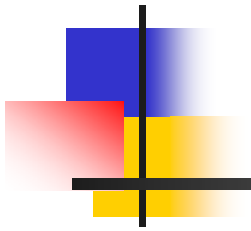

Assignment 2 - Pthreads

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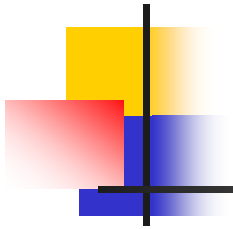
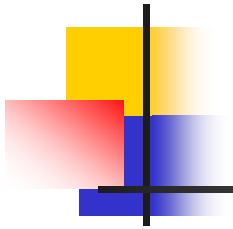


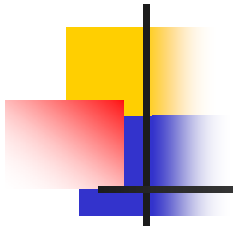
Overview

- Questions
- Hello world – pthreads
- Parallel fractal generation
- Parallel matrix multiplication



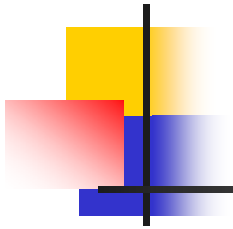
Hello World

- Create & join threads.
- Pass data to threads.



Fractal

- Mandelbrot's set.
- Easy to parallelize.
- Compute an image:
  - $z_0 = 0$, c = complex number $\leftrightarrow$ pixel
  - $z_n = z_{n-1}^2 + c$, stop when $|z_n| > K$ or n = max,
  - color = n % 256.
- Parallelize
  - with 1-D block partitioning
  - 1-D partitioning on rows with round-robin



Parallel Matrix Multiplication

- Take your block-matrix multiplication, move it to pmatrix.c.
- Thread management is already done.
- Parallelize the block-loops.
  - 2-D partitioning by block – round-robin
  - 1-D partitioning by row – round-robin
  - or differently if you wish.