# CYCLE-I

# SQL QUERIES

1] Write a program to implement database triggers in PL/SQL by using following schema -employee(e_id,e_name,e_doj,e_salary,e_age)

i. Create an employee table and insert any five records.

ii. Write row-level trigger for salary changes.(insert / update / delete operations on employee)

```
--> CREATE TABLE EMPLOYEE1
(EID NUMBER PRIMARY KEY,
 ENAME VARCHAR(20),
 ENUM NUMBER,
 EDOJ DATE,
 ESALARY NUMBER,
 EAGE NUMBER);
INSERT INTO EMPLOYEE1 VALUES('&EID','&ENUM','&EDOJ','&ESALARY','&EAGE');
```

```
SQL> select * from employee1;

       EID ENAME                ENUM EDOJ        ESALARY       EAGE
---------- -------------------- ---------- --------- ---------- ----------
      1000 vysh                      2 02-JAN-22      45000         21
      1001 nish                      3 06-FEB-20      63000         26
      1002 prasad                    4 25-MAR-18     100000         23
      1003 manju                     5 26-APR-23      15000         20
      1004 naga                      6 30-MAY-22      65000         26
```

```
SQL> CREATE OR REPLACE TRIGGER display_salary_changes
```

```
 2  BEFORE DELETE OR INSERT OR UPDATE ON employee1
 3  FOR EACH ROW
 4  WHEN (NEW.EID>0)
 5  DECLARE
 6  sal_diff number;
 7  BEGIN
 8  sal_diff:=:NEW.ESALARY -:OLD.ESALARY;
 9  dbms_output.put_line('Old salary:'||:OLD.ESALARY);
10  dbms_output.put_line('New salary:'||:NEW.ESALARY);
11  dbms_output.put_line('Salary difference:'||sal_diff);
12  END;
13   /
```

Trigger created.

```
 INSERT INTO EMPLOYEE1 VALUES(1006,'SINDHU','8','06-DEC-2001',75000,25);
```

OLD SALARY:

NEW SALARY:75000

SALARY DIFFERENCE:

1 row created.

```
 SELECT * FROM EMPLOYEE1;

      EID ENAME                ENUM EDOJ        ESALARY       EAGE
---------- -------------------- ---------- --------- ---------- ----------
      1006 SINDHU                    8 06-DEC-01      75000         25
      1000 vysh                      2 02-JAN-22      45000         21
      1001 nish                      3 06-FEB-20      63000         26
      1002 prasad                    4 25-MAR-18     100000         23
      1003 manju                     5 26-APR-23      15000         20
      1004 naga                      6 30-MAY-22      65000         26
```

6 rows selected

```
SQL> UPDATE EMPLOYEE1
  2  SET ESALARY=ESALARY+500
  3  WHERE EID=1001;

1 row updated.

SQL> SELECT * FROM EMPLOYEE1;

       EID ENAME                ENUM EDOJ        ESALARY      EAGE
---------- -------------------- ---------- --------- ---------- ----------
      1006 SINDHU                    8 06-DEC-01      75000         25
      1000 vysh                      2 02-JAN-22      45000         21
      1001 nish                      3 06-FEB-20      63500         26
      1002 prasad                    4 25-MAR-18     100000         23
      1003 manju                     5 26-APR-23      15000         20
      1004 naga                      6 30-MAY-22      65000         26
6 rows selected.

SQL> DELETE EMPLOYEE1
  2  WHERE EID=1002;
1 row deleted
SQL> SELECT * FROM EMPLOYEE1;
       EID ENAME                ENUM EDOJ        ESALARY      EAGE
---------- -------------------- ---------- --------- ---------- ----------
      1006 SINDHU                    8 06-DEC-01      75000         25
      1000 vysh                      2 02-JAN-22      45000         21
      1001 nish                      3 06-FEB-20      63500         26
      1003 manju                     5 26-APR-23      15000         20
      1004 naga                      6 30-MAY-22      65000         26
```

2]. Write a program to implement database triggers in PL/SQL by using following

schema – employee2(e_id,e_name,e_age)

i. Create an employee table and insert any five records.

ii. Write a trigger to check the age of an employee is between 18 to 58, if not raise an error.(during insert / update / delete operations on employee)

```
-->SQL> CREATE TABLE EMPLOYEE3(
  2  E_ID NUMBER,
  3  E_NAME VARCHAR(20),
  4  E_AGE NUMBER,
  5  PRIMARY KEY (E_ID));
Table created.

SQL> INSERT INTO EMPLOYEE3 VALUES(01,'THEJAS',21);
1 row created.
SQL> INSERT INTO EMPLOYEE3 VALUES(02,'SHREYAS',25);
1 row created.
SQL> INSERT INTO EMPLOYEE3 VALUES(03,'VIVEK',22);
1 row created.
SQL> INSERT INTO EMPLOYEE3 VALUES(04,'VINOD',24);
1 row created.
SQL> INSERT INTO EMPLOYEE3 VALUES(12,'VITTAL',11);
1 row created.
SQL> CREATE OR REPLACE TRIGGER DISPLAY_AGE_CHANGES
  2  BEFORE INSERT OR UPDATE OR DELETE ON EMPLOYEE3
  3  FOR EACH ROW
  4  WHEN(NEW.E_ID>0)
  5  BEGIN
  6  IF:NEW.E_AGE < 18
  7  THEN
 8  RAISE_APPLICATION_ERROR(-20001,'Employee age must be greater than or equal to 18.');
```

```
 9 ELSIF:NEW.E_AGE > 58
 10  THEN
 11  RAISE_APPLICATION_ERROR(-20001,'Employee age must be lesser than or equal to 58.');
 12  END IF;
 13  END;
 14  /
```

Trigger created.

```
SQL> set serveroutput on;
SQL> INSERT INTO EMPLOYEE3 VALUES(21,'RADHA',11);
```

1 row created.

```
SQL> SELECT * FROM EMPLOYEE3;
```

| E_ID | E_NAME | E_AGE |
|---|---|---|
| 1 | THEJAS | 21 |
| 2 | SHREYAS | 25 |
| 3 | VIVEK | 22 |
| 4 | VINOD | 24 |
| 12 | VITTAL | 11 |
| 21 | RADHA | 11 |

6 rows selected.

```
SQL>UPDATE EMPLOYEE3
SET E_AGE=E_AGE+10
WHERE E_ID=3;
```

1 row updated.

SQL> SELECT * FROM EMPLOYEE3;

| E_ID | E_NAME | E_AGE |
|---|---|---|
| 1 | THEJAS | 21 |
| 2 | SHREYAS | 25 |
| 3 | VIVEK | 32 |
| 4 | VINOD | 24 |
| 12 | VITTAL | 11 |
| 21 | RADHA | 11 |

6 rows selected.

DELETE FROM EMPLOYEE3

WHERE E_ID=12;

| E_ID | E_NAME | E_AGE |
|---|---|---|
| 1 | THEJAS | 21 |
| 2 | SHREYAS | 25 |
| 3 | VIVEK | 32 |
| 4 | VINOD | 24 |
| 21 | RADHA | 11 |

3]. Write a program to implement cursor in PL/SQL to display the employee details

from the following table -emp(eno,ename,designation,doj,salary) .

-->CREATE TABLE EMPLOYEE31(

E_ID NUMBER,

E_NAME VARCHAR(20),

SALARY NUMBER,

PRIMARY KEY (E_ID));

```
INSERT INTO EMPLOYEE31 VALUES(01,'NATASHA',35000);
INSERT INTO EMPLOYEE31 VALUES(02,'STEVE',40000);
INSERT INTO EMPLOYEE31 VALUES(03,'STARK',50000);
INSERT INTO EMPLOYEE31 VALUES(04,'CLINT',35000);
INSERT INTO EMPLOYEE31 VALUES(05,'PAUL',30000);
INSERT INTO EMPLOYEE31 VALUES(06,'MARK',15000);

SELECT * FROM EMPLOYEE31;
```

| E_ID | E_NAME | SALARY |
|---|---|---|
| 1 | NATASHA | 35000 |
| 2 | STEVE | 40000 |
| 3 | STARK | 50000 |
| 4 | CLINT | 35000 |
| 5 | PAUL | 30000 |
| 6 | MARK | 15000 |

```
DECLARE
CURSOR employee_cur IS
SELECT * FROM EMPLOYEE31
FOR UPDATE;
incr_sal NUMBER;
BEGIN
FOR employee_rec IN employee_cur LOOP
IF employee_rec.salary< 25000 THEN
incr_sal := .20;
ELSE
incr_sal := .10;
END IF;
UPDATE EMPLOYEE31
SET salary = salary + salary * incr_sal
WHERE CURRENT OF employee_cur;
```

```
END LOOP;
END;
/
PL/SQL procedure successfully completed.
    E_ID E_NAME                SALARY
---------- -------------------- ----------
         1 NATASHA                38500
         2 STEVE                  44000
         3 STARK                  55000
         4 CLINT                  38500
         5 PAUL                   33000
         6 MARK                   18000

6 rows selected.
```

4]. Write a program to implement Procedure in PL/SQL to update the salary of the employee from the following table –

employee5(eno,ename,designation,doj,salary) .

```
-->CREATE TABLE EMPLOYEE5(
E_ID NUMBER,
E_NAME VARCHAR(20),
SALARY NUMBER,
PRIMARY KEY (E_ID));
Table created.
INSERT INTO EMPLOYEE5 VALUES(100,'ROCK',50000);
INSERT INTO EMPLOYEE5 VALUES(97,'BIG SHAW',14000);
INSERT INTO EMPLOYEE5 VALUES(150,'HHH',5000);
INSERT INTO EMPLOYEE5 VALUES(140,'ROMAN REIGNS',35000);
INSERT INTO EMPLOYEE5 VALUES(143,'JOHN CENA',30000);
INSERT INTO EMPLOYEE5 VALUES(80,'UNDER TAKER',24000);
```

```
  E_ID E_NAME               SALARY
---------- -------------------- ----------
       100 ROCK                 50000
        97 BIG SHAW              14000
       150 HHH                  5000
       140 ROMAN REIGNS           35000
       143 JOHN CENA             30000
        80 UNDER TAKER            24000

6 rows selected.

CREATE OR REPLACE PROCEDURE adjust_salary
IS
BEGIN
UPDATE EMPLOYEE5 set salary = salary * 1.1 WHERE salary>25000;
UPDATE EMPLOYEE5 set salary = salary * 1.2 WHERE salary<25000;
END;
/
Procedure created.

Exec adjust_salary;
PL/SQL procedure successfully completed.
    E_ID E_NAME               SALARY
---------- -------------------- ----------
       100 ROCK                 55000
        97 BIG SHAW             16800
       150 HHH                   6000
       140 ROMAN REIGNS       38500
       143 JOHN CENA             33000
        80 UNDER TAKER          28800
```

5]. Write a program to implement packages in PL/SQL by using following schema –

EMPLOYEE12(ID NUMBER,NAME VARCHAR(20),AGE NUMBER,ADDRESS VARCHAR(20),SALARY NUMBER, PRIMARY KEY (ID));

i. Create the package for adding, removing and listing a customer.

ii. Display suitable output.

-->CREATE TABLE EMPLOYEE21(

ID NUMBER,

NAME VARCHAR(20),

AGE NUMBER,

ADDRESS VARCHAR(20),

SALARY NUMBER,

PRIMARY KEY (ID));

Table created.

INSERT INTO EMPLOYEE21 VALUES(01,'THEJAS',21,'CHELUR',40000);

INSERT INTO EMPLOYEE21 VALUES(02,'SHREYAS',23,'MUDIGERE',50000);

INSERT INTO EMPLOYEE21 VALUES(03,'VIVEK',25,'HAROGERI',40000);

INSERT INTO EMPLOYEE21 VALUES(04,'SINDHU',21,'SOGILU',35000);

| ID | NAME | AGE | ADDRESS | SALARY |
|---|---|---|---|---|
| 1 | THEJAS | 21 | CHELUR | 40000 |
| 2 | SHREYAS | 23 | MUDIGERE | 50000 |
| 3 | VIVEK | 25 | HAROGERI | 40000 |
| 4 | SINDHU | 21 | SOGILU | 35000 |

create or replace package e_pack1 as

procedure addemp(e_id employee21.id%type,

e_name employee21.name%type,

```
e_age employee21.age%type,
e_addr employee21.address%type,
e_sal employee21.salary%type);
procedure delemp(e_id employee21.id%type);
procedure listemp;
end e_pack1;
/
Package created.

CREATE OR REPLACE PACKAGE BODY  e_pack1 AS
PROCEDURE addemp(e_id employee21.id%type,
e_name employee21.Name%type,
e_age employee21.age%type,
e_addr employee21.address%type,
e_sal employee21.salary%type)
IS
BEGIN
        INSERT INTO employee21(id, name,age,address,salary)
        VALUES(e_id, e_name,e_age,e_addr,e_sal);
END addemp;

PROCEDURE delemp(e_id employee21.id%type) is
BEGIN
        delete from employee21
        where id=e_id;
END delemp;

PROCEDURE listemp is
CURSOR e_emp is
        SELECT name FROM employee21;
TYPE e_list is TABLE OF employee21.name%type;
```

```
name_list e_list := e_list();
counter integer := 0;
BEGIN
        FOR n IN e_emp loop
        counter := counter +1;
        name_list.extend;
        name_list(counter) := n.name;
        dbms_output.put_line('employee('||counter||')'||name_list(counter));
        END loop;
END listemp;

END e_pack1;
/
Package body created.

Set Serveroutput on;
DECLARE
        code employee21.id%type:=10;
BEGIN
        e_pack1.addemp(12,'shrey',39,'tumkur',7600);
        e_pack1.listemp;
        e_pack1.delemp(code);
        e_pack1.listemp;
END;
/

employee(1)THEJAS
employee(2)SHREYAS
employee(3)VIVEK
employee(4)SINDHU
employee(5)shrey
```

employee(1)THEJAS

employee(2)SHREYAS

employee(3)VIVEK

employee(4)SINDHU

employee(5)shrey

PL/SQL procedure successfully completed.

## CYCLE-II

## MongoDB

1]Querying Data using MongoDB

1.Create a collection named “products” with fields: ”name”, ”category”, “price” and “stock”.

2.Insert multiple documents into the “products” collection.

3.Write queries to find all products in a specific category.

4. Retrieve products with a price less than a certain value.

5.Find products that are out of stock.

6.Count the number of products in a specific category.

```
test> db.createCollection("products")
{ ok: 1 }
test> db.products.insertOne([{name: "Products1",category:"Electronics",price:499.99,stock:10}])
{
  acknowledged: true,
  insertedId: ObjectId('658ea5abfff6c4b3250daccc')
}
test> db.products.insertMany([{name:
"Products2",category:"Clothings",price:299.99,stock:20},{name:"products3",category:"Electronics",price:899.99,st
ock:5},{name:"products4",category:"Books",price:300.0,stock:8}])
{
  acknowledged: true,
  insertedIds: {
    '0': ObjectId('658ea694fff6c4b3250daccd'),
    '1': ObjectId('658ea694fff6c4b3250dacce'),
```

```
    '2': ObjectId('658ea694fff6c4b3250daccf')
  }
}
test> db.products.find({category:"Electronics"})
[
  {
    _id: ObjectId('658ea59cfff6c4b3250daccb'),
    name: 'Products1',
    category: 'Electronics',
    price: 499.99,
    stock: 10
  },
  {
    _id: ObjectId('658ea694fff6c4b3250dacce'),
    name: 'products3',
    category: 'Electronics',
    price: 899.99,
    stock: 5
  }
]
test> db.products.find({category:'Electronics'})
[
  {
    _id: ObjectId('658ea59cfff6c4b3250daccb'),
    name: 'Products1',
    category: 'Electronics',
    price: 499.99,
    stock: 10
  },
  {
    _id: ObjectId('658ea694fff6c4b3250dacce'),
```

```
    name: 'products3',
    category: 'Electronics',
    price: 899.99,
    stock: 5
  }
]
test> db.products.find({price:{$lt:300.0}})
[
  {
    _id: ObjectId('658ea694fff6c4b3250daccd'),
    name: 'Products2',
    category: 'Clothings',
    price: 299.99,
    stock: 20
  }
]
test> db.products.find({price:{$lt:50.0}})

test> db.products.find({stock:0})

test> db.products.find({stock:10})
[
  {
    _id: ObjectId('658ea59cfff6c4b3250daccb'),
    name: 'Products1',
    category: 'Electronics',
    price: 499.99,
    stock: 10
  }
]
```

```
test> db.products.find({price:{$lt:301.0}})
[
  {
    _id: ObjectId('658ea694fff6c4b3250daccd'),
    name: 'Products2',
    category: 'Clothings',
    price: 299.99,
    stock: 20
  },
  {
    _id: ObjectId('658ea694fff6c4b3250daccf'),
    name: 'products4',
    category: 'Books',
    price: 300,
    stock: 8
  }
]
test> db.products.countDocuments({category:'Electronics'})
2
test> db.products.countDocuments({category:'Books'})
1
```

2]Aggregation Framework

1.Create a collection named “orders” with fields:”order_date”,”total_amount”,and “customer_id”.

2.Insert orders into “order” collection.

3.Write an aggregation pipeline to calculate the total sales per month.

4.Calculate the average order amount for each customer.

5.Find the customer with highest total order amount.

6.Group orders by the year and month and calculate the total revenue for each period.

```
test> db.createCollection("orders")
```

```
{ ok: 1 }
test> db.orders.insertMany([{ord_date:ISODate("2023-01-
15T12:30:00Z"),total_amount:100.50,cust_id:1},{ord_date:ISODate("2023-01-
16T01:30:00Z"),total_amount:75.00,cust_id:2},{ord_date:ISODate("2023-01-
17T02:30:00Z"),total_amount:120.00,cust_id:3},])
{
  acknowledged: true,
  insertedIds: {
    '0': ObjectId('658ea911fff6c4b3250dacd0'),
    '1': ObjectId('658ea911fff6c4b3250dacd1'),
    '2': ObjectId('658ea911fff6c4b3250dacd2')
  }
}
test> db.orders.aggregate([])
[
  {
    _id: ObjectId('658ea911fff6c4b3250dacd0'),
    ord_date: ISODate('2023-01-15T12:30:00.000Z'),
    total_amount: 100.5,
    cust_id: 1
  },
  {
    _id: ObjectId('658ea911fff6c4b3250dacd1'),
    ord_date: ISODate('2023-01-16T01:30:00.000Z'),
    total_amount: 75,
    cust_id: 2
  },
  {
    _id: ObjectId('658ea911fff6c4b3250dacd2'),
    ord_date: ISODate('2023-01-17T02:30:00.000Z'),
    total_amount: 120,
```

```
    cust_id: 3
  }
]
```

```
test>
db.orders.aggregate([{$group:{_id:{$month:"$ord_date"},totalSales:{$sum:"$total_amount"}}},{$project:
{_id:0,month:"$_id",totalSales:1}},{$sort:{month:1}}])
[ { totalSales: 295.5, month: 1 } ]
test>
db.orders.aggregate([{$group:{_id:"$cust_id",averageOrderAmount:{$avg:"$total_amount"}}},{$project:{
_id:0,cust_id:"$_id",averageOrderAmount:1}}])
[
  { averageOrderAmount: 75, cust_id: 2 },
  { averageOrderAmount: 100.5, cust_id: 1 },
  { averageOrderAmount: 120, cust_id: 3 }
]
test>
db.orders.aggregate([{$group:{_id:"$cust_id",totalOrderAmount:{$sum:"$total_amount"}}},{$sort:{totalO
rderAmount:-1}},{$limit:1}])
[ { _id: 3, totalOrderAmount: 120 } ]
test>
```

3] Indexing and performance

1. Insert a large number of documents into a collection.

2. Measure the time taken for a simple query without an index.

3.Create an index on a specific field and measure the query performance again.

4.Experiment with compound indexes and observe the impact on query performance.

5.Montior the performance of the database using MongoDB.

```
test> db.createCollection("restaurants")
{ ok: 1 }
```

```
test>
db.restaurants.insertMany([{rest_id:1,name:"rev",borough:"gobi",cuisine:"eggrice"},{rest_id:2,borough:"
rome",cuisine:"dosa"},{rest_id:3,name:"vince",borough:"spain",cuisine:"idli"},])
{
  acknowledged: true,
  insertedIds: {
    '0': ObjectId('658eaca2fff6c4b3250dacd3'),
    '1': ObjectId('658eaca2fff6c4b3250dacd4'),
    '2': ObjectId('658eaca2fff6c4b3250dacd5')
  }
}
test> db.resturants.find({},{rest_id:1,name:1,borough:1,cuisine:1})

test> db.resturants.find({},{rest_id:1,name:1,borough:1,cuisine:1,_id:0})

test> db.restaurants.find({borough:"gobi"})
[
  {
    _id: ObjectId('658eaca2fff6c4b3250dacd3'),
    rest_id: 1,
    name: 'rev',
    borough: 'gobi',
    cuisine: 'eggrice'
  }
]
test> db.restaurants.find({borough:"gobi"}).limit(5)
[
  {
    _id: ObjectId('658eaca2fff6c4b3250dacd3'),
    rest_id: 1,
    name: 'rev',
```

```
    borough: 'gobi',
    cuisine: 'eggrice'
  }
]
test> db.restaurants.find({"grades.score":{$gt:90}})


test> db.restaurants.find({"grades.score":{$lt:90}})


test>
db.restaurants.insertMany([{rest_id:1,name:"rev",borough:"gobi",cuisine:"eggrice",score:50},{rest_id:2,b
orough:"rome",cuisine:"dosa",score:91},{rest_id:3,name:"vince",borough:"spain",cuisine:"idli",score:88},
])
{
  acknowledged: true,
  insertedIds: {
    '0': ObjectId('658eade2fff6c4b3250dacd6'),
    '1': ObjectId('658eade2fff6c4b3250dacd7'),
    '2': ObjectId('658eade2fff6c4b3250dacd8')
  }
}
test> db.restaurants.find({"grades.score":{$lt:90}})


test>
db.restaurants.insertMany([{rest_id:1,name:"rev",borough:"gobi",cuisine:"eggrice",grades:50},{rest_id:2,
borough:"rome",cuisine:"dosa",grades:91},{rest_id:3,name:"vince",borough:"spain",cuisine:"idli",grades:
88},])
{
  acknowledged: true,
  insertedIds: {
    '0': ObjectId('658eae04fff6c4b3250dacd9'),
    '1': ObjectId('658eae04fff6c4b3250dacda'),
    '2': ObjectId('658eae04fff6c4b3250dacdb')
  }
```

```
}
test> db.restaurants.find({"grades.score":{$lt:90}})

test> db.restaurants.find({"grades":{$lt:90}})
[
  {
    _id: ObjectId('658eae04fff6c4b3250dacd9'),
    rest_id: 1,
    name: 'rev',
    borough: 'gobi',
    cuisine: 'eggrice',
    grades: 50
  },
  {
    _id: ObjectId('658eae04fff6c4b3250dacdb'),
    rest_id: 3,
    name: 'vince',
    borough: 'spain',
    cuisine: 'idli',
    grades: 88
  }
]
test> db.restaurants.find({"grades":{$gt:90}})
[
  {
    _id: ObjectId('658eae04fff6c4b3250dacda'),
    rest_id: 2,
    borough: 'rome',
    cuisine: 'dosa',
    grades: 91
```

```
  }
]
test> db.restaurants.find({"grades":{$gt:80,$lt:100}})
[
 {
   _id: ObjectId('658eae04fff6c4b3250dacda'),
   rest_id: 2,
   borough: 'rome',
   cuisine: 'dosa',
   grades: 91
 },
 {
   _id: ObjectId('658eae04fff6c4b3250dacdb'),
   rest_id: 3,
   name: 'vince',
   borough: 'spain',
   cuisine: 'idli',
   grades: 88
 }
]
test>
```

## CYCLE-III

Execute the following commands in HADOOP:

1. To get the list of directories and files at the root of HDFS.
2. To get the list of complete directories and files of HDFS.
3. To create a directory (say, sample) in HDFS.
4. To copy a file from Local file system in HDFS.
5. To copy a file from HDFS to Local file system.
6. To copy a file from Local file System to HDFS via copy From Local command.
7. To copy a file from Hadoop file system to local file system via copy To Local .
8. To display the contents of an HDFS file on console.
9. To copy a file from one directory to another directory.

10. To remove a directory HDFS.

```
hadoop@hadoopvm-virtual-machine:~$ start-dfs.sh
Starting namenodes on [localhost]
localhost: namenode is running as process 4854.  Stop it first.
Starting datanodes
localhost: datanode is running as process 4998.  Stop it first.
Starting secondary namenodes [hadoopvm-virtual-machine]
hadoopvm-virtual-machine: secondarynamenode is running as process 5184.  Stop it first.
hadoop@hadoopvm-virtual-machine:~$ start-yarn.sh
Starting resourcemanager
resourcemanager is running as process 5450.  Stop it first.
Starting nodemanagers
localhost: nodemanager is running as process 5590.  Stop it first.
hadoop@hadoopvm-virtual-machine:~$ hadoop
Usage: hadoop [OPTIONS] SUBCOMMAND [SUBCOMMAND OPTIONS]
 or    hadoop [OPTIONS] CLASSNAME [CLASSNAME OPTIONS]
  where CLASSNAME is a user-provided Java class

  OPTIONS is none or any of:

buildpaths                       attempt to add class files from build tree
--config dir                     Hadoop config directory
--debug                          turn on shell script debug mode
--help                           usage information
hostnames list[,of,host,names]   hosts to use in slave mode
hosts filename                   list of hosts to use in slave mode
loglevel level                   set the log4j level for this command
workers                          turn on worker mode

  SUBCOMMAND is one of:
```

Admin Commands:

daemonlog get/set the log level for each daemon

Client Commands:

archive create a Hadoop archive
checknative check native Hadoop and compression libraries availability
classpath prints the class path needed to get the Hadoop jar and the required libraries
conftest validate configuration XML files
credential interact with credential providers
distch distributed metadata changer
distcp copy file or directories recursively
dtutil operations related to delegation tokens
envvars display computed Hadoop environment variables
fs run a generic filesystem user client
gridmix submit a mix of synthetic job, modeling a profiled from production load
jar <jar> run a jar file. NOTE: please use "yarn jar" to launch YARN applications, not this command.
jnipath prints the java.library.path
kdiag Diagnose Kerberos Problems
kerbname show auth_to_local principal conversion
key manage keys via the KeyProvider
rumenfolder scale a rumen input trace
rumentrace convert logs into a rumen trace
s3guard manage metadata on S3
trace view and modify Hadoop tracing settings
version print the version

Daemon Commands:

```
kms           run KMS, the Key Management Server
registrydns   run the registry DNS server

SUBCOMMAND may print help when invoked w/o parameters or with -h.
hadoop@hadoopvm-virtual-machine:~$ jps
10848 Jps
5184 SecondaryNameNode
5590 NodeManager
4998 DataNode
4854 NameNode
5450 ResourceManager
hadoop@hadoopvm-virtual-machine:~$ hadoop fs -ls
Found 4 items
drwxr-xr-x   - hadoop supergroup          0 2023-12-27 09:25 file
drwxr-xr-x   - hadoop supergroup          0 2023-12-27 10:01 sample
drwxr-xr-x   - hadoop supergroup          0 2023-12-27 10:52 student_info
drwxr-xr-x   - hadoop supergroup          0 2023-12-27 10:03 test
hadoop@hadoopvm-virtual-machine:~$ hadoop fs -ls /
Found 17 items
drwxr-xr-x   - hadoop supergroup          0 2023-12-26 16:05 /20cs011
drwxr-xr-x   - hadoop supergroup          0 2023-11-28 16:31 /20cs046
drwxr-xr-x   - hadoop supergroup          0 2023-11-28 16:35 /20cs047
drwxr-xr-x   - hadoop supergroup          0 2023-12-26 15:25 /20cs049
drwxr-xr-x   - hadoop supergroup          0 2023-11-28 16:39 /20cs050
drwxr-xr-x   - hadoop supergroup          0 2023-11-21 16:10 /20cs051
drwxr-xr-x   - hadoop supergroup          0 2023-11-28 16:37 /20cs052
drwxr-xr-x   - hadoop supergroup          0 2023-12-15 16:13 /20cs071
drwxr-xr-x   - hadoop supergroup          0 2023-11-28 15:23 /Laxmi
drwxr-xr-x   - hadoop supergroup          0 2023-12-27 10:26 /adcd
drwxr-xr-x   - hadoop supergroup          0 2023-11-27 16:58 /cse
```

```
drwxr-xr-x   - hadoop supergroup          0 2023-12-27 09:39 /file1
drwxr-xr-x   - hadoop supergroup          0 2023-12-27 10:24 /file2
drwxr-xr-x   - hadoop supergroup          0 2023-11-27 16:45 /hadiya
drwxr-xr-x   - hadoop supergroup          0 2023-11-28 15:10 /sample
drwxrwxr-x   - hadoop supergroup          0 2021-11-30 22:24 /tmp
drwxr-xr-x   - hadoop supergroup          0 2023-12-18 16:05 /user
hadoop@hadoopvm-virtual-machine:~$ hadoop fs -ls -R /
drwxr-xr-x   - hadoop supergroup          0 2023-12-26 16:05 /20cs011
drwxr-xr-x   - hadoop supergroup          0 2023-11-28 16:31 /20cs046
-rw-r--r--   1 hadoop supergroup          0 2023-11-28 16:25 /20cs046/ay.txt
-rw-r--r--   1 hadoop supergroup         31 2023-11-28 16:31 /20cs046/aya.txt
drwxr-xr-x   - hadoop supergroup          0 2023-11-28 16:35 /20cs047
drwxr-xr-x   - hadoop supergroup          0 2023-12-26 15:25 /20cs049
-rw-r--r--   1 hadoop supergroup          0 2023-12-26 15:25 /20cs049/abc.txt
drwxr-xr-x   - hadoop supergroup          0 2023-11-28 16:39 /20cs050
-rw-r--r--   1 hadoop supergroup          0 2023-11-28 16:39 /20cs050/ny.txt
drwxr-xr-x   - hadoop supergroup          0 2023-11-21 16:10 /20cs051
drwxr-xr-x   - hadoop supergroup          0 2023-11-28 16:37 /20cs052
drwxr-xr-x   - hadoop supergroup          0 2023-12-15 16:13 /20cs071
-rw-r--r--   1 hadoop supergroup          0 2023-12-15 16:13 /20cs071/ranj.txt
drwxr-xr-x   - hadoop supergroup          0 2023-11-28 15:23 /Laxmi
drwxr-xr-x   - hadoop supergroup          0 2023-12-27 10:26 /adcd
drwxr-xr-x   - hadoop supergroup          0 2023-11-27 16:58 /cse
-rw-r--r--   1 hadoop supergroup         18 2023-11-27 16:58 /cse/xyz.txt
drwxr-xr-x   - hadoop supergroup          0 2023-12-27 09:39 /file1
drwxr-xr-x   - hadoop supergroup          0 2023-12-27 09:53 /file1/sample.txt
-rw-r--r--   1 hadoop supergroup         15 2023-12-27 09:53 /file1/sample.txt/sample.txt
drwxr-xr-x   - hadoop supergroup          0 2023-12-27 10:24 /file2
-rw-r--r--   1 hadoop supergroup         17 2023-12-27 10:24 /file2/t.txt
drwxr-xr-x   - hadoop supergroup          0 2023-11-27 16:45 /hadiya
-rw-r--r--   1 hadoop supergroup         18 2023-11-27 16:01 /hadiya/xyz.txt
```

-rw-r--r--   1 hadoop supergroup          0 2023-11-27 16:43 /hadiya/xyz1.txt

-rw-r--r--   1 hadoop supergroup          0 2023-11-27 16:45 /hadiya/xyz2.txt

drwxr-xr-x   - hadoop supergroup          0 2023-11-28 15:10 /sample

drwxrwxr-x   - hadoop supergroup          0 2021-11-30 22:24 /tmp

drwx------   - hadoop supergroup          0 2021-11-30 22:24 /tmp/hadoop-yarn

drwx------   - hadoop supergroup          0 2021-11-30 22:32 /tmp/hadoop-yarn/staging

drwx------   - hadoop supergroup          0 2021-11-30 22:24 /tmp/hadoop-yarn/staging/hadoop

drwx------   - hadoop supergroup          0 2023-12-27 10:52 /tmp/hadoop-yarn/staging/hadoop/.staging

drwx------   - hadoop supergroup          0 2021-11-30 22:24 /tmp/hadoop-yarn/staging/hadoop/.staging/job_1638279301336_0001

-rw-r--r--  10 hadoop supergroup   40623961 2021-11-30 22:24 /tmp/hadoop-yarn/staging/hadoop/.staging/job_1638279301336_0001/job.jar

-rw-r--r--  10 hadoop supergroup        315 2021-11-30 22:24 /tmp/hadoop-yarn/staging/hadoop/.staging/job_1638279301336_0001/job.split

-rw-r--r--   1 hadoop supergroup         38 2021-11-30 22:24 /tmp/hadoop-yarn/staging/hadoop/.staging/job_1638279301336_0001/job.splitmetainfo

-rw-r--r--   1 hadoop supergroup     366892 2021-11-30 22:24 /tmp/hadoop-yarn/staging/hadoop/.staging/job_1638279301336_0001/job.xml

drwx------   - hadoop supergroup          0 2021-11-30 22:24 /tmp/hadoop-yarn/staging/hadoop/.staging/job_1638279301336_0002

-rw-r--r--  10 hadoop supergroup   40623961 2021-11-30 22:24 /tmp/hadoop-yarn/staging/hadoop/.staging/job_1638279301336_0002/job.jar

-rw-r--r--  10 hadoop supergroup        316 2021-11-30 22:24 /tmp/hadoop-yarn/staging/hadoop/.staging/job_1638279301336_0002/job.split

-rw-r--r--   1 hadoop supergroup         38 2021-11-30 22:24 /tmp/hadoop-yarn/staging/hadoop/.staging/job_1638279301336_0002/job.splitmetainfo

-rw-r--r--   1 hadoop supergroup     366736 2021-11-30 22:24 /tmp/hadoop-yarn/staging/hadoop/.staging/job_1638279301336_0002/job.xml

drwxr-xr-x   - hadoop supergroup          0 2021-11-30 22:32 /tmp/hadoop-yarn/staging/history

drwxrwxrwt   - hadoop supergroup          0 2021-11-30 22:32 /tmp/hadoop-yarn/staging/history/done_intermediate

drwxrwx---   - hadoop supergroup          0 2023-12-27 10:52 /tmp/hadoop-yarn/staging/history/done_intermediate/hadoop

-rwxrwx---   1 hadoop supergroup      21539 2021-11-30 22:33 /tmp/hadoop-yarn/staging/history/done_intermediate/hadoop/job_1638279301336_0003-1638291768349-hadoop-

INSERT+INTO+TABLE+stu...6%27%29%2C%28%27Dhruv%27-1638291799290-0-0-FAILED-default-1638291777270.jhist

-rwxrwx---  1 hadoop supergroup  474 2021-11-30 22:33 /tmp/hadoop-yarn/staging/history/done_intermediate/hadoop/job_1638279301336_0003.summary

-rwxrwx---  1 hadoop supergroup  424576 2021-11-30 22:33 /tmp/hadoop-yarn/staging/history/done_intermediate/hadoop/job_1638279301336_0003_conf.xml

-rwxrwx---  1 hadoop supergroup  21539 2021-11-30 22:42 /tmp/hadoop-yarn/staging/history/done_intermediate/hadoop/job_1638279301336_0004-1638292339756-hadoop-INSERT+INTO+TABLE+stu...6%27%29%2C%28%27Dhruv%27-1638292369774-0-0-FAILED-default-1638292350988.jhist

-rwxrwx---  1 hadoop supergroup  474 2021-11-30 22:42 /tmp/hadoop-yarn/staging/history/done_intermediate/hadoop/job_1638279301336_0004.summary

-rwxrwx---  1 hadoop supergroup  424576 2021-11-30 22:42 /tmp/hadoop-yarn/staging/history/done_intermediate/hadoop/job_1638279301336_0004_conf.xml

-rwxrwx---  1 hadoop supergroup  26759 2021-11-30 22:55 /tmp/hadoop-yarn/staging/history/done_intermediate/hadoop/job_1638292941265_0001-1638293104988-hadoop-INSERT+INTO+TABLE+stu...6%27%29%2C%28%27Dhruv%27-1638293135338-1-1-SUCCEEDED-default-1638293115975.jhist

-rwxrwx---  1 hadoop supergroup  488 2021-11-30 22:55 /tmp/hadoop-yarn/staging/history/done_intermediate/hadoop/job_1638292941265_0001.summary

-rwxrwx---  1 hadoop supergroup  424571 2021-11-30 22:55 /tmp/hadoop-yarn/staging/history/done_intermediate/hadoop/job_1638292941265_0001_conf.xml

-rwxrwx---  1 hadoop supergroup  26759 2023-12-27 10:52 /tmp/hadoop-yarn/staging/history/done_intermediate/hadoop/job_1703653298454_0001-1703654496859-hadoop-insert+into+table+ext...alues%283%2C%27joth%27%2C6-1703654525467-1-1-SUCCEEDED-default-1703654511624.jhist

-rwxrwx---  1 hadoop supergroup  487 2023-12-27 10:52 /tmp/hadoop-yarn/staging/history/done_intermediate/hadoop/job_1703653298454_0001.summary

-rwxrwx---  1 hadoop supergroup  424560 2023-12-27 10:52 /tmp/hadoop-yarn/staging/history/done_intermediate/hadoop/job_1703653298454_0001_conf.xml

drwx-wx-wx  - hadoop supergroup  0 2021-11-30 22:59 /tmp/hive

drwx-wx-wx  - hadoop supergroup  0 2024-01-01 10:33 /tmp/hive/_resultscache_

drwx------  - hadoop supergroup  0 2024-01-01 10:33 /tmp/hive/hadoop

drwxr-xr-x  - hadoop supergroup  0 2023-12-18 16:05 /user

drwxr-xr-x  - hadoop supergroup  0 2023-12-27 10:03 /user/hadoop

drwxr-xr-x  - hadoop supergroup  0 2023-12-27 09:25 /user/hadoop/file

drwxr-xr-x  - hadoop supergroup  0 2023-12-27 09:25 /user/hadoop/file/one

```
drwxr-xr-x   - hadoop supergroup          0 2023-12-27 10:01 /user/hadoop/sample
drwxr-xr-x   - hadoop supergroup          0 2023-12-27 10:00 /user/hadoop/sample/abc.txt
-rw-r--r--   1 hadoop supergroup         15 2023-12-27 10:00 /user/hadoop/sample/abc.txt/sample.txt
drwxr-xr-x   - hadoop supergroup          0 2023-12-27 10:01 /user/hadoop/sample/sample.txt
-rw-r--r--   1 hadoop supergroup         15 2023-12-27 10:01 /user/hadoop/sample/sample.txt/sample.txt
drwxr-xr-x   - hadoop supergroup          0 2023-12-27 10:52 /user/hadoop/student_info
-rw-r--r--   1 hadoop supergroup         12 2023-12-27 10:51 /user/hadoop/student_info/000000_0
-rw-r--r--   1 hadoop supergroup         24 2023-12-27 10:49 /user/hadoop/student_info/student.tsv
drwxr-xr-x   - hadoop supergroup          0 2023-12-27 10:03 /user/hadoop/test
-rw-r--r--   1 hadoop supergroup         15 2023-12-27 10:03 /user/hadoop/test/sample.txt
drwxr-xr-x   - hadoop supergroup          0 2021-11-30 20:36 /user/hive
drwxrwxr-x   - hadoop supergroup          0 2024-01-01 10:13 /user/hive/warehouse
drwxr-xr-x   - hadoop supergroup          0 2024-01-01 10:18 /user/hive/warehouse/ssit.db
drwxr-xr-x   - hadoop supergroup          0 2024-01-01 10:16 /user/hive/warehouse/ssit.db/cse
drwxr-xr-x   - hadoop supergroup          0 2024-01-01 10:31 /user/hive/warehouse/ssit.db/ise
-rw-r--r--   1 hadoop supergroup         25 2024-01-01 10:31 /user/hive/warehouse/ssit.db/ise/stude.tsv
drwxr-xr-x   - hadoop supergroup          0 2023-12-19 14:14 /user/hive/warehouse/ssit_student.db
drwxr-xr-x   - hadoop supergroup          0 2021-11-30 22:55 /user/hive/warehouse/student
-rw-r--r--   1 hadoop supergroup         43 2021-11-30 22:55 /user/hive/warehouse/student/000000_0
drwxr-xr-x   - hadoop supergroup          0 2023-12-18 14:58 /user/hive/warehouse/student1.db
drwxr-xr-x   - hadoop supergroup          0 2023-12-18 14:58 /user/hive/warehouse/student1.db/stud1_table
drwxr-xr-x   - hadoop supergroup          0 2023-12-29 16:40 /user/hive/warehouse/student20
drwxr-xr-x   - hadoop supergroup          0 2023-12-29 16:14 /user/hive/warehouse/student20.db
drwxr-xr-x   - hadoop supergroup          0 2023-12-27 10:40 /user/hive/warehouse/students.db
drwxr-xr-x   - hadoop supergroup          0 2023-12-27 10:40 /user/hive/warehouse/students.db/student
hadoop@hadoopvm-virtual-machine:~$ hadoop fs -mkdir /home/hadoop/Desktop/20cs102
mkdir: `hdfs://localhost:9000/home/hadoop/Desktop': No such file or directory
hadoop@hadoopvm-virtual-machine:~$ hadoop fs -mkdir /20cs102
hadoop@hadoopvm-virtual-machine:~$ hadoop fs -ls
Found 4 items
drwxr-xr-x   - hadoop supergroup          0 2023-12-27 09:25 file
```

drwxr-xr-x - hadoop supergroup 0 2023-12-27 10:01 sample

drwxr-xr-x - hadoop supergroup 0 2023-12-27 10:52 student_info

drwxr-xr-x - hadoop supergroup 0 2023-12-27 10:03 test

hadoop@hadoopvm-virtual-machine:~$ hadoop fs -ls /

Found 18 items

drwxr-xr-x - hadoop supergroup 0 2023-12-26 16:05 /20cs011

drwxr-xr-x - hadoop supergroup 0 2023-11-28 16:31 /20cs046

drwxr-xr-x - hadoop supergroup 0 2023-11-28 16:35 /20cs047

drwxr-xr-x - hadoop supergroup 0 2023-12-26 15:25 /20cs049

drwxr-xr-x - hadoop supergroup 0 2023-11-28 16:39 /20cs050

drwxr-xr-x - hadoop supergroup 0 2023-11-21 16:10 /20cs051

drwxr-xr-x - hadoop supergroup 0 2023-11-28 16:37 /20cs052

drwxr-xr-x - hadoop supergroup 0 2023-12-15 16:13 /20cs071

drwxr-xr-x - hadoop supergroup 0 2024-01-01 10:37 /20cs102

drwxr-xr-x - hadoop supergroup 0 2023-11-28 15:23 /Laxmi

drwxr-xr-x - hadoop supergroup 0 2023-12-27 10:26 /adcd

drwxr-xr-x - hadoop supergroup 0 2023-11-27 16:58 /cse

drwxr-xr-x - hadoop supergroup 0 2023-12-27 09:39 /file1

drwxr-xr-x - hadoop supergroup 0 2023-12-27 10:24 /file2

drwxr-xr-x - hadoop supergroup 0 2023-11-27 16:45 /hadiya

drwxr-xr-x - hadoop supergroup 0 2023-11-28 15:10 /sample

drwxrwxr-x - hadoop supergroup 0 2021-11-30 22:24 /tmp

drwxr-xr-x - hadoop supergroup 0 2023-12-18 16:05 /user

hadoop@hadoopvm-virtual-machine:~$ cd /home/hadoop/Desktop

hadoop@hadoopvm-virtual-machine:~/Desktop$ mkdir 20cs089

hadoop@hadoopvm-virtual-machine:~/Desktop$ cd 20cs089

hadoop@hadoopvm-virtual-machine:~/Desktop/20cs089$ touch tanu.txt

hadoop@hadoopvm-virtual-machine:~/Desktop/20cs089$ hadoop fs -put /home/hadoop/Desktop/20cs089/tanu.txt /20cs102/vin.txt

hadoop@hadoopvm-virtual-machine:~/Desktop/20cs089$ hadoop fs -get /20cs102/vin.txt

Usage: hadoop fs [generic options]

[-appendToFile <localsrc> ... <dst>]

[-cat [-ignoreCrc] <src> ...]

[-checksum [-v] <src> ...]

[-chgrp [-R] GROUP PATH...]

[-chmod [-R] <MODE[,MODE]... | OCTALMODE> PATH...]

[-chown [-R] [OWNER][:[GROUP]] PATH...]

[-copyFromLocal [-f] [-p] [-l] [-d] [-t <thread count>] <localsrc> ... <dst>]

[-copyToLocal [-f] [-p] [-ignoreCrc] [-crc] <src> ... <localdst>]

[-count [-q] [-h] [-v] [-t [<storage type>]] [-u] [-x] [-e] <path> ...]

[-cp [-f] [-p | -p[topax]] [-d] <src> ... <dst>]

[-createSnapshot <snapshotDir> [<snapshotName>]]

[-deleteSnapshot <snapshotDir> <snapshotName>]

[-df [-h] [<path> ...]]

[-du [-s] [-h] [-v] [-x] <path> ...]

[-expunge [-immediate] [-fs <path>]]

[-find <path> ... <expression> ...]

[-get [-f] [-p] [-ignoreCrc] [-crc] <src> ... <localdst>]

[-getfacl [-R] <path>]

[-getfattr [-R] {-n name | -d} [-e en] <path>]

[-getmerge [-nl] [-skip-empty-file] <src> <localdst>]

[-head <file>]

[-help [cmd ...]]

[-ls [-C] [-d] [-h] [-q] [-R] [-t] [-S] [-r] [-u] [-e] [<path> ...]]

[-mkdir [-p] <path> ...]

[-moveFromLocal <localsrc> ... <dst>]

[-moveToLocal <src> <localdst>]

[-mv <src> ... <dst>]

[-put [-f] [-p] [-l] [-d] <localsrc> ... <dst>]

[-renameSnapshot <snapshotDir> <oldName> <newName>]

[-rm [-f] [-r|-R] [-skipTrash] [-safely] <src> ...]

[-rmdir [--ignore-fail-on-non-empty] <dir> ...]

[-setfacl [-R] [{-b|-k} {-m|-x <acl_spec>} <path>]|[--set <acl_spec> <path>]]

[-setfattr {-n name [-v value] | -x name} <path>]

[-setrep [-R] [-w] <rep> <path> ...]

[-stat [format] <path> ...]

[-tail [-f] [-s <sleep interval>] <file>]

[-test -[defswrz] <path>]

[-text [-ignoreCrc] <src> ...]

[-touch [-a] [-m] [-t TIMESTAMP ] [-c] <path> ...]

[-touchz <path> ...]

[-truncate [-w] <length> <path> ...]

[-usage [cmd ...]]

Generic options supported are:

-conf <configuration file> specify an application configuration file

-D <property=value> define a value for a given property

-fs <file:///|hdfs://namenode:port> specify default filesystem URL to use, overrides 'fs.defaultFS' property from configurations.

-jt <local|resourcemanager:port> specify a ResourceManager

-files <file1,...> specify a comma-separated list of files to be copied to the map reduce cluster

-libjars <jar1,...> specify a comma-separated list of jar files to be included in the classpath

-archives <archive1,...> specify a comma-separated list of archives to be unarchived on the compute machines

The general command line syntax is:

command [genericOptions] [commandOptions]

hadoop@hadoopvm-virtual-machine:~/Desktop/20cs089$ cat tanu.txt;

Hi, ssit

hadoop@hadoopvm-virtual-machine:~/Desktop/20cs089$ hadoop fs -get /20cs102/vin.txt /home/hadoop/Desktop/20cs089/anu.txt

hadoop@hadoopvm-virtual-machine:~/Desktop/20cs089$ hadoop fs -copyFromLocal /home/hadoop/Desktop/20cs089/tanu.txt /20cs102/vin1.txt

```
hadoop@hadoopvm-virtual-machine:~/Desktop/20cs089$ hadoop fs -copyToLocal /20cs102/vin1.txt
/home/hadoop/Desktop/20cs089/an1u.txt

hadoop@hadoopvm-virtual-machine:~/Desktop/20cs089$ cd ..

hadoop@hadoopvm-virtual-machine:~/Desktop$ cd ..

hadoop@hadoopvm-virtual-machine:~$ cd ..

hadoop@hadoopvm-virtual-machine:/home$ cd ..

hadoop@hadoopvm-virtual-machine:/$ cd

hadoop@hadoopvm-virtual-machine:~$ hadoop fs -cat vin.txt;

cat: `vin.txt': No such file or directory

hadoop@hadoopvm-virtual-machine:~$ hadoop fs -cat /20cs102/vin.txt;

Hi, ssit

hadoop@hadoopvm-virtual-machine:~$ hadoop fs -rm -r /20cs102

Deleted /20cs102

hadoop@hadoopvm-virtual-machine:~$ hadoop fs -ls /

Found 17 items

drwxr-xr-x   - hadoop supergroup          0 2023-12-26 16:05 /20cs011

drwxr-xr-x   - hadoop supergroup          0 2023-11-28 16:31 /20cs046

drwxr-xr-x   - hadoop supergroup          0 2023-11-28 16:35 /20cs047

drwxr-xr-x   - hadoop supergroup          0 2023-12-26 15:25 /20cs049

drwxr-xr-x   - hadoop supergroup          0 2023-11-28 16:39 /20cs050

drwxr-xr-x   - hadoop supergroup          0 2023-11-21 16:10 /20cs051

drwxr-xr-x   - hadoop supergroup          0 2023-11-28 16:37 /20cs052

drwxr-xr-x   - hadoop supergroup          0 2023-12-15 16:13 /20cs071

drwxr-xr-x   - hadoop supergroup          0 2023-11-28 15:23 /Laxmi

drwxr-xr-x   - hadoop supergroup          0 2023-12-27 10:26 /adcd

drwxr-xr-x   - hadoop supergroup          0 2023-11-27 16:58 /cse

drwxr-xr-x   - hadoop supergroup          0 2023-12-27 09:39 /file1

drwxr-xr-x   - hadoop supergroup          0 2023-12-27 10:24 /file2

drwxr-xr-x   - hadoop supergroup          0 2023-11-27 16:45 /hadiya

drwxr-xr-x   - hadoop supergroup          0 2023-11-28 15:10 /sample

drwxrwxr-x   - hadoop supergroup          0 2021-11-30 22:24 /tmp
```

drwxr-xr-x - hadoop supergroup 0 2023-12-18 16:05 /user

hadoop@hadoopvm-virtual-machine:~$

2. Execute the following commands in HIVE
   1. To create a database named “Students” with comments and database pro
   2. To display the list of all databases
   3. To describe the extended database
   4. To describe the databases
   5. To alter the database properties
   6. To make the database as current working database
   7. To drop database
   8. To create managed table named ‘Students’
   9. To describe the ‘Students’ table
   10. To create external table name ‘EXT_STUDENT’.
   11. To load into the table from file named student.tsv.

hadoop@hadoopvm-virtual-machine:~$ start-dfs.sh
Starting namenodes on [localhost]
localhost: namenode is running as process 4854. Stop it first.
Starting datanodes
localhost: datanode is running as process 4998. Stop it first.
Starting secondary namenodes [hadoopvm-virtual-machine]
hadoopvm-virtual-machine: secondarynamenode is running as process 5184. Stop it first.
hadoop@hadoopvm-virtual-machine:~$ start.dfs.sh
start.dfs.sh: command not found
hadoop@hadoopvm-virtual-machine:~$ start-yarn.sh
Starting resourcemanager
resourcemanager is running as process 5450. Stop it first.
Starting nodemanagers
localhost: nodemanager is running as process 5590. Stop it first.
hadoop@hadoopvm-virtual-machine:~$ hive
SLF4J: Class path contains multiple SLF4J bindings.
SLF4J: Found binding in [jar:file:/home/hadoop/apache-hive-3.1.2-bin/lib/log4j-slf4j-impl-2.10.0.jar!/org/slf4j/impl/StaticLoggerBinder.class]
SLF4J: Found binding in [jar:file:/home/hadoop/hadoop/share/hadoop/common/lib/slf4j-log4j12-1.7.25.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.apache.logging.slf4j.Log4jLoggerFactory]
Hive Session ID = 589c0af1-42e6-4003-8642-a4f9c0203ad3

Logging initialized using configuration in jar:file:/home/hadoop/apache-hive-3.1.2-bin/lib/hive-common-3.1.2.jar!/hive-log4j2.properties Async: true
Hive Session ID = ae967405-9358-43b7-b515-d9b756a95489
Hive-on-MR is deprecated in Hive 2 and may not be available in the future versions. Consider using a different execution engine (i.e. spark, tez) or using Hive 1.X releases.
hive> show databases;

```
OK
default
ssit_student
student1
student20
students
Time taken: 0.608 seconds, Fetched: 5 row(s)
hive> create database if not exists ssit comment'Student details' with dbproperties('creator'='Vinayak');
OK
Time taken: 0.272 seconds
hive> show databases;
OK
default
ssit
ssit_student
student1
student20
students
Time taken: 0.034 seconds, Fetched: 6 row(s)
hive> describe database ssit;
OK
ssit	Student details	hdfs://localhost:9000/user/hive/warehouse/ssit.db	hadoop	USER
Time taken: 0.047 seconds, Fetched: 1 row(s)
hive> describe database extended ssit;
OK
ssit	Student details	hdfs://localhost:9000/user/hive/warehouse/ssit.db	hadoop	USER
		{creator=Vinayak}
Time taken: 0.033 seconds, Fetched: 1 row(s)
hive> alter database ssit set dbproperties('Edited-By'='Vin');
OK
Time taken: 0.234 seconds
hive> describe database extended ssit;
OK
ssit	Student details	hdfs://localhost:9000/user/hive/warehouse/ssit.db	hadoop	USER
		{creator=Vinayak, Edited-By=Vin}
Time taken: 0.026 seconds, Fetched: 1 row(s)
hive> use ssit;
OK
Time taken: 0.023 seconds
hive> create table if not exists cse(rollno int,name string) row format delimited fields terminated by '\t';
OK
Time taken: 0.519 seconds
hive> describe cse;
OK
rollno		int
name		string
Time taken: 0.085 seconds, Fetched: 2 row(s)
hive> desc cse;
OK
rollno		int
```

```
name                    string
Time taken: 0.065 seconds, Fetched: 2 row(s)
hive> create table if not exists cse(rollno int,name string) row format delimited fields terminated by '\t';
OK
Time taken: 0.029 seconds
hive> create external table if not exists ise(rollno int,name string) row format delimited fields terminated
by '\t';
OK
Time taken: 0.093 seconds
hive> desc ise;
OK
rollno                  int
name                    string
Time taken: 0.057 seconds, Fetched: 2 row(s)
hive> load data local inpath '/home/hadoop/Desktop/stude.tsv' overwrite into table ise;
Loading data to table ssit.ise
OK
Time taken: 0.919 seconds
hive> create external table if not exists ise(rollno int,name string) row format delimited fields terminated
by '\t' location 'std_info';
OK
Time taken: 0.118 seconds
hive> load data local inpath '/home/hadoop/Desktop/stude.tsv' overwrite into table ise;
hive> load data local inpath '/home/hadoop/Desktop/stude.tsv' overwrite into table ise;
hive> load data local inpath '/home/hadoop/Desktop/stude.tsv' overwrite into table ise;
Loading data to table ssit.ise
OK
Time taken: 0.232 seconds
hive> select * from ise;
OK
100     ayaj
101     uya
102     hib
Time taken: 0.139 seconds, Fetched: 3 row(s)
hive> load data local inpath '/home/hadoop/Desktop/stude.tsv' overwrite into table ise;
Loading data to table ssit.ise
OK
Time taken: 0.651 seconds
hive> select * from ise;
OK
100     ayaj
101     uya
102     hib
Time taken: 0.127 seconds, Fetched: 3 row(s)
```

To create a database named “STUDENTS” with comments and database properties