Thread Pool

See:

<https://docs.oracle.com/javase/7/docs/api/java/util/concurrent/Executor.html>

There are two classes as follows:

* MTSMain.java includes the main program
* ThreadPoolServer.java includes the actual program under test

makeMTSMain.bat is a batch file that can be used to compile the programs, It does not requires parameters.

Run the program through the following command:

java -cp ..\lib\commons-cli-1.4\commons-cli-1.4.jar;. MTSMain <options>

Options:

-t number of tasks

-i number of iterations (computational load)

-s sleep time (waiting time)

-p pool size

The default options values are:

-t 10

-I 1000000

-s 0

-p 8

The program prints: Number of tasks Pool size Sleep time Total elapsed time Time per Task

Here is some result:

1. Only processing (i = 1000000 s = 0 p=7, 8, 9)

java -cp ..\lib\commons-cli-1.4\commons-cli-1.4.jar;. MTSMain -t 50 -i 1000000 -s 0 -p 1

50 1 0 42288 845.76

java -cp ..\lib\commons-cli-1.4\commons-cli-1.4.jar;. MTSMain -t 50 -i 1000000 -s 0 -p 2

50 2 0 24166 483.32

java -cp ..\lib\commons-cli-1.4\commons-cli-1.4.jar;. MTSMain -t 50 -i 1000000 -s 0 -p 4

50 4 0 13797 275.94

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1. Only sleeping (i = 0 s = 500 p= 10, 25)

java -cp ..\lib\commons-cli-1.4\commons-cli-1.4.jar;. MTSMain -t 50 -i 0 -s 500 -p 10

50 10 500 2511 50.22

java -cp ..\lib\commons-cli-1.4\commons-cli-1.4.jar;. MTSMain -t 50 -i 0 -s 500 -p 25

50 25 500 1021 20.42

java -cp ..\lib\commons-cli-1.4\commons-cli-1.4.jar;. MTSMain -t 20 -i 0 -s 500 -p 1

20 1 500 10152 507.6