READ ME

**About the java programs:**

* Contains three .java files
* ProgramMain.java is the main program, Peterson.java has the implementation of peterson’s algo for two threads, PetersonBinTree.java has the implementation of Peterson’s algo for n threads
* The main program ProgramMain.java accept two command line arguments 1. Number of threads 2. Average inter-request delay
  + Number of threads – should be an integer and values from 1 till 8 in increments of 1
  + Average inter-request delay – should be an integer in the range [0,100]. Within the implementation this value is considered to be multiples of 1 Time Unit where 1 Time unit = 0.1ms. i.e, if this value is 100, it means each thread waits for an average of 10 ms between two lock requests

**How to compile and run the java source files in Windows?**

Requirement – system should have latest version of java installed

* Unzip the compressed folder
* cd <folder path containing the source files>
* run the following commands
  + javac -cp ".;./commons-math3-3.5.jar” \*.java
  + java -cp ".;./commons-math3-3.5.jar” ProgramMain <numThreads> <average inter-request delay>

e.g., java -cp ".;./commons-math3-3.5.jar” ProgramMain 8 100

- above command will run the program with 8 threads and avg inter-request delay of 100 Time units (1 Time unit = 0.1ms)

**How to compile and run the java source files in Windows?**

Requirement – system should have latest version of java installed

* Unzip the compressed folder
* cd <folder path containing the source files>
* run the following commands
  + javac -cp ".:./commons-math3-3.5.jar” \*.java
  + java -cp ".:./commons-math3-3.5.jar” ProgramMain <numThreads> <average inter-request delay>

**About the script:**

* Added a python script(CallJava.py) which acts as a wrapper to call the java programs with various combinations of command line arguments
* The script runs the java program with all combinations of Number of threads (1, 2, 3, .. 8), inter-request delay (0, 10, 20.. 100). And each of this is averaged over 10 runs. So, in total the script calls the java program 8 \* 11 \* 10 = 880 runs. Each set of 10 runs is delayed by certain number of seconds so as to avoid JRE to run out of heap space.

**How to run the script in windows?**

Requirement: Python 3 has to be installed in the target system

Steps:

1. Open cmd

2. cd <folder path containing the source files>

3. Type the following (if you haven't added the path of python.exe to the environment variable PATH):

<folder where python.exe is present>python CallJava.py

e.g., C:\Python34\python CallJava.py

if you have added it to PATH, then directly run the command

"python CallJava.py"

**How to run the script in Ubuntu?**

Requirement: Python 3 has to be installed in the target system

Steps:

1. cd <folder path containing the source files>

2. Type the following command:

python3 CallJava.py