



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.
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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-IL 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	2
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	Implementation of File management operations in Hadoop.
Theory (100 words)	Hadoop Distributed File System (HDFS) provides scalable and reliable storage for big data applications. It allows users to manage files across a distributed cluster using commands similar to traditional UNIX file systems. File management operations in Hadoop include creating directories, uploading and downloading files, viewing file contents, and deleting files from HDFS. These operations are performed through the Hadoop shell or API commands, ensuring data replication, fault tolerance, and efficient access. Understanding these operations is crucial for effectively handling data within the Hadoop ecosystem.
Procedure and Execution (100 Words)	Steps of implementation: <ul style="list-style-type: none">Start Hadoop services (NameNode and DataNode).Create a directory in HDFS using hadoop fs -mkdir.Upload files with hadoop fs -put.View files using hadoop fs -ls or -cat.Download files using hadoop fs -get.Delete files or directories using hadoop fs -rm or -rmdir. Code: <pre>suraj@suraj:~/hadoop-2.5.0-cdh5.3.2\$ jps 2546 SecondaryNameNode 2404 DataNode 2295 NameNode 2760 ResourceManager 2874 NodeManager 4251 Jps suraj@suraj:~/hadoop-2.5.0-cdh5.3.2\$</pre>



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	<pre>suraj@suraj:~/hadoop-2.5.0-cdh5.3.2\$ bin/hdfs dfs -mkdir /geeks 19/01/31 10:53:43 WARN util.NativeCodeLoader: Unable to load native-hadoop library able suraj@suraj:~/hadoop-2.5.0-cdh5.3.2\$ bin/hdfs dfs -ls / 19/01/31 10:53:56 WARN util.NativeCodeLoader: Unable to load native-hadoop library able Found 5 items drwxr-xr-x - suraj supergroup 0 2019-01-31 10:53 /geeks -rw-r--r-- 1 suraj supergroup 13965969 2019-01-31 00:13 /input drwxr-xr-x - suraj supergroup 0 2019-01-31 01:38 /output drwx----- - suraj supergroup 0 2019-01-31 00:15 /tmp drwxr-xr-x - suraj supergroup 0 2019-01-30 23:44 /user</pre> <pre>suraj@suraj:~/hadoop-2.5.0-cdh5.3.2\$ bin/hdfs dfs -touchz /geeks/myfile.txt 19/01/31 11:10:31 WARN util.NativeCodeLoader: Unable to load native-hadoop library able suraj@suraj:~/hadoop-2.5.0-cdh5.3.2\$ bin/hdfs dfs -lsr /geeks lsr: DEPRECATED: Please use 'ls -R' instead. 19/01/31 11:10:48 WARN util.NativeCodeLoader: Unable to load native-hadoop library able -rw-r--r-- 1 suraj supergroup 0 2019-01-31 11:10 /geeks/myfile.txt suraj@suraj:~/hadoop-2.5.0-cdh5.3.2\$</pre> <pre>suraj@suraj:~/hadoop-2.5.0-cdh5.3.2\$ bin/hdfs dfs -cat /geeks/AI.txt 19/01/31 11:33:25 WARN util.NativeCodeLoader: Unable to load native-hadoop library able In computer science, artificial intelligence, sometimes called machine intelligence, is the natural intelligence displayed by humans and other animals suraj@suraj:~/hadoop-2.5.0-cdh5.3.2\$</pre> <pre>suraj@suraj:~/hadoop-2.5.0-cdh5.3.2\$ bin/hdfs dfs -get /geeks/myfile.txt/Desktop/hero 19/01/31 11:43:34 WARN util.NativeCodeLoader: Unable to load native-hadoop library for your able suraj@suraj:~/hadoop-2.5.0-cdh5.3.2\$ ls/Desktop/hero myfile.txt suraj@suraj:~/hadoop-2.5.0-cdh5.3.2\$</pre> <pre>suraj@suraj:~/hadoop-2.5.0-cdh5.3.2\$ bin/hdfs dfs -mkdir /geeks_copied 19/01/31 12:46:03 WARN util.NativeCodeLoader: Unable to load native-hadoop library able</pre>
Output Analysis	Each command execution confirms successful file operations in HDFS. For instance, files uploaded with -put appear when listing directories, and -cat displays their contents. The successful execution of create, view, and delete commands verifies that the Hadoop file management system is functioning properly.
Github Link	https://github.com/Prerana-Bijekar/BDH
Conclusion	Implementing file management operations in Hadoop demonstrates efficient handling of files within a distributed system. These commands help manage large datasets seamlessly, ensuring scalability, reliability, and accessibility across the Hadoop cluster.



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Date	30 October 2025