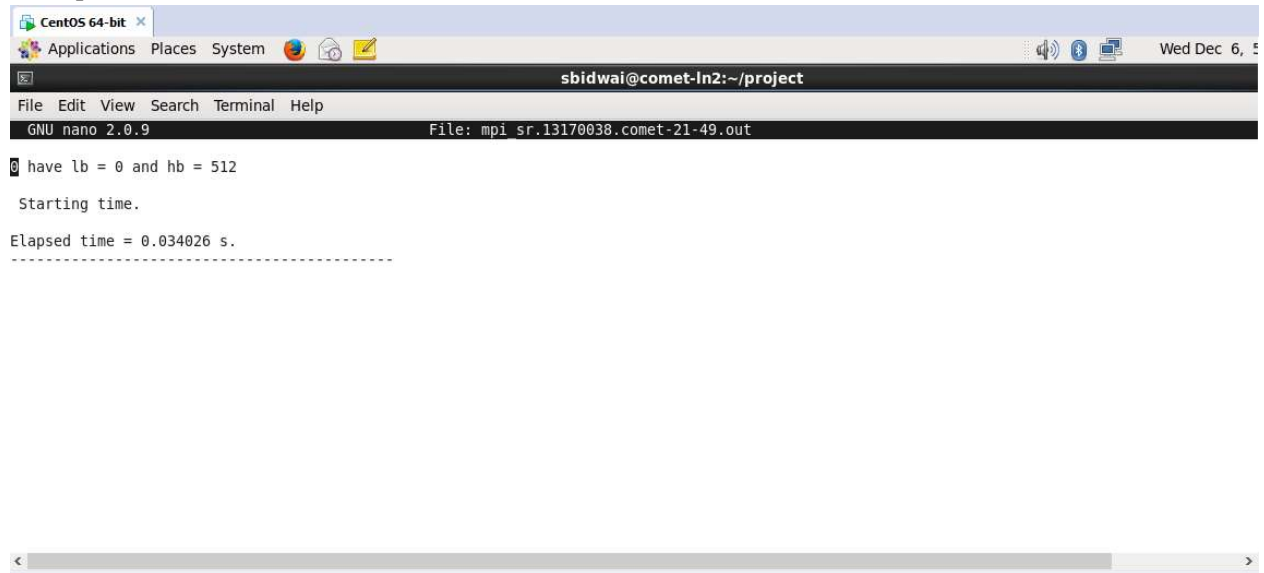


CS546 Project

Result Report

1. MPI send and Receive Operations

For 1 processor:

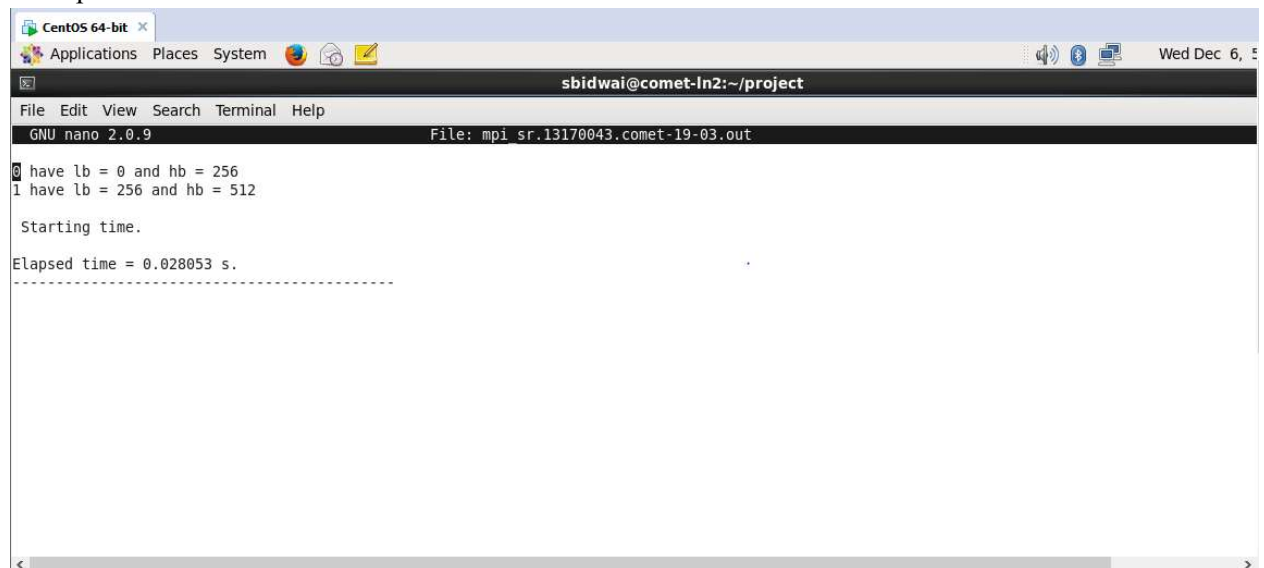


The screenshot shows a terminal window titled 'CentOS 64-bit' with a menu bar (Applications, Places, System) and a status bar (Wed Dec 6, 5). The prompt is 'sbidwai@comet-ln2:~/project'. The terminal is running 'GNU nano 2.0.9' editing 'File: mpi_sr.13170038.comet-21-49.out'. The output is as follows:

```
0 have lb = 0 and hb = 512
Starting time.
Elapsed time = 0.034026 s.
-----
```

Time is 0.034026 sec.

For 2 processors:



The screenshot shows a terminal window titled 'CentOS 64-bit' with a menu bar (Applications, Places, System) and a status bar (Wed Dec 6, 5). The prompt is 'sbidwai@comet-ln2:~/project'. The terminal is running 'GNU nano 2.0.9' editing 'File: mpi_sr.13170043.comet-19-03.out'. The output is as follows:

```
0 have lb = 0 and hb = 256
1 have lb = 256 and hb = 512
Starting time.
Elapsed time = 0.028053 s.
-----
```

Time is 0.028053 sec

For 4 processors:

```
sbidwai@comet-ln2:~/project
File Edit View Search Terminal Help
GNU nano 2.0.9 File: mpi_sr.13170044.comet-05-07.out

0 have lb = 0 and hb = 128
3 have lb = 384 and hb = 512
1 have lb = 128 and hb = 256
2 have lb = 256 and hb = 384

Starting time.

Elapsed time = 0.035612 s.
-----
```

Time is 0.035612 sec.

For 8 processors:

```
sbidwai@comet-ln2:~/project
File Edit View Search Terminal Help
GNU nano 2.0.9 File: mpi_sr.13170045.comet-26-50.out

0 have lb = 0 and hb = 64
4 have lb = 256 and hb = 320
3 have lb = 192 and hb = 256
1 have lb = 64 and hb = 128
2 have lb = 128 and hb = 192
6 have lb = 384 and hb = 448
5 have lb = 320 and hb = 384
7 have lb = 448 and hb = 512

Starting time.

Elapsed time = 0.038085 s.
-----
```

Time is 0.038085

2. MPI collective communication

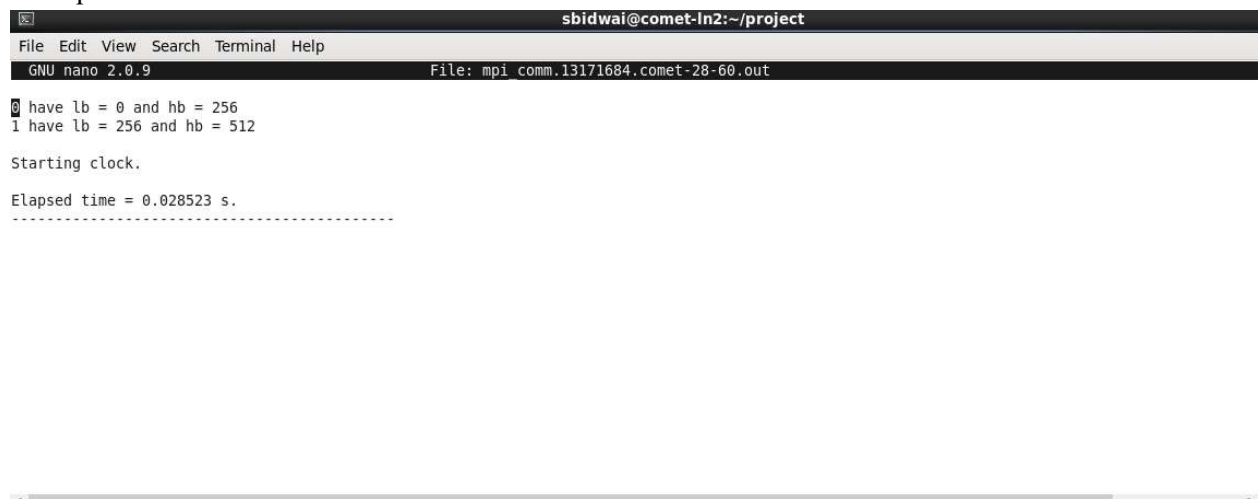
For 1 processor:

A screenshot of a terminal window titled 'sbidwai@comet-ln2:~/project'. The terminal shows the output of an MPI program for 1 processor. The first line is '0 have lb = 0 and hb = 512'. The second line is 'Starting clock.'. The third line is 'Elapsed time = 0.037185 s.'. The terminal has a menu bar with 'File Edit View Search Terminal Help' and a status bar with 'GNU nano 2.0.9' and 'File: mpi_comm.13171588.comet-14-26.out'.

```
sbidwai@comet-ln2:~/project
File Edit View Search Terminal Help
GNU nano 2.0.9 File: mpi_comm.13171588.comet-14-26.out
0 have lb = 0 and hb = 512
Starting clock.
Elapsed time = 0.037185 s.
-----
```

Time is 0.037185 sec

For 2 processors:

A screenshot of a terminal window titled 'sbidwai@comet-ln2:~/project'. The terminal shows the output of an MPI program for 2 processors. The first two lines are '0 have lb = 0 and hb = 256' and '1 have lb = 256 and hb = 512'. The third line is 'Starting clock.'. The fourth line is 'Elapsed time = 0.028523 s.'. The terminal has a menu bar with 'File Edit View Search Terminal Help' and a status bar with 'GNU nano 2.0.9' and 'File: mpi_comm.13171684.comet-28-60.out'.

```
sbidwai@comet-ln2:~/project
File Edit View Search Terminal Help
GNU nano 2.0.9 File: mpi_comm.13171684.comet-28-60.out
0 have lb = 0 and hb = 256
1 have lb = 256 and hb = 512
Starting clock.
Elapsed time = 0.028523 s.
-----
```

Time is 0.028523 sec

For 4 processors:

```
sbidwai@comet-ln2:~/project
File Edit View Search Terminal Help
GNU nano 2.0.9 File: mpi_comm.13171686.comet-14-16.out

0 have lb = 0 and hb = 128
1 have lb = 128 and hb = 256
2 have lb = 256 and hb = 384
3 have lb = 384 and hb = 512

Starting clock.

Elapsed time = 0.036740 s.
-----
```

Time is 0.036740 sec

For 8 processors:

```
CentOS 64-bit x
Applications Places System
sbidwai@comet-ln2:~/project
File Edit View Search Terminal Help
GNU nano 2.0.9 File: mpi_comm.13171688.comet-05-06.out

0 have lb = 0 and hb = 64
5 have lb = 320 and hb = 384
7 have lb = 448 and hb = 512
6 have lb = 384 and hb = 448
4 have lb = 256 and hb = 320
1 have lb = 64 and hb = 128
3 have lb = 192 and hb = 256
2 have lb = 128 and hb = 192

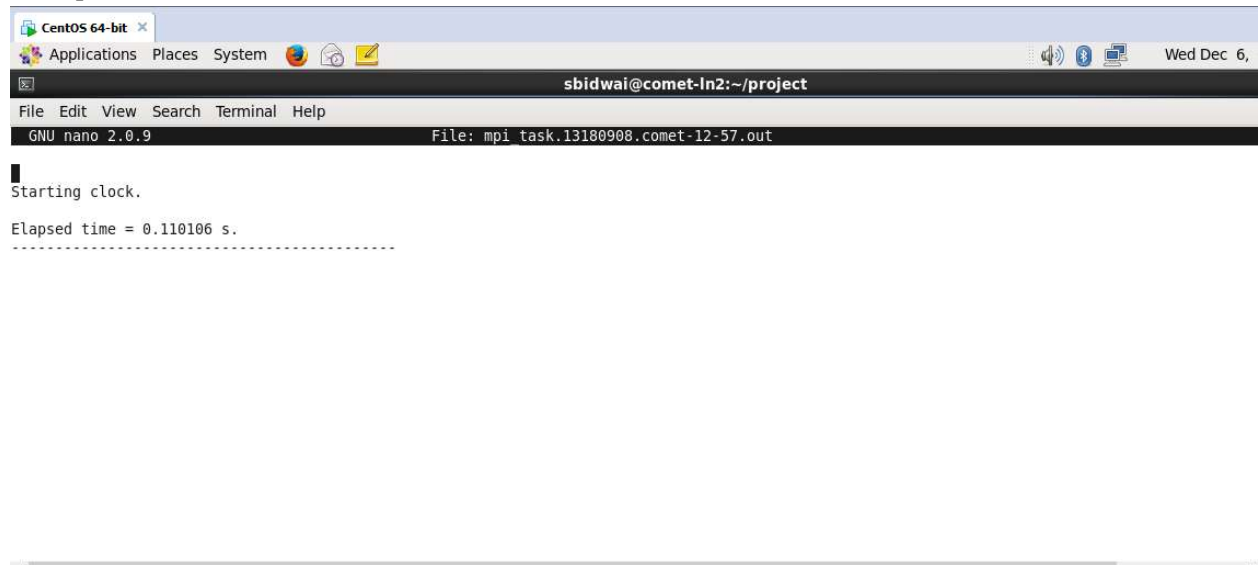
Starting clock.

Elapsed time = 0.034629 s.
-----
```

Time is 0.034629 sec.

3. MPI with task and data parallel model

For 8 processors:-



```
CentOS 64-bit
Applications Places System
sbidwai@comet-ln2:~/project
File Edit View Search Terminal Help
GNU nano 2.0.9 File: mpi_task.13180908.comet-12-57.out

Starting clock.
Elapsed time = 0.110106 s.
-----

Time is 0.110106 sec.
```