

**Year:** 2021-22

**Semester:** 1

**Course:** High Performance Computing Lab

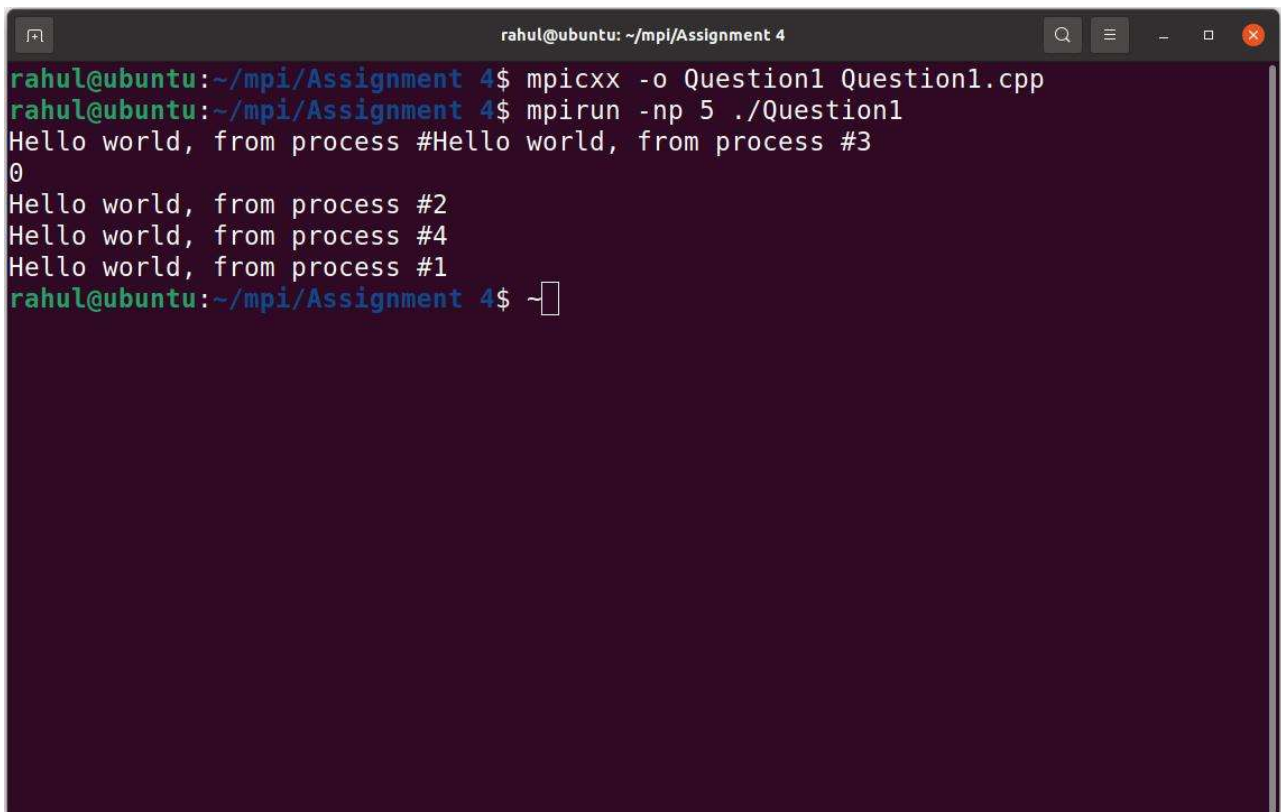
### Practical No. 4

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

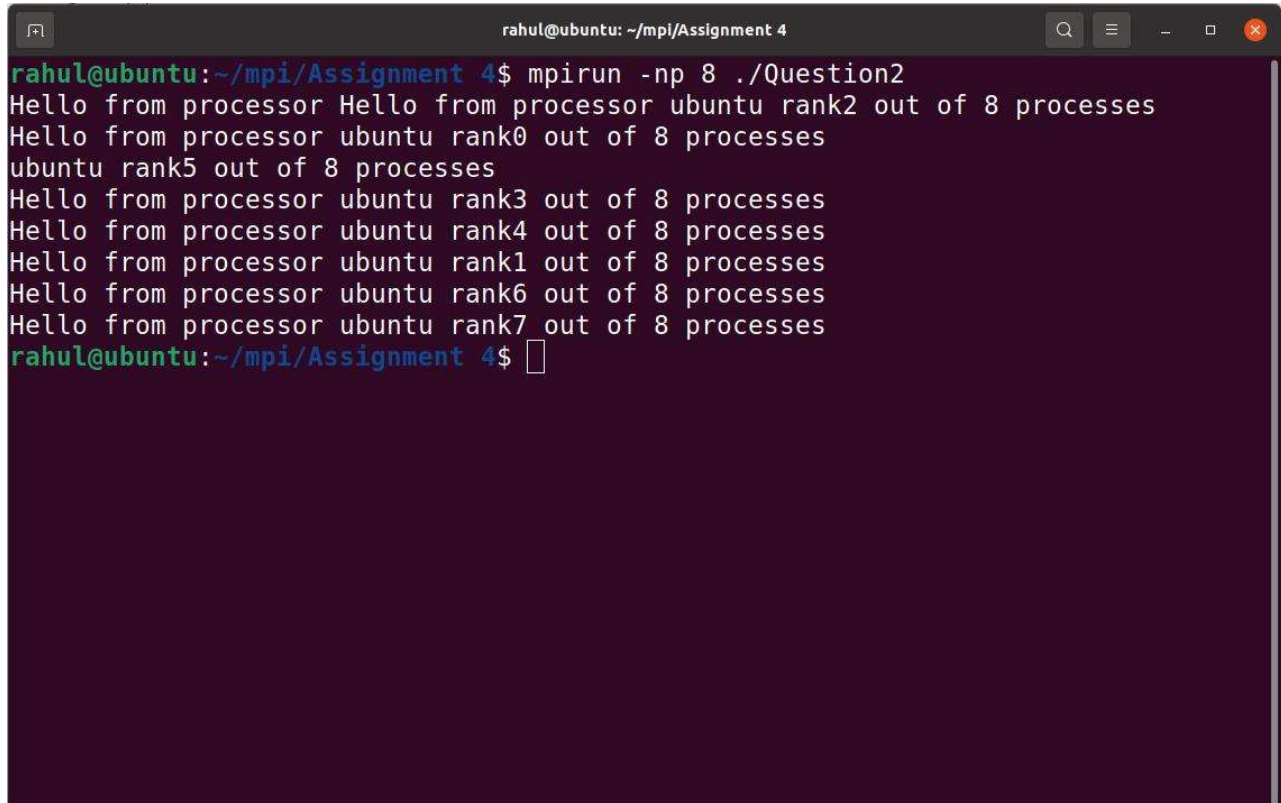
**Information #:**

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

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

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

**Screenshot :**

A terminal window titled 'rahul@ubuntu: ~/mpi/Assignment 4' showing the execution of a program. The command 'mpirun -np 8 ./Question2' is entered, and the output consists of eight lines, each representing a process rank from 0 to 7. The output for rank 0 is 'Hello from processor ubuntu rank0 out of 8 processes', and for rank 7 it is 'Hello from processor ubuntu rank7 out of 8 processes'. The terminal prompt 'rahul@ubuntu:~/mpi/Assignment 4\$' is visible at the bottom.

```
rahul@ubuntu:~/mpi/Assignment 4$ mpirun -np 8 ./Question2
Hello from processor ubuntu rank2 out of 8 processes
Hello from processor ubuntu rank0 out of 8 processes
ubuntu rank5 out of 8 processes
Hello from processor ubuntu rank3 out of 8 processes
Hello from processor ubuntu rank4 out of 8 processes
Hello from processor ubuntu rank1 out of 8 processes
Hello from processor ubuntu rank6 out of 8 processes
Hello from processor ubuntu rank7 out of 8 processes
rahul@ubuntu:~/mpi/Assignment 4$
```

**Information #:**

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

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

[Github Link](#)