**Sequential programs take 3 inputs.**

Number of Time instances.

Number of Bodies.

Filename containing test data.

**Sample Run**

g++ BH\_Seq.cpp

./a.out

10 5000 Test\_Cases/b5000.txt

**OpenMP programs take 4 inputs.**

Number of Time instances.

Number of Bodies.

Filename containing test data.

Number of threads.

**Sample Run**

g++ -fopenmp BH\_OpenMP.cpp

./a.out

10 5000 Test\_Cases/b5000.txt 8

**MPI Program(For 100 bodies)**

mpic++ barnesMPI.cpp

mpirun -np 101 .a/.out