Walchand College of Engineering, Sangli
Department of Computer Science and Engineering

Class: Final Year (Computer Science and Engineering)

Year: 2021-22 **Semester:** 1

Course: High Performance Computing Lab

Practical No. 4

Exam Seat No:2018BTECS00019

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Problem Statement 1:Hello World program using 10 processes

Screenshot :

```
sarthak@sarthak:~/hpc$ mpicc mpi_hello_world.c -o hello-world
sarthak@sarthak:~/hpc$ mpirun -np 10 ./hello-world
Hello world from processor sarthak, rank 2 out of 10 processors
Hello world from processor sarthak, rank 9 out of 10 processors
Hello world from processor sarthak, rank 1 out of 10 processors
Hello world from processor sarthak, rank 3 out of 10 processors
Hello world from processor sarthak, rank 6 out of 10 processors
Hello world from processor sarthak, rank 5 out of 10 processors
Hello world from processor sarthak, rank 4 out of 10 processors
Hello world from processor sarthak, rank 8 out of 10 processors
Hello world from processor sarthak, rank 7 out of 10 processors
Hello world from processor sarthak, rank 0 out of 10 processors
sarthak@sarthak:~/hpc$
```

Information :Hello world program implemented using mpi setting number of processes 10

Problem Statement 2:Program to display rank and communicator group of 5 processes

Screenshot:

```
sarthak@sarthak:~/hpc$ mpicc mpi12.c -o mpi12
sarthak@sarthak:~/hpc$ mpirun -np 5 ./mpi12
Hello world from  sarthak, rank 2 out of 5 processors 1140850688
Hello world from  sarthak, rank 3 out of 5 processors 1140850688
Hello world from  sarthak, rank 4 out of 5 processors 1140850688
Hello world from  sarthak, rank 1 out of 5 processors 1140850688
Hello world from  sarthak, rank 0 out of 5 processors 1140850688
sarthak@sarthak:~/hpc$
```

Information : hello world program displays rank and communicator group of 5 processes

Github Link: