Exercise: parallel matrix multiply
Matrix Multiplication
Parallelization

• Ideal for parallelization
  – Input arrays are read-only
  – Output array is written to exactly once

• Break into parallel units of work
  – Unit = single output cell
  – Unit = single output row
  – Unit = several output rows

• Divide units of work among threads
Code structure

• Define a Runnable or Callable<Void> per unit
  – Parameterized by unit size

• Main routine organizes the work; examples:
  – Spawn one thread per unit
  – Use a fixed-size thread pool; submit units of work to the thread pool queue

• What are the tradeoffs?
  – Consider unit size vs. threading strategy