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This project is meant to write an equivalent version of the codes, provided by 4 programmers, in Java. These codes (strategies) filter files provided by C_i companies containing sets of phone numbers that were near the area of E_j events. What it filters is the numbers in each set (the elements) and returns a set containing only those elements that appear in every single set that is provided. The program also tests each strategy by evaluating the correlation between the size of the datasets and the average time it takes each strategy to run.

Getting Started

Prerequisites

Install Java Run-time Environment (JRE)
Install Eclipse IDE for Java Developers (Optional)
When running this program, for best results have the least amount of processes running in your system.

Running the tests

To run the main classes through the Ubuntu terminal you must first change directory into the directory of the project and write:

```
javac -d bin -sourcepath -Xlint src src/p1MainClasses/Part1Main.java
```

This command will compile the class. Then, you run the class with:

```
java -classpath bin p1MainClasses.Part1Main
```

and it will run the class and return the results.

Part1Main will test that the strategies work properly by getting the data out of the files given by the companies.

For the Part1Main it is suggested you either run it with one argument or none. If you give it one argument, please make sure you write a number from 1 to 4.

Part2Main will test the efficiency of the strategies by comparing the average time each takes for different sizes of data.

For the Part2Main it is suggested you run it with the least processes running in your machine for it will affect the results. Also, it will take up to 6 parameters. If you run it with arguments, they have to be integers where they represent:

1. The amount of companies
2. The amount of events
3. The initial size of the datasets
4. The final size of the datasets
5. The rate of incrementation of the sizes
6. The amount of repetitions per size to make sure we get an average value

Built With

- Eclipse Oxygen – Java IDE for Developers with JRE to write the code scripts.
- ObjectAid – Eclipse plug-in to create UML file

Authors

- Prof. P. Rivera - *Initial code* - [pirvos](#)
- Angel G. Carrillo Laguna – *Final code* - [AngelGCL](#)

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