	15:08:22	17:20:49	02:12:27	1	2022-07-30	Prerna Singh	11	00:00:38	00:04:20
110 4.11	J	2022-07-29	12:08:23	12:11:35	00:03:11	1	2022-07-30	Prerna Singh	11	00:00:38	00:04:20

Q17) Perform partitioning on top of the agent column and then on top of that perform bucketing for each partitioning.

Solution:

First set the below mentioned properties to be true.

hive> set hive.exec.dynamic.partition=true;

hive> set hive.exec.dynamic.patition.mode=nonstrict;

Create Partition_bucketed table:

hive> create table partition_bucketed_loging

```
> (
> s_no int,
> date date,
> login_time string,
> logout_time string,
> duration string
> )
> partitioned by (agent string)
> clustered by(s_no)
> into 4 buckets
> row format delimited
> fields terminated by ','
```

Time taken: 0.156 seconds

> stored as textfile;

Load data into Partition_bucketed table:

hive> insert overwrite table partition_bucketed_loging partition(agent) select s_no, date, login_time, logout_time, duration, agent from agent_loging;

```
Query ID = cloudera_20221102040808_6531ce58-de2e-4c4a-a582-331557eb8787
```

Total jobs = 3

OK

Launching Job 1 out of 3 $\,$

Number of reduce tasks is set to 0 since there's no reduce operator

```
Kill Command = /usr/lib/hadoop/bin/hadoop job -kill job_1667377030429_0010
Hadoop job information for Stage-1: number of mappers: 1; number of reducers: 0
2022-11-02 04:08:54,135 Stage-1 map = 0%, reduce = 0%
2022-11-02 04:09:15,365 Stage-1 map = 100%, reduce = 0%, Cumulative CPU 6.32 sec
MapReduce Total cumulative CPU time: 6 seconds 320 msec
Ended Job = job_1667377030429_0010
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: hdfs://quickstart.cloudera:8020/user/hive/warehouse/agent.db/partition_bucketed_loging/.hive-staging_hive_2022-11-
02_04-08-38_814_1998316040267771961-1/-ext-10000
Loading data to table agent.partition_bucketed_loging partition (agent=null)
    Time taken for load dynamic partitions: 11817
    Loading partition {agent=Sudhanshu Kumar}
    Loading partition {agent=Aditya Shinde}
    Loading partition {agent=Suraj S Bilgi}
    Loading partition {agent=Hrisikesh Neogi}
    Loading partition {agent=Dibyanshu}
    Loading partition {agent=Shiva Srivastava}
    Loading partition {agent=Saikumarreddy N}
    Loading partition {agent=Jaydeep Dixit}
    Loading partition {agent=Ankitjha}
    Loading partition {agent=Prabir Kumar Satapathy}
    Loading partition {agent=Deepranjan Gupta}
    Loading partition {agent=Khushboo Priya}
    Loading partition {agent=Hyder Abbas}
    Loading partition {agent=Amersh}
    Loading partition {agent=Anurag Tiwari}
    Loading partition {agent=Madhulika G}
    Loading partition {agent=Aravind}
    Loading partition {agent=Prateek _iot}
    Loading partition {agent=Mithun S}
    Loading partition {agent=Mahesh Sarade}
    Loading partition {agent=Ameya Jain}
    Loading partition {agent=Swati}
    Loading partition {agent=Bharath}
    Loading partition {agent=Sowmiya Sivakumar}
```

Loading partition {agent=Ineuron Intelligence}

```
Loading partition {agent=Prerna Singh}
Loading partition {agent=Wasim}
Loading partition {agent=Zeeshan}
Loading partition {agent=Manjunatha A}
Loading partition {agent=Nishtha Jain}
Loading partition {agent=Harikrishnan Shaji}
Loading partition {agent=Shubham Sharma}
Loading partition {agent=Boktiar Ahmed Bappy}
Loading partition {agent=Saurabh Shukla}
Loading partition {agent=Rishav Dash}
Loading partition {agent=Jawala Prakash}
Loading partition {agent=Mukesh}
Loading partition {agent=Tarun}
Loading partition {agent=Sanjeev Kumar}
Loading partition {agent=Maitry}
Loading partition {agent=Nandani Gupta}
Loading partition {agent=Aditya_iot}
Loading partition {agent=Chaitra K Hiremath}
Loading partition {agent=Shivan K}
Loading partition {agent=Shivananda Sonwane}
Loading partition {agent=Nitin M}
Loading partition {agent=Ishawant Kumar}
Loading partition {agent=Muskan Garg}
Loading partition {agent=Ayushi Mishra}
Time taken for adding to write entity: 31
```

Partition agent.partition_bucketed_loging{agent=Aditya Shinde} stats: [numFiles=1, numRows=1, totalSize=42, rawDataSize=41]

Partition agent.partition_bucketed_loging{agent=Aditya_iot} stats: [numFiles=1, numRows=9, totalSize=377, rawDataSize=368]

Partition agent.partition_bucketed_loging{agent=Amersh} stats: [numFiles=1, numRows=4, totalSize=168, rawDataSize=164]

Partition agent.partition_bucketed_loging{agent=Amerya Jain} stats: [numFiles=1, numRows=10, totalSize=420, rawDataSize=410]

Partition agent.partition_bucketed_loging{agent=Ankitjha} stats: [numFiles=1, numRows=4, totalSize=168, rawDataSize=164]

Partition agent.partition_bucketed_loging{agent=Ankitjha} stats: [numFiles=1, numRows=37, totalSize=1553, rawDataSize=1516]

Partition agent.partition_bucketed_loging{agent=Aravind} stats: [numFiles=1, numRows=10, totalSize=420, rawDataSize=410]

Partition agent.partition_bucketed_loging{agent=Ayushi Mishra} stats: [numFiles=1, numRows=18, totalSize=755, rawDataSize=737]

Partition agent.partition_bucketed_loging{agent=Bharath} stats: [numFiles=1, numRows=9, totalSize=378, rawDataSize=369]

Partition agent.partition_bucketed_loging{agent=Boktiar Ahmed Bappy} stats: [numFiles=1, numRows=13, totalSize=543, rawDataSize=530]

Partition agent.partition_bucketed_loging{agent=Chaitra K Hiremath} stats: [numFiles=1, numRows=13, totalSize=543, rawDataSize=530]

Partition agent.partition_bucketed_loging{agent=Deepranjan Gupta} stats: [numFiles=1, numRows=28, totalSize=2433, rawDataSize=2375]

Partition agent.partition_bucketed_loging{agent=Dibyanshu} stats: [numFiles=1, numRows=208, totalSize=8719, rawDataSize=8511]

```
Partition\ agent.partition\_bucketed\_loging \{agent=Harikrishnan\ Shaji\}\ stats: [numFiles=1, numRows=23, totalSize=963, rawDataSize=940]
Partition agent.partition bucketed loging{agent=Hrisikesh Neogi} stats: [numFiles=1, numRows=37, totalSize=1544, rawDataSize=1507]
Partition agent.partition_bucketed_loging{agent=Hyder Abbas} stats: [numFiles=1, numRows=2, totalSize=84, rawDataSize=82]
Partition agent.partition_bucketed_loging{agent=Ineuron Intelligence} stats: [numFiles=1, numRows=1, totalSize=42, rawDataSize=41]
Partition agent.partition_bucketed_loging{agent=Ishawant Kumar} stats: [numFiles=1, numRows=49, totalSize=2052, rawDataSize=2003]
Partition agent.partition_bucketed_loging{agent=Jawala Prakash} stats: [numFiles=1, numRows=16, totalSize=668, rawDataSize=652]
Partition agent.partition_bucketed_loging{agent=Jaydeep Dixit} stats: [numFiles=1, numRows=11, totalSize=459, rawDataSize=448]
Partition agent.partition_bucketed_loging{agent=Khushboo Priya} stats: [numFiles=1, numRows=18, totalSize=752, rawDataSize=734]
Partition agent.partition_bucketed_loging{agent=Madhulika G} stats: [numFiles=1, numRows=17, totalSize=713, rawDataSize=696]
Partition agent.partition_bucketed_loging{agent=Mahesh Sarade} stats: [numFiles=1, numRows=36, totalSize=1509, rawDataSize=1473]
Partition agent.partition_bucketed_loging{agent=Maitry} stats: [numFiles=1, numRows=5, totalSize=210, rawDataSize=205]
Partition agent.partition bucketed loging{agent=Manjunatha A} stats: [numFiles=1, numRows=8, totalSize=333, rawDataSize=325]
Partition agent.partition_bucketed_loging{agent=Mithun S} stats: [numFiles=1, numRows=14, totalSize=586, rawDataSize=572]
Partition agent.partition_bucketed_loging{agent=Mukesh} stats: [numFiles=1, numRows=3, totalSize=124, rawDataSize=121]
Partition agent.partition_bucketed_loging{agent=Muskan Garg} stats: [numFiles=1, numRows=12, totalSize=503, rawDataSize=491]
Partition agent.partition_bucketed_loging{agent=Nandani Gupta} stats: [numFiles=1, numRows=11, totalSize=458, rawDataSize=447]
Partition agent.partition_bucketed_loging{agent=Nishtha Jain} stats: [numFiles=1, numRows=18, totalSize=754, rawDataSize=736]
Partition agent.partition_bucketed_loging{agent=Nitin M} stats: [numFiles=1, numRows=1, totalSize=42, rawDataSize=41]
Partition agent.partition_bucketed_loging{agent=Prabir Kumar Satapathy} stats: [numFiles=1, numRows=26, totalSize=1091,
rawDataSize=1065]
Partition agent.partition_bucketed_loging{agent=Prateek _iot} stats: [numFiles=1, numRows=17, totalSize=711, rawDataSize=694]
Partition\ agent.partition\_bucketed\_loging \{agent=Prerna\ Singh\}\ stats: [numFiles=1, numRows=18, totalSize=753, rawDataSize=735]
Partition agent.partition_bucketed_loging{agent=Rishav Dash} stats: [numFiles=1, numRows=12, totalSize=504, rawDataSize=492]
Partition agent.partition_bucketed_loging{agent=Saikumarreddy N} stats: [numFiles=1, numRows=10, totalSize=420, rawDataSize=410]
Partition agent.partition bucketed loging{agent=Sanjeev Kumar} stats: [numFiles=1, numRows=20, totalSize=839, rawDataSize=819]
Partition agent.partition_bucketed_loging{agent=Saurabh Shukla} stats: [numFiles=1, numRows=40, totalSize=1680, rawDataSize=1640]
Partition agent.partition_bucketed_loging{agent=Shiva Srivastava} stats: [numFiles=1, numRows=15, totalSize=629, rawDataSize=614]
Partition agent.partition_bucketed_loging{agent=Shivan K} stats: [numFiles=1, numRows=36, totalSize=1506, rawDataSize=1470]
Partition agent.partition_bucketed_loging{agent=Shivananda Sonwane} stats: [numFiles=1, numRows=15, totalSize=625, rawDataSize=610]
Partition\ agent.partition\_bucketed\_loging \{agent=Shubham\ Sharma\}\ stats: [numFiles=1, numRows=35, totalSize=1469, rawDataSize=1434]
Partition agent.partition_bucketed_loging{agent=Sowmiya Sivakumar} stats: [numFiles=1, numRows=24, totalSize=1005, rawDataSize=981]
Partition\ agent. partition\ _bucketed\ _loging \{agent=Sudhanshu\ Kumar\}\ stats:\ [numFiles=1,numRows=11,totalSize=462,rawDataSize=451]\ stats:\ [numFiles=1,numRows=11,totalSize=462,rawDataSize=451]\ stats:\ [numFiles=1,numRows=11,totalSize=462,rawDataSize=451]\ stats:\ [numFiles=1,numRows=11,totalSize=462,rawDataSize=461]\ stats:\ [numFiles=1,numRows=11,totalSize=462,rawDataSize=461]\ stats:\ [numFiles=1,numRows=11,totalSize=462,rawDataSize=461]\ stats:\ [numFiles=1,numRows=11,totalSize=462,rawDataSize=461]\ stats:\ [numFiles=1,numRows=11,totalSize=462,rawDataSize=461]\ stats:\ [numFiles=1,numRows=11,totalSize=462,rawDataSize=461]\ stats:\ [numFiles=1,numRows=11,totalSize=462,rawDataSize=462,rawDataSize=462,rawDataSize=462,rawDataSize=462,rawDataSize=462,rawDataSize=462,rawDataSize=462,rawDataSize=462,rawDataSize=462,rawDataSize=462,rawDataSize=462,rawDataSize=462,rawDataSize=462,rawDataSize=462,rawDataSize=462,rawDataSize=462,rawDataSize=462,rawDataSize=462,rawDataSize=462,rawDataSize=462,rawDataSize=462,rawDataSize=462,rawDataSize=462,rawDataSize=462,rawDataSize=462,rawDataSize=462,rawDataSize=462,rawDataSize=462,rawDataSize=462,rawDataSize=462,rawDataSize=462,rawDataSize=462,rawDataSize=462,rawDataSize=462,rawDataSize=462,rawDataSize=462,rawDataSize=462,rawDataSize=462,rawDataSize=462,rawDataSize=462,rawDataSize=462,rawDataSize=462,rawDataSize=462,rawDataSize=462,rawDataSize=462,rawDataSize=462,rawDataSize=462,rawDataSize=462,rawDataSize=462,rawDataSize=462,rawDataSize=462,rawDataSize=462,rawDataSize=462,rawDataSize=462,rawDataSize=462,rawDataSize=462,rawDataSize=462,rawDataSize=462,rawDataSize=462,rawDataSize=462,rawDataSize=462,rawDataSize=462,rawDataSize=462,rawDataSize=462,rawDataSize=462,rawDataSize=462,rawDataSize=462,rawDataSize=462,rawDataSize=462,rawDataSize=462,rawDataSize=462,rawDataSize=462,rawDataSize=462,rawDataSize=462,rawDataSize=462,rawDataSize=462,rawDataSize=462,rawDataSize=462,rawDataSize=462,rawDataSize=462,rawDataSize=462,rawDataSize=462,rawDataSize=462,rawDataSize=462,rawDataSize=46
Partition agent.partition_bucketed_loging{agent=Suraj S Bilgi} stats: [numFiles=1, numRows=5, totalSize=206, rawDataSize=201]
Partition agent.partition_bucketed_loging{agent=Swati} stats: [numFiles=1, numRows=5, totalSize=210, rawDataSize=205]
Partition agent.partition_bucketed_loging{agent=Tarun} stats: [numFiles=1, numRows=1, totalSize=43, rawDataSize=42]
Partition agent.partition_bucketed_loging{agent=Wasim} stats: [numFiles=1, numRows=20, totalSize=840, rawDataSize=820]
Partition\ agent.partition\_bucketed\_loging \{agent=Zeeshan\}\ stats: [numFiles=1, numRows=10, totalSize=419, rawDataSize=409]
MapReduce Jobs Launched:
```

Stage-Stage-1: Map: 1 Cumulative CPU: 6.32 sec HDFS Read: 61313 HDFS Write: 45367 SUCCESS

Total MapReduce CPU Time Spent: 6 seconds 320 msec

ОК

Time taken: 57.42 seconds