

Exercise Instructions for students:

1. Follow the instructor directions
 - a. Download: Slides, Video, and code
 - b. Before continuing on the next exercises make sure you understand the provided code and you are able to compile and run it
2. Do answer Sample Assessment question to evaluate your basic understanding of learning objectives

Sample Exercise:

Rewrite provided code provided so instead of using only the neighbor to the North, South, East, and West uses also the neighbor

NW	North	NE
West	Center	East
SW	South	SE

Use the function `MPI_Wtime()` to measure execution times of different loops and/or functions on the code. Example

```
double start = MPI_Wtime();  
  
// Do something here lets call it ABC  
  
double end = MPI_Wtime();  
  
printf("ABC took %1.2f seconds to run\n", end-start);
```

Change the number of MPI processes and obtain runtimes of sequential code (also provided) vs. distributed code using those different process

Create a table and graphs to study execution

MPI code 1 process	
MPI code 2 process	
....	

Create a graph with the above results, does the code scale well with the number of processes?