Thread per Task

The directory includes two classes as follows:

* TPTMain.java includes the main program
* ThreadPerTask.java includes the actual program to be tested

makeTPTMain.bat is a batch file that takes care of compilation using a command line. It does not require parameters.

Run the program through the following command:

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

Options:

-t number of tasks

-i number of iterations (computational load)

-s sleep time (waiting time)

The default options values are:

-t 10

-I 1000000

-s 0

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

Here is some result:

1. Only processing (i = 1000000 s = 0)

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

1 0 862 862.0

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

2 0 988 494.0

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

4 0 1189 297.25

java -cp ..\lib\commons-cli-1.4\commons-cli-1.4.jar;. TPTMain -t 8 -i 1000000 -s 0

8 0 1559 194.875

java -cp ..\lib\commons-cli-1.4\commons-cli-1.4.jar;. TPTMain -t 10 -i 1000000 -s 0

10 0 2009 200.9

java -cp ..\lib\commons-cli-1.4\commons-cli-1.4.jar;. TPTMain -t 100 -i 1000000 -s 0

10 0 2009 200.9

1. Only sleeping (i = 0 s = 1000)

java -cp ..\lib\commons-cli-1.4\commons-cli-1.4.jar;. TPTMain -t 1 -i 0 -s 1000

1 1000 1004 1004.0

java -cp ..\lib\commons-cli-1.4\commons-cli-1.4.jar;. TPTMain -t 2 -i 0 -s 1000

2 1000 1005 502.5

java -cp ..\lib\commons-cli-1.4\commons-cli-1.4.jar;. TPTMain -t 100 -i 0 -s 1000

100 1000 1004 10.04