

**Year:** 2021-22

**Semester:** 1

**Course:** High Performance Computing Lab

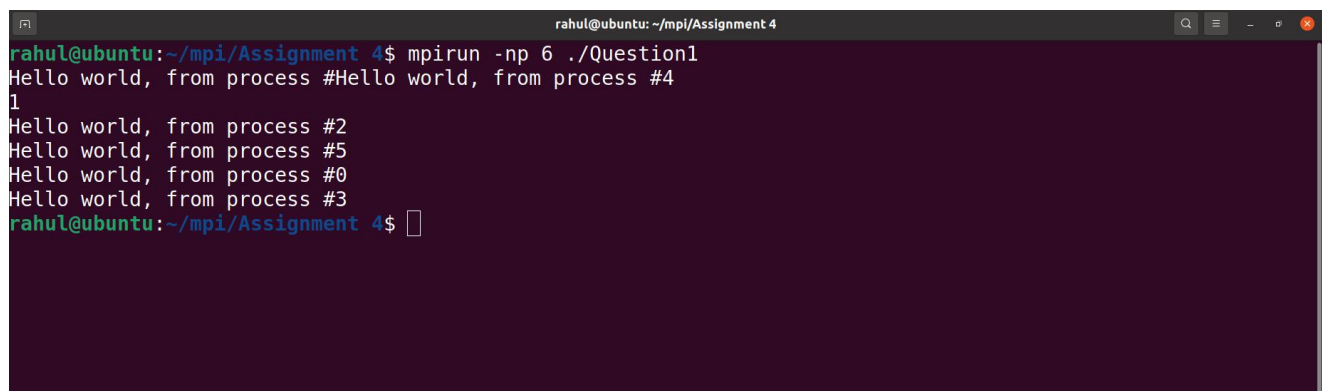
### Practical No. 4

**Exam Seat No:** 2018BTECS00005

**Name:** Rahul Sanjay Naravadkar

**Problem Statement 1:** Implement a simple hello world program by setting number of processes equal to 6

**Screenshot #:**



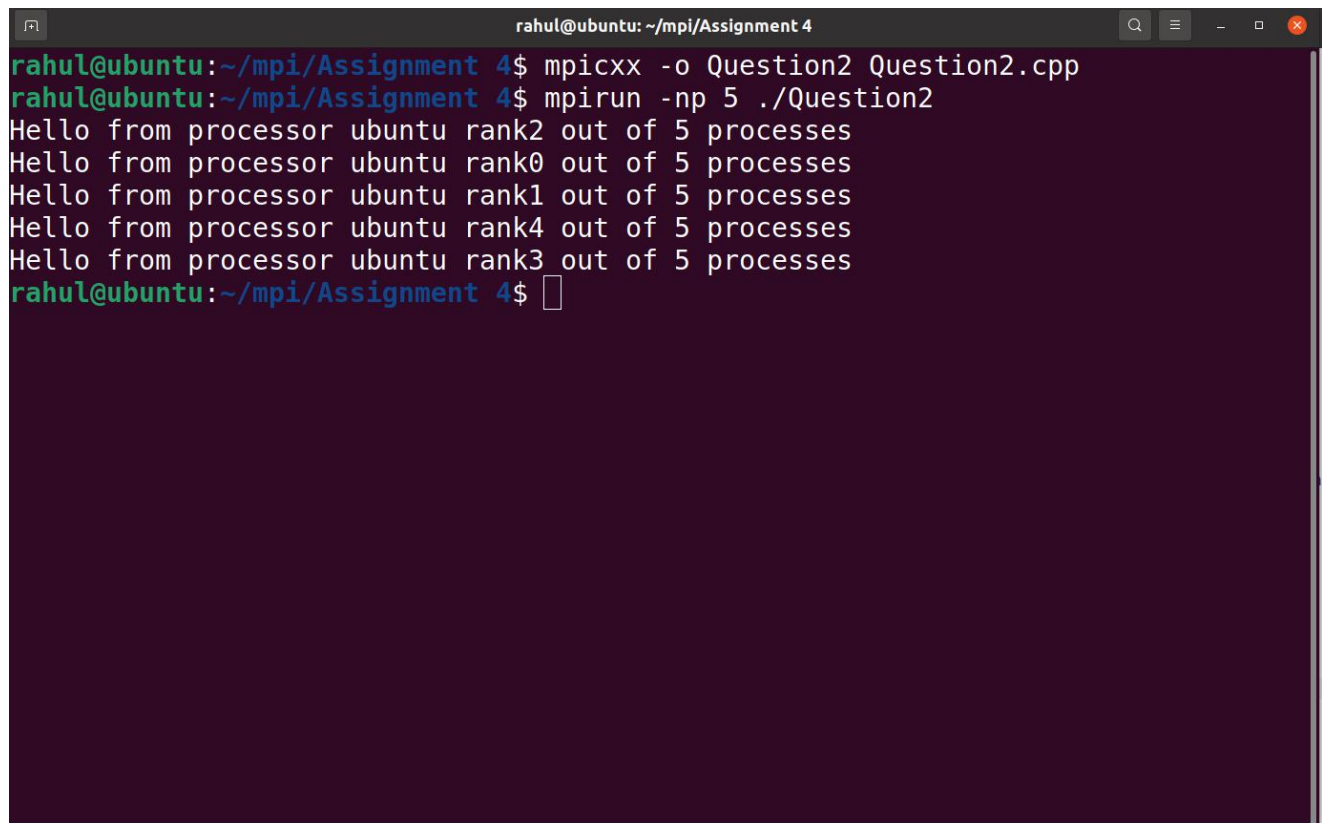
```
rahul@ubuntu: ~/mpi/Assignment 4
rahul@ubuntu:~/mpi/Assignment 4$ mpirun -np 6 ./Question1
Hello world, from process #Hello world, from process #4
1
Hello world, from process #2
Hello world, from process #5
Hello world, from process #0
Hello world, from process #3
rahul@ubuntu:~/mpi/Assignment 4$
```

**Information #:**

**Compile:** - mpicxx -o Question1 Question1.cpp

**Run** - mpirun -np 5 ./Question1

**Problem Statement2-** Implement a program to display rank and communicator group of 8

A terminal window titled 'rahul@ubuntu: ~/mpi/Assignment 4' showing the compilation and execution of an MPI program. The user runs 'mpicxx -o Question2 Question2.cpp' and then 'mpirun -np 5 ./Question2'. The output shows five lines of 'Hello from processor ubuntu rankX out of 5 processes' for ranks 2, 0, 1, 4, and 3. The terminal has a dark purple background and green text.

```
rahul@ubuntu:~/mpi/Assignment 4$ mpicxx -o Question2 Question2.cpp
rahul@ubuntu:~/mpi/Assignment 4$ mpirun -np 5 ./Question2
Hello from processor ubuntu rank2 out of 5 processes
Hello from processor ubuntu rank0 out of 5 processes
Hello from processor ubuntu rank1 out of 5 processes
Hello from processor ubuntu rank4 out of 5 processes
Hello from processor ubuntu rank3 out of 5 processes
rahul@ubuntu:~/mpi/Assignment 4$
```

**Compile** - mpicxx -o Question2 Question2.cpp

**Run** - mpirun -np 8 ./Question2

[Github Link](#)