**Instructions for Max-Temperature Analysis**

CS555: Big Data Computing Lab

horizontal line

# **16th August 2021**

1. Install Maven
   1. Open the terminal and type:

**sudo apt-get install maven**

1. create project directory : (**Temperature**)
   1. Browse to home directory

**cd /home/iitp**

* 1. Create project directory

**mkdir Temperature**

1. Create source files:
   1. Browse into Temperature directory

**cd Temperature**

* 1. Create new folder **src** inside Temperature directory

**mkdir src**

* 1. Browse into src directory

**cd src**

* 1. Create new folder **main** inside src directory

**mkdir main**

* 1. Browse into **main** directory

**cd main**

* 1. Create new folder **java** inside main directory

**mkdir java**

* 1. Browse into java directory

**cd java**

* 1. Create source files within java directory
     1. **nano TotalDriver.java**
     2. **nano TotalMapper1.java**
     3. **nano TotalMapper2.java**
     4. **nano TotalReducer.java**

paste the lines from the source code provided

Note:- **To save file: Press- CTRL + o followed by Enter button**

**To Exit Press:- CTRL + x from nano editor**

* 1. Browse into Temperature directory

**cd /home/iitp/Temperature**

* 1. Create pom.xml file inside Temperature directory

**nano pom.xml**

paste the lines from the xml file provided and follow the steps in note of step (h)

* 1. Compile the java source files

**mvn clean && mvn compile && maven package**

1. Create input directory (inputdata) for input files

cd /home/iitp/Temperature

**mkdir** **inputdata**

1. Copy the input file (input.txt) into inputdata folder

**cd /home/iitp/Temperature/inputdata**

**nano file1.txt**

**nano file2.txt**

paste the lines from the provided input file

1. Start all hadoop services
   1. Browse to hadoop installation sbin sub-directory

**cd /home/iitp/hadoop-2.6.0/sbin**

* 1. start all services

**./start-all.sh**

Note:- Enter password when prompted

1. Create input directory on HDFS
   1. browse to hadoop installation bin folder

**cd /home/iitp/hadoop-2.6.0/bin**

* 1. create directory (**Temperature**)

**./hadoop fs -mkdir /Temperature**

* 1. create sub-directory (**inputdata**) under Temperature directory

**./hadoop fs -mkdir /Temperature/inputdata**

1. Copy the input text file from local directory to HDFS
   1. browse to hadoop installation bin folder

**cd /home/iitp/hadoop-2.6.0/bin**

* 1. Copy both input files (file1.txt and file2.txt) from Local

**./hadoop dfs -put /home/iitp/Temperature/inputdata/file1.txt /Temperature/inputdata/**

and

**./hadoop dfs -put /home/iitp/Temperature/inputdata/file2.txt /Temperature/inputdata/**

1. Running the program
   1. browse to the bin directory of hadoop installation

**cd /home/iitp/hadoop-2.6.0/bin**

* 1. Running in terminal

**./hadoop jar /home/iitp/Temperature/target/MaxTemp-1.0.0.jar TotalDriver 1 /Temperature/inputdata/file1.txt /Temperature/inputdata/file2.txt /Temperature/outputdata/**

* 1. Finding outputs

**./hadoop dfs -cat /Temperature/outputdata/part-r-00000**