

COEN498/691 (Winter 2016) - Assignment 2
Due by April 8th 23:55
Individual Assignment

Description

In this assignment, write a MapReduce program to process the following data set. The Canadian Radiological Monitoring Network – Airborne Radioactivity.
<http://open.canada.ca/data/en/dataset/21b821cf-0f1c-40ee-8925-eab12d357668>
The description and sample plotting of the data are available on this link.

Given any year and location, the program should display the **Maximum, Minimum and Average** value of the metric mBq/m³ Milli-becquerel per cubic metre. The units used to report radioactivity concentration in air.

You can choose to code the MapReduce program in Java, C++ or Python. No matter what language you choose to implement, the submission should be packed and executable.

- For Java, all the classes should be packed in a single executable Jar.
- For C++, please provide the make file

Pack all your executable in a single archive file. Your program will be tested and run by giving the arguments in the order of Year and Location.

Submit to Moodle site the following :

1. your code in a single package, including both source code and packaged executable
2. A report in PDF that describes
 - a. Your map reduce algorithm design
 - b. How to run your program and show results with your sample data with screenshots.
 - c. Use the logs to estimate the time taken for the map task and reduce task respectively.

Marking Criteria

- 1) Correctness of the program code (35%)
- 2) MapReduce algorithm design (25%)
- 3) Program readability (15%)
- 4) Quality of the report with clear description (25%)