

Hadoop & BigData Lab

Week 1,2:

Implement the following Data structures in Java

a) Linked Lists b) Stacks c) Queues d) Set e) Map

Week 3, 4:

(i) Perform setting up and Installing Hadoop in its three operating modes:

Standalone,
Pseudo distributed,
Fully distributed

(ii) Use web based tools to monitor your Hadoop setup.

Week 5:

Implement the following file management tasks in Hadoop:

Adding files and directories

Retrieving files

Deleting files

Hint: A typical Hadoop workflow creates data files (such as log files) elsewhere and copies them into HDFS using one of the above command line utilities.

Week 6:

4. Run a basic Word Count Map Reduce program to understand Map Reduce Paradigm.

Week 7:

Write a Map Reduce program that mines weather data.

Weather sensors collecting data every hour at many locations across the globe gather a large volume of log data, which is a good candidate for analysis with MapReduce, since it is semi structured and record-oriented.

Week 8:

6. Implement Matrix Multiplication with Hadoop Map Reduce

Week 9,10:

Install and Run Pig then write Pig Latin scripts to sort, group, join, project, and filter your data.

Week 11,12:

Install and Run Hive then use Hive to create, alter, and drop databases, tables, views, functions, and indexes