Steps to execute MapReduce programs on Hadoop:

1. Create a directory and write Driver.java, MapperCode.java, ReducerCode.java (names may not be the same for the files), make sure the Driver.java has the correct class names of Mapper and Reducer Class. Make sure all java files have a package in them Eg:
   package Test;
2. Create Manifest.txt file and write
   Main-Class:[package-name].[DriverClassName]
   (Driver class is the class with the main function)
   Main-Class: (blankspace)Test.Driver
   (here Test is the package name and Driver is the class name driver)
3. Now lets configure the classpath
   Open the folder where Hadoop folder is there, right-click and open properties
   Copy the path, eg: /home/rit/
   In the directory where files are stored, open terminal on that path run the command
   From now all the commands should be executed in the terminal in the same directory where the java files there.
   export HADOOP_HOME="[path hadoop]/hadoop2/"
4. Find the correct names of the jars
   a. hadoop-mapreduce-client-core-[version].jar
   b. hadoop-mapreduce-client-common-[version].jar
   c. hadoop-common-[version].jar
   and replace them with the correct version names in share/hadoop/mapreduce directory

export CLASSPATH="$HADOOP_HOME/share/hadoop/mapreduce/hadoop-mapreduce-client-core-[version].jar:$HADOOP_HOME/share/hadoop/mapreduce/hadoop-mapreduce-client-common-[version].jar:$HADOOP_HOME/share/hadoop/common/hadoop-common-[version].jar:$HADOOP_HOME/lib/*"

5. Compile the Driver, MapperCode and ReducerCode files by running the command
   javac -d . Driver.java MapperCode.java ReducerCode.java
   Will the create .class files in the directory same as the name of the package
6. Now create a jar file:
   jar cfm [package_name].jar Manifest.txt Test/*.class

   Jar file is finally created now run the same jar in hadoop system

   Running mapreduce:

   $HADOOP_HOME/bin/hadoop jar [jarfile].jar [input_file/input_folder] output

   Note: Make sure that there is no folder named output before
   If it exists then delete it using the command: **rm -r output**

Commands:

export HADOOP_HOME="/home/rit/hadoop2/"

export CLASSPATH="$HADOOP_HOME/share/hadoop/mapreduce/hadoop-mapreduce-client-core-2.7.3.jar:$HADOOP_HOME/share/hadoop/mapreduce/hadoop-mapreduce-client-common-2.7.3.jar:$HADOOP_HOME/share/hadoop/common/hadoop-common-2.7.3.jar:~/MapReduceTutorial/SalesCountry/*:$HADOOP_HOME/lib/*"

javac -d . Driver.java MapperCode.java ReducerCode.java

Create manifest.txt

Main-Class: Test.Driver

Packagename.Classname

jar cfm Test.jar Manifest.txt Test/*.class

Steps Temp programs

1. export HADOOP_HOME="/home/msrit/hadoop2"
2. export CLASSPATH="$HADOOP_HOME/share/hadoop/mapreduce/hadoop-mapreduce-client-core-3.2.2.jar:$HADOOP_HOME/share/hadoop/mapreduce/hadoop-mapreduce-client-common-3.2.2.jar:$HADOOP_HOME/share/hadoop/common/hadoop-common-3.2.2.jar:$HADOOP_HOME/lib/*"
3. javac -d . driver.java reducer.java mapper.java
4. create Manifest.txt file

   command:

   gedit Manifest.txt

   add: **Main-Class: temp.driver**
5. jar cfm lab1.jar Manifest.txt temp/*.class
6. $HADOOP_HOME/bin/hadoop jar lab1.jar tem.txt output

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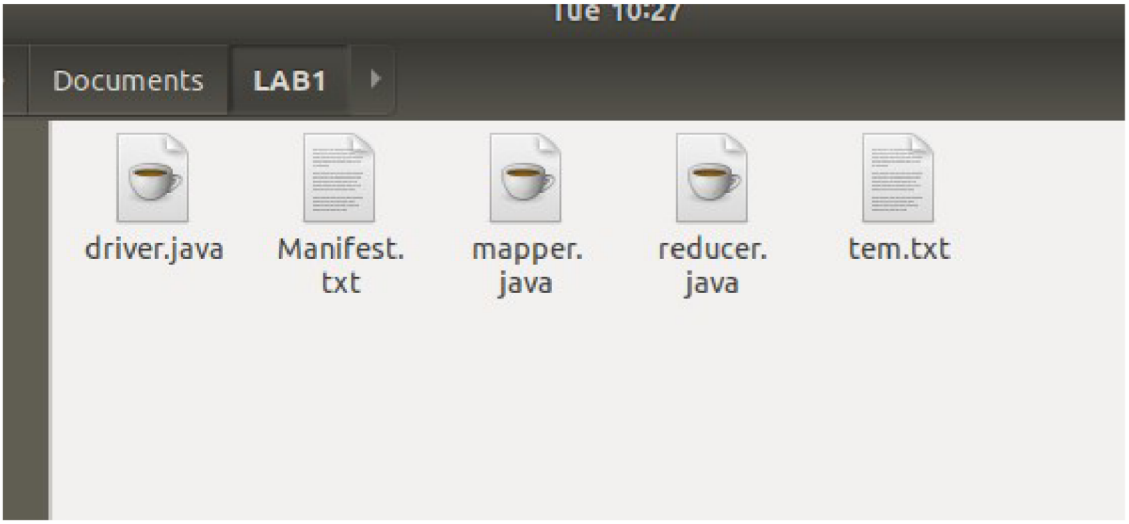
        at org.apache.hadoop.util.RunJar.main(RunJar.java:236)
(base) msrit@msrit-ThinkCentre-M720t:~/Documents/LAB1$ javac -d . driver.java reducer.java mapper.java
(base) msrit@msrit-ThinkCentre-M720t:~/Documents/LAB1$ jar cfm lab1.jar Manifest.txt temp/*.class
(base) msrit@msrit-ThinkCentre-M720t:~/Documents/LAB1$ $HADOOP_HOME/bin/hadoop jar lab1.jar tem.txt
output
```


Tue 10:27
Documents
LAB1
driver.java
Manifest.
txt
mapper.
java
reducer.
java
tem.txt