Program 1 A] Parallel BFS

```
gescoe@gescoe:~$ g++ -o gfg -fopenmp HPC1A.cpp
gescoe@gescoe:~$ ./gfg

 enter data=>5
do you want insert one more node?y

 enter data=>3
do you want insert one more node?y

 enter data=>2
do you want insert one more node?y

 enter data=>1
do you want insert one more node?y

 enter data=>7
do you want insert one more node?y

 enter data=>8
do you want insert one more node?n
```

5 3 2 1 7 8

gescoe@gescoe:~$

Program 1 B] Parallel DFS

gescoe@gescoe:~$ g++ -o gfg -fopenmp HPC1B.cpp

gescoe@gescoe:~$ ./gfg

Enter No of Node,Edges,and start node:4

4

1

Enter Pair of edges:1 2

2 4

3 4

1 3

1 2 4 3

Program 2 A] Parallel Bubble Sort

gescoe@gescoe:~$ g++ -o gfg -fopenmp HPC2A.cpp

gescoe@gescoe:~$ ./gfg

enter total no of elements=>7

enter elements=>51

11

78

45

23

90

77

sorted array is=>11

23

45

51

77

78

90

Program 2 B] Parallel Merge Sort

```
gescoe@gescoe:~$ g++ -o gfg -fopenmp HPC2B.cpp
gescoe@gescoe:~$ ./gfg

 enter total no of elements=>7

 enter elements=>51
11
78
45
23
90
77
```

sorted array is=>

11

23

45

51

77

78

90

Program 3 : Parallel Reduction

gescoe@gescoe:~$ g++ -o gfg -fopenmp HPC3.cpp

gescoe@gescoe:~$ ./gfg

enter total no of elements=>5

enter elements=>10

20

30

40

50

Minimum value: 10

Maximum value: 50

Sum: 150

Average: 37.5