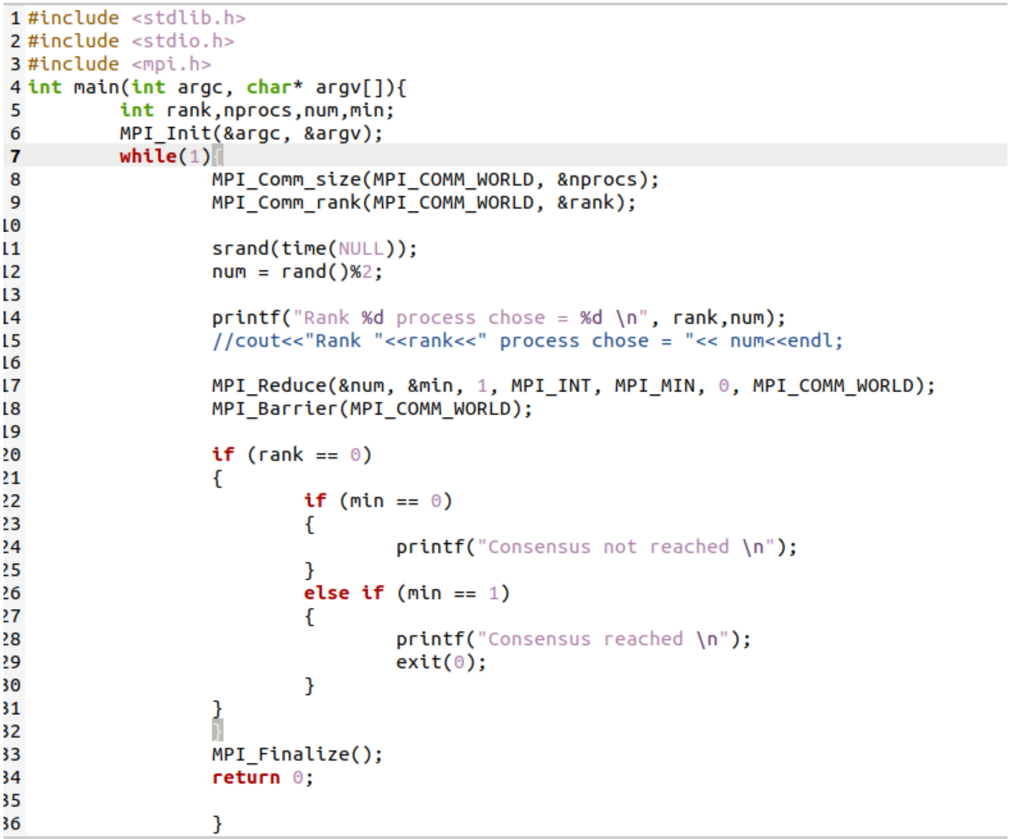
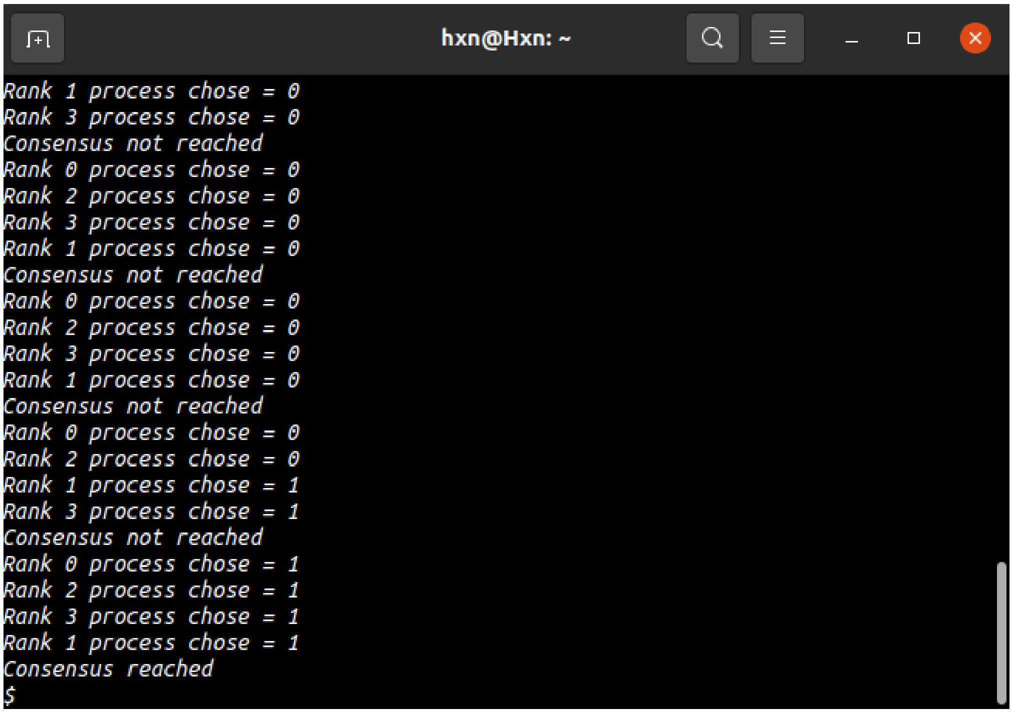
PDC Class Task 2



```c
#include <stdlib.h>
#include <stdio.h>
#include <mpi.h>
int main(int argc, char* argv[]){
        int rank,nprocs,num,min;
        MPI_Init(&argc, &argv);
        while(1){
                MPI_Comm_size(MPI_COMM_WORLD, &nprocs);
                MPI_Comm_rank(MPI_COMM_WORLD, &rank);

                srand(time(NULL));
                num = rand()%2;

                printf("Rank %d process chose = %d \n", rank,num);
                //cout<<"Rank "<<rank<<" process chose = "<< num<<endl;

                MPI_Reduce(&num, &min, 1, MPI_INT, MPI_MIN, 0, MPI_COMM_WORLD);
                MPI_Barrier(MPI_COMM_WORLD);

                if (rank == 0)
                {
                        if (min == 0)
                        {
                                printf("Consensus not reached \n");
                        }
                        else if (min == 1)
                        {
                                printf("Consensus reached \n");
                                exit(0);
                        }
                }
                }
                MPI_Finalize();
                return 0;

                }
```



```
Rank 1 process chose = 0
Rank 3 process chose = 0
Consensus not reached
Rank 0 process chose = 0
Rank 2 process chose = 0
Rank 3 process chose = 0
Rank 1 process chose = 0
Consensus not reached
Rank 0 process chose = 0
Rank 2 process chose = 0
Rank 3 process chose = 0
Rank 1 process chose = 0
Consensus not reached
Rank 0 process chose = 0
Rank 2 process chose = 0
Rank 1 process chose = 1
Rank 3 process chose = 1
Consensus not reached
Rank 0 process chose = 1
Rank 2 process chose = 1
Rank 3 process chose = 1
Rank 1 process chose = 1
Consensus reached
$
```