

Before:

```
brand@DESKTOP-T4HMG2N MINGW64 ~/lab_13
$ time ./gravsim
Name      Position      Velocity      Acceleration
Sun        0,0,0          -0,0,0        0,0,0
Mercury    57900000000,0,0 -0,21.1006925247696,0 0,0,0
Venus      108200000000,0,0 -0,54.9841975761914,0 0,0,0
Earth      149600000000,0,0 -0,52.0304055024792,0 0,0,0
Mars       227900000000,0,0 -0,14.285671893005,0 0,0,0
Jupiter    778550000000,0,0 -0,412.657757969241,0 0,0,0
Saturn     143355000000,0,0 -0,166.905408371534,0 0,0,0
Uranus     287246350000,0,0 -0,45.881166539681,0 0,0,0
Neptune    449506000000,0,0 -0,123.996616571859,0 0,0,0
Pluto      586965650000,0,0 -0,0.421019540098609,0 0,0,0
Ceres      414261500000,0,0 -0,0.402311534056521,0 0,0,0
Arrokoth   6562300000000,0,0 -0,3.25134569066339e-06,0 0,0,0
GravSim t=31556950
Sun        117521181.743142,540994.779137361,0 7.01605162828429,0.0479077240223421,0 1.84623526472023e-07,2.56364645097177e-09,0
Mercury    2023545322139.84,1242960317.74951,0 66742.9797882012,41.6024011775393,0 3.24369484176147e-05,2.00033183345204e-08,0
Venus      1406799486901.8,3000547383.70552,0 47594.5081604358,105.745247279664,0 6.70980246453234e-05,1.43251050318221e-07,0
Earth      1155346005842.97,2662695553.81215,0 39307.0270240606,97.3303803864715,0 9.94719812740707e-05,2.29447380626796e-07,0
Mars       900812334977.413,651869728.643147,0 29500.9121625771,24.9693054975572,0 0.000163605307962133,1.18776264569647e-07,0
Jupiter    882967341590.593,13570414694.7565,0 6349.70891082584,461.443641917367,0 0.000170182315458811,2.6152197827077e-06,0
Saturn     1465490986605.86,5305759391.50784,0 2009.49635394949,170.54462788829,0 6.18274453510498e-05,2.23945678037279e-07,0
Uranus     2880473534773.25,1449219655.48958,0 507.174906660554,46.0093142499743,0 1.60109502373115e-05,8.09168587865431e-09,0
Neptune    4498333457986.54,3913906456.82865,0 207.410332006747,124.087029839383,0 6.56583779978199e-06,5.72455496087761e-09,0
Pluto      5871577006066.2,13288618.2879143,0 121.702247349406,0.421260618294825,0 3.85474280144784e-06,1.54224051819857e-11,0
Ceres      724836154436.832,15234608.8709941,0 16571.8248831804,0.588288176783291,0 0.000252656776545907,5.93226917670081e-09,0
Arrokoth   6563836604317.72,908.219018718358,0 97.3775547924279,8.06093180180758e-05,0 3.08468781029724e-06,5.01749737622398e-12,0

real    0m4.646s
user    0m0.000s
sys     0m0.015s
```

Time : 4.646

After:

```
brand@DESKTOP-T4HMG2N MINGW64 ~/cpe390/CPE-390-2023S-Lab-Section/lab_13
$ time ./gravsim
Name      Position      Velocity      Acceleration
Sun        0,0,0          -0,0,0        0,0,0
Mercury    57900000000,0,0 -0,21.1006925247696,0 0,0,0
Venus      108200000000,0,0 -0,54.9841975761914,0 0,0,0
Earth      149600000000,0,0 -0,52.0304055024792,0 0,0,0
Mars       227900000000,0,0 -0,14.285671893005,0 0,0,0
Jupiter    778550000000,0,0 -0,412.657757969241,0 0,0,0
Saturn     143355000000,0,0 -0,166.905408371534,0 0,0,0
Uranus     287246350000,0,0 -0,45.881166539681,0 0,0,0
Neptune    449506000000,0,0 -0,123.996616571859,0 0,0,0
Pluto      586965650000,0,0 -0,0.421019540098609,0 0,0,0
Ceres      414261500000,0,0 -0,0.402311534056521,0 0,0,0
Arrokoth   6562300000000,0,0 -0,3.25134569066339e-06,0 0,0,0
GravSim t=31556950
Sun        117521181.743878,540994.779147614,0 7.0160516283115,0.0479077240231653,0 1.84623526471837e-07,2.56364645101138e-09,0
Mercury    2023545322139.29,1242960317.75487,0 66742.9797881995,41.6024011775379,0 3.24369484176318e-05,2.00033183346224e-08,0
Venus      1406799486903.2,3000547383.70689,0 47594.5081604361,105.745247279661,0 6.70980246451894e-05,1.4325105031786e-07,0
Earth      1155346005843.8,2662695553.81279,0 39307.0270240633,97.3303803864744,0 9.94719812739272e-05,2.29447380626358e-07,0
Mars       900812334977.653,651869728.643158,0 29500.9121625809,24.9693054975563,0 0.000163605307962045,1.18776264569557e-07,0
Jupiter    882967341585.63,13570414694.7741,0 6349.70891091942,461.443641918391,0 0.000170182315460721,2.61521978275515e-06,0
Saturn     1465490986635.64,5305759391.50786,0 2009.49635380435,170.544627887843,0 6.18274453485378e-05,2.23945678023637e-07,0
Uranus     2880473534228.42,1449219655.5064,0 507.174906756139,46.0093142500235,0 1.60109502433665e-05,8.09168588333327e-09,0
Neptune    4498333459022.97,3913906456.89492,0 207.410331958949,124.087029839344,0 6.56583779675699e-06,5.72455495701955e-09,0
Pluto      5871577006674.86,13288618.2890426,0 121.702247336782,0.421260618294786,0 3.85474280064873e-06,1.54224051781775e-11,0
Ceres      724836154436.716,15234608.8709778,0 16571.8248832055,0.588288176783568,0 0.000252656776545987,5.932269176704e-09,0
Arrokoth   6563836604804.49,908.219018636339,0 97.3775547852044,8.06093180075983e-05,0 3.08468780983973e-06,5.0174973752158e-12,0

real    0m1.395s
user    0m0.000s
sys     0m0.000s
```

Time: 1.395