

Assignment1

This folder contains the following files:

1. src.c
 - contains the source code of Multiple MPI_Sends
 - contains the source code of MPI_Pack/MPI_Unpack and MPI_Send/MPI_Recv
 - contains the source code of MPI_Send/Recv using MPI derived datatypes
 2. run.sh - brings everything together
 3. Makefile - compiles the program
 4. plot.py - makes the plot : needs matplotlib,seaborn,pandas,numpy
 5. plot1.png
plot2.png
plot3.png
plot4.png
 6. readme.pdf
-

How to run the script-

- run the job script
- ```
$ sh run.sh
```
- 

The output of job.sh is output.csv file

It contains 105\*4 entries.

105 entries for each P value

We plot the time (in seconds) for each data size per method per process count.

There are 4 plots created using Boxplot-

- Plot16.png (for P=16)
  - Plot36.png (for P=36)
  - Plot49.png (for P=49)
  - Plot64.png (for P=64)
- 

Observations from plots-

1. In all 4 plots, Multiple MPI\_Sends(method-1) take more time than other 2 methods.
  2. The execution time of all 3 methods increases with increase in N
  3. method 1 take more because of multiple send receives
  4. method 2 taking less time than remaining methods
  5. In method 3 we have used vector datatype to send columns .contiguous datatype to send rows
- 

Issues:

observed significant difference in execution time for same N ,P values

---