

# HiveQL Practical Commands with Hadoop Setup

## Complete HiveQL Session

Step 1: Start Hadoop and Hive

```
$ sudo su user
Password: hadoop1

$ cd /home/student
$ start-dfs.sh
$ start-yarn.sh
$ jps

$ cd /usr/local/hive/bin
$ ./hive
```

Step 2: Hive Commands

```
-- Create Database and Use It
hive> CREATE DATABASE IF NOT EXISTS new-jyoti;
hive> USE new-jyoti;

-- Create Employee Table
hive> CREATE TABLE IF NOT EXISTS emps (
    id INT,
    name STRING
)
ROW FORMAT DELIMITED
FIELDS TERMINATED BY ','
STORED AS TEXTFILE;

-- Show and Describe Tables
hive> SHOW TABLES;
hive> DESCRIBE emps;
hive> SELECT * FROM emps;

-- Load Data into Table
hive> LOAD DATA LOCAL INPATH '/home/student/desktop/emp.txt' INTO TABLE emps;

-- (Optional) Set Transaction Properties
hive> SET hive.txn.manager=org.apache.hadoop.hive.ql.lockmgr.DbTxnManager;
hive> SET hive.support.concurrency=true;

-- (Fails in non-ACID table)
hive> UPDATE emps SET id=5 WHERE name='Jyoti';

-- Alter Table and Index Operations
hive> ALTER TABLE emps RENAME TO emp_new;
hive> ALTER TABLE emp_new ADD COLUMNS (age INT);
```

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```
-- Create Index on 'name' column
hive> CREATE INDEX idx_emp_name ON TABLE emp_new(name)
AS 'org.apache.hadoop.hive.ql.index.compact.CompactIndexHandler'
WITH DEFERRED REBUILD;

-- Rebuild Index
hive> ALTER INDEX idx_emp_name ON emp_new REBUILD;

-- Show Indexes
hive> SHOW INDEXES ON emp_new;

-- View Index Table (auto-created)
hive> SELECT * FROM new-jyoti.emp_new__idx__emp_name__;

-- Create Another Index on 'id'
hive> CREATE INDEX idx_emp_id ON TABLE emp_new(id)
AS 'org.apache.hadoop.hive.ql.index.compact.CompactIndexHandler'
WITH DEFERRED REBUILD;
hive> ALTER INDEX idx_emp_id ON emp_new REBUILD;

-- Additional Table: Department
hive> CREATE TABLE IF NOT EXISTS dept (
    id INT,
    dept_name STRING
)
ROW FORMAT DELIMITED
FIELDS TERMINATED BY ','
STORED AS TEXTFILE;

-- Load Department Data
hive> LOAD DATA LOCAL INPATH '/home/student/desktop/dept.txt' INTO TABLE dept;

-- Join Operation
hive> SELECT e.id, e.name, d.dept_name
FROM emp_new e
JOIN dept d ON (e.id = d.id);
```