Nagar Yuwak Shikshan Sanstha's
Yeshwantrao Chavan College of Engineering
(An Autonomous Institution affiliated to Rashtrasant Tukadoji Maharaj Nagpur University)
Hingna Road, Wanadongri, Nagpur - 441 110
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Department of Artificial Intelligence & Data Science

Vision of the Department

To be a well-known centre for pursuing computer education through innovative pedagogy, value-based education and industry collaboration.

Mission of the Department

To establish learning ambience for ushering in computer engineering professionals in core and multidisciplinary area by developing Problem-solving skills through emerging technologies.

Session 2025-2026

Vision: Dream of where you want.	**Mission:** Means to achieve Vision

Program Educational Objectives of the program (PEO): (broad statements that describe the professional and career accomplishments)

PEO1	**Preparation**	**P: Preparation**	**Pep-CL abbreviation pronounce as Pep-si-lL easy to recall**
PEO2	**Core Competence**	**E: Environment (Learning Environment)**	
PEO3	**Breadth**	**P: Professionalism**	
PEO4	**Professionalism**	**C: Core Competence**	
PEO5	**Learning Environment**	**L: Breadth (Learning in diverse areas)**	

Program Outcomes (PO): (statements that describe what a student should be able to do and know by the end of a program)

Keywords of POs:
Engineering knowledge, Problem analysis, Design/development of solutions, Conduct Investigations of Complex Problems, Engineering Tool Usage, The Engineer and The World, Ethics, Individual and Collaborative Team work, Communication, Project Management and Finance, Life-Long Learning

PSO Keywords: Cutting edge technologies, Research

"I am an engineer, and I know how to apply engineering knowledge to investigate, analyse and design solutions to complex problems using tools for entire world following all ethics in a collaborative way with proper management skills throughout my life." *to contribute to the development of cutting-edge technologies and Research*.

Integrity: I will adhere to the Laboratory Code of Conduct and ethics in its entirety.

Name and Signature of Student and Date
(Signature and Date in Handwritten)

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Session	2025-26 (ODD)	**Course Name**	BDH Lab
Semester	7 AIDS	**Course Code**	22ADS703
Roll No	21	**Name of Student**	**Sanskruti. Paunikar**

Practical Number	**5**
Course Outcome	**CO1:-** 1. Understand big data analytics and its business applications. **CO2:-** Analyze the HADOOP and Map Reduce technologies associated with big data analytics. **CO3:-** Apply Big Data analytics Using Pig and Hive.
Aim	Perform Hive Operations: Create, Alter and Drop Databases, Tables, Views, and Indexes.
Problem Definition	
Theory (100 words)	Apache Hive is a data warehouse tool on Hadoop that allows structured querying using HiveQL. Hive supports operations on databases, tables, views, and indexes to organize and manage large datasets stored in HDFS. Users can create databases/tables for storing data, alter them to modify schema or metadata, and drop them when no longer needed. Views allow logical representation of data without storing it physically, and indexes improve query performance. Hive translates these operations into MapReduce, Tez, or Spark jobs, enabling scalable and efficient data management and analytics in distributed environments.
Procedure and Execution (100 Words)	Steps of Implementation:- 1. Start Hive shell: `hive` 2. Databases: CREATE DATABASE db;` → `ALTER DATABASE db ...;` → `DROP DATABASE db;` 3. Tables: CREATE TABLE tbl(...);` → `ALTER TABLE tbl ADD COLUMNS(...);` → `DROP TABLE tbl;` 4. Views: CREATE VIEW v AS SELECT ...;` → `ALTER VIEW v AS SELECT ...;` → `DROP VIEW v;` 5. Indexes: CREATE INDEX idx ON tbl(col);` → `ALTER INDEX idx ON tbl REBUILD;` → `DROP INDEX idx ON tbl;` 6. Verify with `SHOW DATABASES; SHOW TABLES; SHOW VIEWS; SHOW INDEXES;`

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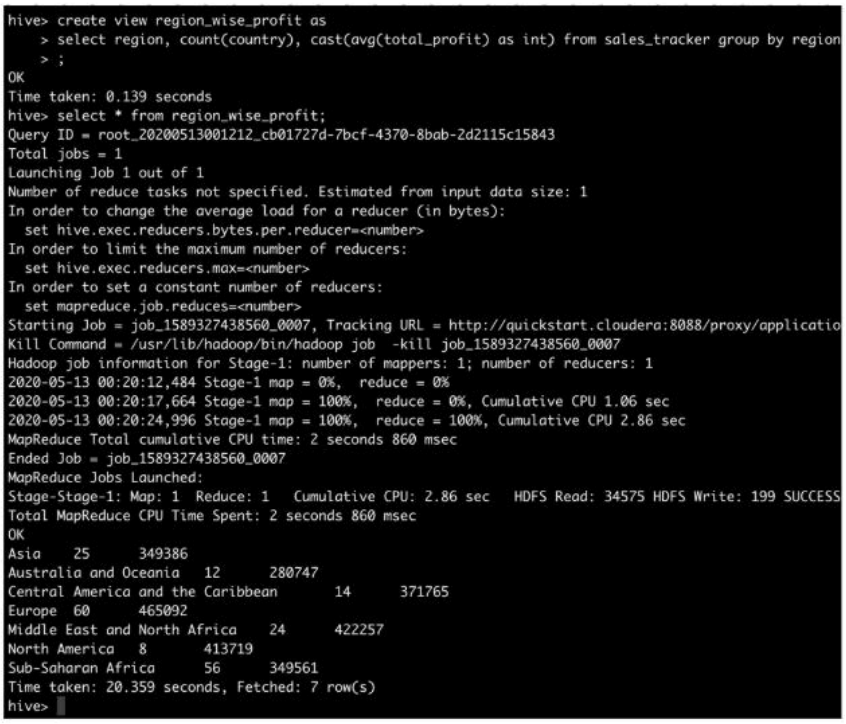
Code:

```
hive> create database test;
OK
Time taken: 0.2 seconds
hive> use test;
OK
Time taken: 0.141 seconds
```

```
hive> show tables;
OK
values__tmp__table__3
Time taken: 0.186 seconds, Fetched: 1 row(s)
hive> create table test.emp
    > (
    > sno int,
    > usr_name string,
    > city string)
    > ROW FORMAT delimited fields terminated by ',' LINES TERMINATED BY '\n' STORED AS TEXTFILE;
OK
Time taken: 0.77 seconds
hive> show tables;
OK
emp
values__tmp__table__3
Time taken: 0.111 seconds, Fetched: 2 row(s)
hive>
```

```
hive> DROP DATABASE IF EXISTS Test;
OK
Time taken: 0.055 seconds
hive> DROP DATABASE Test1;
OK
Time taken: 0.033 seconds
hive> show databases;
OK
default
Time taken: 0.012 seconds, Fetched: 1 row(s)
hive>
```

	Output: 
Output Analysis	After performing the commands, Hive confirms execution with messages like `Query OK` and metadata updates. Databases, tables, views, and indexes are created, modified, or removed in HDFS and Hive metastore. Verifying with `SHOW DATABASES;`, `SHOW TABLES;`, `SHOW VIEWS;` ensures proper implementation. The output demonstrates successful schema management and reflects Hive's ability to handle metadata and structured operations efficiently in a distributed Hadoop environment.
Link of student Github profile where lab assignment has been uploaded	https://github.com/sanskruti-1234/BDH.git
Conclusion	Hive operations for creating, altering, and dropping databases, tables, views, and indexes were successfully executed. These operations enable flexible schema management, efficient data organization, and improved query performance. Hive's integration with Hadoop ensures scalable handling of large datasets, and these exercises confirm its effectiveness as a data warehousing tool for big data analytics.

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