Homework2

【修改部分代码截图】

```
127
128 /*--------------------------------------------------------------------*/
129 void Find_bins(
130       int bin_counts[]      /* out */,
131       float local_data[]    /* in  */,
132       int loc_bin_cts[]     /* out */,
133       int local_data_count  /* in  */,
134       float bin_maxes[]     /* in  */,
135       int bin_count         /* in  */,
136       float min_meas        /* in  */,
137       MPI_Comm comm){
138
139    int i,bin;
140    for (i = 0; i < local_data_count; i++){
141       bin = Which_bin(local_data[i], bin_maxes, bin_count, min_meas);
142       loc_bin_cts[bin]++;
143    }
144
145    /*********************************************************************/
146
147
148    //PLEASE ADD THE RIGHT CODES
149    MPI_Reduce(loc_bin_cts, bin_counts, bin_count, MPI_INT, MPI_SUM, 0, comm);
150
151
152    /*********************************************************************/
153 }  /* Find_bins */
154
```

```
155
156 /*--------------------------------------------------------------------*/
157 int Which_bin(float data, float bin_maxes[], int bin_count,
158       float min_meas) {
159
160    /*********************************************************************/
161
162
163    //PLEASE ADD THE RIGHT CODES
164    if(data > min_meas && data < bin_maxes[0]) return 0;
165    for(int i = 1; i < bin_count; ++i)
166       if(data >= bin_maxes[i-1] && data < bin_maxes[i]) return i;
167
168
169    /*********************************************************************/
170
171    printf("Uh oh . . .\n");
172    return 0;
173 }  /* Which_bin */
174
```

【结果截图】

```
sty@ubuntu:~$ mpicc -g -Wall -o mpi_histogram mpi_histogram.c
sty@ubuntu:~$ mpiexec -n 8 ./mpi_histogram
Enter the number of bins
5
Enter the minimum measurement
0
Enter the maximum measurement
10
Enter the number of data
40
0.000-2.000:    XXXXXXX
2.000-4.000:    XXXXXXXX
4.000-6.000:    XXXXXXX
6.000-8.000:    XXXXXXXXXX
8.000-10.000:   XXXXXXXX
```