Slip 22

q.1

#include <stdio.h>

#include <stdlib.h>

#include <mpi.h>

#define ARRAY\_SIZE 1000

int main(int argc, char\*\* argv) {

int my\_rank, num\_procs;

int array[ARRAY\_SIZE];

int sum = 0, local\_sum = 0;

MPI\_Init(&argc, &argv);

MPI\_Comm\_rank(MPI\_COMM\_WORLD, &my\_rank);

MPI\_Comm\_size(MPI\_COMM\_WORLD, &num\_procs);

srand(my\_rank + 1);

for (int i = 0; i < ARRAY\_SIZE; i++) {

array[i] = rand() % 100;

}

for (int i = my\_rank; i < ARRAY\_SIZE; i += num\_procs) {

if (array[i] % 2 != 0) {

local\_sum += array[i];

}

}

MPI\_Reduce(&local\_sum, &sum, 1, MPI\_INT, MPI\_SUM, 0, MPI\_COMM\_WORLD);

if (my\_rank == 0) {

printf("Sum of odd numbers = %d\n", sum);

}

MPI\_Finalize();

return 0;

}

q.2

#include<stdio.h>

#include<stdlib.h>

//#include<conio.h>

void main()

{

int f[50],i,st,len,j,c,k,count=0;

for(i=0;i<50;i++)

f[i]=0;

printf("File allocation are:\n");

x:count=0;

printf("Enter starting block and length of file:");

scanf("%d%d",&st,&len);

for(k=st;k<(st+len);k++)

if(f[k]==0)

count++;

if(len==count)

{

for(j=st;j<(st+len);j++)

if(f[j]==0)

{

f[j]=1;

printf("%d\t%d\n",j,f[j]);

}

if(j!=(st+len-1))

printf("The file is allocation to disk\n");

}

else

printf("The file is not allocated\n");

printf("Do you want to enter more file(Yes-1/No-0)");

scanf("%d",&c);

if(c==1)

goto x;

else

exit(0);

getch();

}