Problem Set 8

(10 Points) Cohort Question 1:

Given MultipleClient.java and WebServer.java, implement the sequential server and one thread per task server and compare their performance. Vary the number of threads (10,100,1000) and see the trend.

(10 Points) Cohort Question 2:

Given MultipleClient.java, complete ExecutorWebServer.java using newFixedThreadPool with 100 threads. Compare the performance with the sequential and thread-per-task web server (with 10, 100, 1000 client threads).

(10 Points) Cohort Question 3:

Given LifecycleWebServer.java, modify it such that it can be shut down through a client request by sending the server a specially formatted request. Test your program.

(10 Points) Cohort Question 4:

Given MultipleClient.java (with the bigger number and 5 clients) and ExecutorWebServer.java, tune the thread pool size in the factor web server example for optimal performance.

(20 Point) **Homework Question 1:**

RejectedExecutionException is thrown by an Executor when a task cannot be accepted for execution, which could happen when (A) the executor has shutdown (B) when the task queue is full. Based on LifecycleWebServer.java, write two programs (according to A and B) which demonstrate how RejectedExecutionException occurs.