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**PARALLEL AND DISTRIBUTED COMPUTING**  
**LAB – 8**

## Lab 8 - MPI Basics

**Opened:** Tuesday, 20 September 2022, 12:00 AM

**Due:** Wednesday, 21 September 2022, 11:00 PM

Mark as done

### MPI simple program



mpi40-report.pdf

20 September 2022, 9:12 AM



MPIIntro.ppt

20 September 2022, 9:12 AM

### Submission status

#### **CODE:**

```
#include <mpi.h>
#include <stdio.h>
```

```
int main(int argc, char** argv) {
    // Initialize the MPI environment
    MPI_Init(NULL, NULL);

    // Get the number of processes
    int world_size;
    MPI_Comm_size(MPI_COMM_WORLD, &world_size);

    // Get the rank of the process
    int world_rank;
    MPI_Comm_rank(MPI_COMM_WORLD, &world_rank);

    // Get the name of the processor
    char processor_name[MPI_MAX_PROCESSOR_NAME];
    int name_len;
    MPI_Get_processor_name(processor_name, &name_len);

    // Print off a hello world message
    printf("Hello world from processor %s, rank %d out of %d processors\n",
        processor_name, world_rank, world_size);
```

```
// Finalize the MPI environment.  
MPI_Finalize();  
}
```

### **OUTPUT:**

```
ansh@ansh:~$ mpicc -g mpilab.c -o mpilab  
ansh@ansh:~$ ./mpilab  
Hello world from processor ansh, rank 0 out of 1 processors  
ansh@ansh:~$
```