CSC 3331: Analysis of Algorithms
Project 3: Parallel Programming and MapReduce Framework
Total Point 100
Due on 24th April, 2017

Task # 1: Modifying MaxTemperature to become AvgTemperature [30 pt]
Change the MaxTemperatureReducer.java, so that it produces Average Temperature of each year instead of Maximum Temperature. Test your program with the above temp.txt. Submit your updated java files.

Task # 2: Modifying WordCount to become LetteCount [30 pt]
Change the WordCount.java, so that it outputs the number of words that start with the letters 'a' 'b' and 'c'. This means that for every letter we want to count the total number of words that start with these three letters. You need to change both Map and Reduce functions. Once changed, test your code with following input file.

```
    ant bear cat dog elephant
    iguana bird cow antelope baboon
```

Your Program should output

```
a  2
b 3
c 2
```

Submit your updated java file.

Task # 3: Developing your own MapReduce Application [20 pt]
See the attached input file OrderDB.txt. Each line in this file contains {Order-ID, Customer_id, Order_date, total} where total is the amount of money spent be the customer on that order. Write a Mapreduce program (use wordcount/maxtemperature as skeleton) that will output the total amont spent by each customer considering all the orders. Submit your java file.

Task # 4: **Follow the in-class demonstration, run experiments and submit accordingly [20 pt]**