# HPC Project – Part 2: Implementation & Presentation

## Timeline:

Start date: Oct. 8  
Due date: Oct. 22   
Presentations Oct. 22 / 24

## Overview

You’ll now implement and evaluate the parallel or concurrent version of your project idea. Your goal is to explore performance optimization using one the approach outlined in your proposal.

You’ll present your work to the class in a short talk. Even if your project doesn’t achieve major speedups, what matters most is your effort, analysis, and reflection.

## Deliverables

1. Implementation

A working version of your project that uses concurrency or parallelism. Include a short README with:  
• How to run your code  
• Hardware or libraries used  
• Example command or input/output

2. Presentation (≈10 minutes + 2–3 min Q&A)

Your presentation should include:  
1. Problem introduction and baseline performance  
2. Your parallel/concurrent approach  
3. Results (timing, scaling, profiling, etc.)  
4. Takeaways: what worked, what didn’t, and what you learned  
You may use slides, a Jupyter notebook, or a live demo (slides recommended).

## Grading (70 points total)

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| Category | Points | Description |
| Problem & baseline | 10 | Clear explanation and working serial version |
| Parallel approach | 20 | Thoughtful design, reasonable implementation effort |
| Performance investigation | 20 | Shows measurements and interprets them meaningfully |
| Presentation quality | 20 | Clear and organized talk |

Bonus (+5 pts): Exceptional creativity or insight.

## Submission

• Submit your code and README by the due date. Be prepared for your in classs presentation.  
• Include any sample data or small test cases needed to run your code.