Lab 5: Java threads

Aim: The aim of this lab class is to use Java threads abstractions to implement matrix operations effectively. You need to think of a way to parallelize the operation and implement that using the thread interface.

Task:
Download the skeleton code form Moodle and try to understand what it is doing. You should recall the matrix multiplication from your mathematics courses as well.

Your task is to implement the *public static int [][] multiply(int [][] a, int [][] b)* using Java threads. In your implementation you should consider the following:
1. How to use threads to parallelize the operation?
2. How may threads to use?
3. How to allocate work for each thread (recall it is the run function which all the threads execute)
4. How to synchronize?

You should list all your assumptions and answers to these questions in the **code itself as comments**.

Extra: This part is extra and if you complete it correctly will get additional 10marks (total will be sealed to 100). Consider the how the cache memories work from the computer architecture course. Is this implementation cache friendly? Can you think of a way to make it so? You should show that your method is cache friendly and hence efficient by measuring the run time.

Submission: You should use the provided skeleton code for the final submission. *Tar* the whole folder and submit before 30ᵗʰ November 2018.