

20BCE1550
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CSE4001 Lab 8
Simple MPI Program

Code:

```
C ex8.c > main(int, char * [])
1  #include <mpi.h>
2  #include <stdio.h>
3
4  int main(int argc, char *argv[]){
5      double starttime = MPI_Wtime(), endtime;
6      int procRank, procNum;
7      int message;
8
9      MPI_Init(&argc, &argv);
10     MPI_Comm_size(MPI_COMM_WORLD, &procNum);
11     MPI_Comm_rank(MPI_COMM_WORLD, &procRank);
12
13     if (procRank == 0) {
14         message = 1550;
15         MPI_Send(&message, 1, MPI_INT, 1, 0, MPI_COMM_WORLD);
16         printf("proc %d sent message %d to id:1\n", procRank,
17             message);
18     } else if (procRank == 1) {
19         MPI_Recv(&message, 1, MPI_INT, 0, 0, MPI_COMM_WORLD,
20             MPI_STATUS_IGNORE);
21         printf("Recieved %d message by proc%d\n", message,
22             procRank);
23     }
24     endtime = MPI_Wtime();
25     MPI_Finalize();
26     printf("proc %d took %f seconds\n", procRank, endtime -
27         starttime); return 0;
28 }
```

Output:

```
[~/vit/CSE4001_Parallel-and_Dis  
[ (18:17:00) → make ex8  
mpicc ex8.c -o ex8.out  
mpiexec -np 2 ex8.out  
Recieved 1550 message by proc1  
proc 0 sent message 1550 to id:1  
proc 1 took 0.633166 seconds  
proc 0 took 0.636244 seconds  
[~/vit/CSE4001_Parallel-and_Dis
```