|  |  |  |
| --- | --- | --- |
| Number Of Cores (p) | Matrix Size | Distributed Execution Time (UAlbany Cluster) |
| 5 | 2x2 | 257280 |
| 5 | 4x2 | 258845 |
| 5 | 4x4 | 255950 |
| 5 | 4x8 | 260262 |
| 5 | 8x8 | 252993 |
| 5 | 8x2 | 266184 |
| 5 | 2x9 | 253013 |
| 5 | 2x10 | 257708 |
| 5 | 10x4 | 259691 |
| 5 | 4x10 | 260228 |
| 5 | 6x4 | 259622 |
| 5 | 9x2 | 257333 |
| 5 | 10x6 | 264143 |
| 5 | 8x16 | 255493 |
| 5 | 8x10 | 256616 |
| 5 | 9x7 | 254629 |
| 5 | 8x3 | 260362 |
| 5 | 10x9 | 257178 |

Steps to Run the Code:

salloc -n 5

./generateInputMatrixFile.out 6 4 1

mpirun ./homework8\_distributed.out 6 4 1

Once the ./homework8\_distributed.out is executed the inputMatrix.txt file will be over written with the final output resultant Matrix.

For the Serial Program the inserialinput.txt is used.

./generateInputMatrixFile.out 6 4 1

bash-4.2$ ./ homework8\_serial.out 6 4 1