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

NAAC A++

Ph.: 07104-237919, 234623, 329249, 329250 Fax: 07104-232376, Website: www.ycce.edu

Department of Computer Technology

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: To harness the power of artificial intelligence and data science to solve real-world problems and enhance human potential.	**Mission:** To acquire skills through coursework, projects, and internships, while actively engaging in research and collaboration with peers to innovate and apply AI solutions.

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.

Prerana Bijekar   30 October 2025

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	Course Code	22ADS704
Roll No	11	Name of Student	Prerana Bijekar

Practical Number	5
Course Outcome	**CO1:** 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.
Theory (100 words)	Apache Hive provides a SQL-like interface for managing structured data in Hadoop. It allows users to perform Data Definition Language (DDL) operations such as creating, altering, and dropping databases, tables, views, and indexes. These operations help organize and optimize large datasets stored in HDFS. Databases group related tables, tables store structured data, views act as virtual tables for simplified queries, and indexes improve query performance. Hive translates these SQL operations into MapReduce or Tez/Spark jobs, enabling scalable and efficient data management within the Hadoop ecosystem.
Procedure and Execution (100 Words)	Steps of implementation: • Start Hive shell using hive command. • Create a database: CREATE DATABASE dbname; • Use the database: USE dbname; • Create a table: CREATE TABLE tablename (...); • Alter table: ALTER TABLE tablename ADD COLUMNS (...); • Drop table: DROP TABLE tablename; • Create a view: CREATE VIEW viewname AS SELECT ...; • Drop view: DROP VIEW viewname; • Create index: CREATE INDEX idx_name ON TABLE tablename (column); • Drop index: DROP INDEX idx_name ON tablename;
	Code: ``` hive> create database test; OK Time taken: 0.2 seconds hive> use test; OK Time taken: 0.141 seconds ```

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```
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>
```

```
hive> create view region_wise_profit as
    > select region, count(country), cast(avg(total_profit) as int) from sales_tracker group by region
    > ;
OK
Time taken: 0.139 seconds
hive> select * from region_wise_profit;
Query ID = root_20200513001212_cb01727d-7bcf-4370-8bab-2d2115c15843
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_1589327438560_0007, Tracking URL = http://quickstart.cloudera:8088/proxy/applicatio
Kill Command = /usr/lib/hadoop/bin/hadoop job  -kill job_1589327438560_0007
Hadoop job information for Stage-1: number of mappers: 1; number of reducers: 1
2020-05-13 00:20:12,484 Stage-1 map = 0%,   reduce = 0%
2020-05-13 00:20:17,664 Stage-1 map = 100%,  reduce = 0%, Cumulative CPU 1.06 sec
2020-05-13 00:20:24,996 Stage-1 map = 100%,  reduce = 100%, Cumulative CPU 2.86 sec
MapReduce Total cumulative CPU time: 2 seconds 860 msec
Ended Job = job_1589327438560_0007
MapReduce Jobs Launched:
Stage-Stage-1: Map: 1  Reduce: 1   Cumulative CPU: 2.86 sec   HDFS Read: 34575 HDFS Write: 199 SUCCESS
Total MapReduce CPU Time Spent: 2 seconds 860 msec
OK
Asia    25      349386
Australia and Oceania   12      280747
Central America and the Caribbean       14      371765
Europe  60      465092
Middle East and North Africa    24      422257
North America   8       413719
Sub-Saharan Africa      56      349561
Time taken: 20.359 seconds, Fetched: 7 row(s)
hive>
```

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	Output:
Output Analysis	Each command executes successfully, displaying confirmation messages like "Table created," "Database dropped," or "Index created." Listing commands (SHOW DATABASES;, SHOW TABLES;) verify the changes. The output demonstrates successful management of Hive databases, tables, views, and indexes within Hadoop.
Github Link	https://github.com/Prerana-Bijekar/BDH
Conclusion	Performing Hive operations such as creating, altering, and dropping databases, tables, views, and indexes enables structured organization and optimized querying of big data. These operations simplify data management while leveraging Hadoop's scalability and Hive's SQL-like interface for efficient analytics.
Plag Report (Similarity index < 12%)	
Date	30 October 2025