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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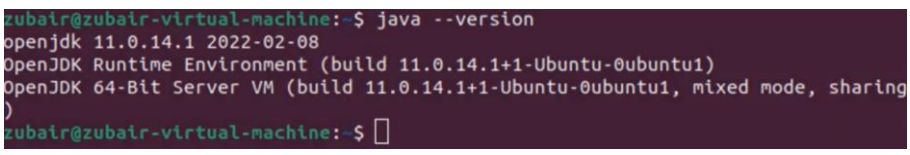
Session	2025-26 (ODD)	**Course Name**	BDH Lab
Semester	7	**Course Code**	22ADS704
Roll No	11	**Name of Student**	Prerana Bijekar

Practical Number	1
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	Installation of Apache Hadoop on Linux System.
Theory (100 words)	Apache Hadoop is an open-source framework that enables distributed storage and processing of large datasets across clusters of computers. It follows the master-slave architecture with HDFS for storage and MapReduce for data processing. Installing Hadoop on a Linux system involves setting up Java, configuring environment variables, and creating a pseudo-distributed or fully distributed setup. The configuration includes editing XML files like core-site.xml, hdfs-site.xml, and mapred-site.xml to define directories, replication factors, and file system paths. Once installed, Hadoop allows efficient handling of big data through parallel computation and fault-tolerant data management.
Procedure and Execution (100 Words)	Steps of implementation: • Install Java Development Kit (JDK). • Download and extract Hadoop. • Configure environment variables in .bashrc. • Edit core, HDFS, and MapReduce XML files. • Format the NameNode. • Start NameNode and DataNode daemons. • Verify installation using Hadoop web UI or shell commands.
	Code: 

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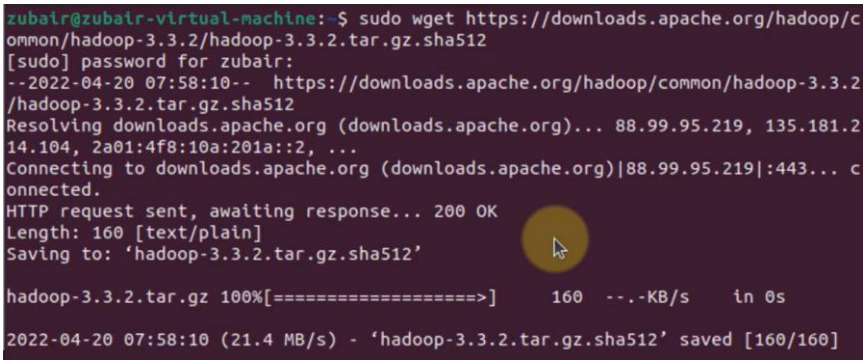

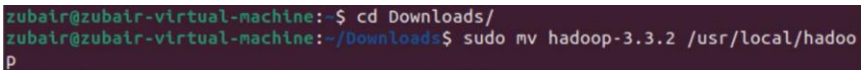

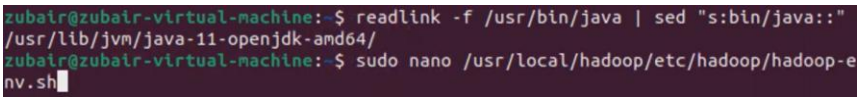

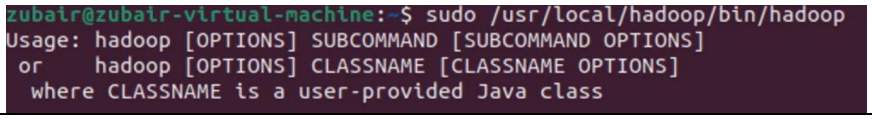

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<tr><td>Output Analysis</td><td>After installation, Hadoop services such as NameNode, DataNode, ResourceManager, and NodeManager start successfully. The web interfaces display cluster information and running nodes. The hadoop fs -ls / command confirms access to HDFS, verifying that Hadoop is properly configured and operational.</td></tr>
<tr><td>Github Link</td><td>https://github.com/Prerana-Bijekar/BDH</td></tr>
<tr><td>Conclusion</td><td>Installing Apache Hadoop on Linux provides a robust environment for distributed data storage and parallel processing. Once set up, the framework can efficiently handle large-scale datasets, forming the foundation for big data analytics and scalable computation.</td></tr>
</table>

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Date	30 October 2025