/Users/soni6/.conda/envs/src/bin/python /Users/soni6/github/forgedMachines/saa.py

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Changed value of parameter TimeLimit to 5000.0

Prev: inf Min: 0.0 Max: inf Default: inf

Changed value of parameter MIPGap to 0.04

Prev: 0.0001 Min: 0.0 Max: inf Default: 0.0001

Gurobi Optimizer version 9.0.3 build v9.0.3rc0 (mac64)

Optimize a model with 295514 rows, 87740 columns and 894782 nonzeros

Model fingerprint: 0x4c3c2055

Variable types: 86864 continuous, 876 integer (826 binary)

Coefficient statistics:

Matrix range [1e-01, 8e+04]

Objective range [1e-01, 1e-01]

Bounds range [1e+00, 1e+00]

RHS range [1e+00, 2e+04]

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Multi-objectives: starting optimization with 1 objectives ...

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Multi-objectives: optimize objective 1 () ...

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Optimize a model with 295514 rows, 87740 columns and 894782 nonzeros

Variable types: 86864 continuous, 876 integer (826 binary)

Coefficient statistics:

Matrix range [1e-01, 8e+04]

Objective range [1e-01, 1e-01]

Bounds range [1e+00, 1e+00]

RHS range [1e+00, 2e+04]

User MIP start did not produce a new incumbent solution

User MIP start violates constraint R295263 by 1.000000000

Presolve removed 124962 rows and 38114 columns

Presolve time: 1.10s

Presolved: 170552 rows, 49626 columns, 642970 nonzeros

Variable types: 49104 continuous, 522 integer (472 binary)

Deterministic concurrent LP optimizer: primal and dual simplex

Showing first log only...

Root simplex log...

Iteration Objective Primal Inf. Dual Inf. Time

59619 0.0000000e+00 4.715244e+04 3.236105e+10 5s

76148 0.0000000e+00 3.719504e+04 1.696059e+10 10s

82558 0.0000000e+00 3.385393e+04 1.374140e+10 15s

89411 0.0000000e+00 3.175932e+04 2.020642e+10 20s

102829 0.0000000e+00 2.766270e+04 1.528720e+10 25s

117311 0.0000000e+00 1.564903e+04 1.523865e+10 30s

128803 0.0000000e+00 6.847543e+03 4.371394e+09 35s

138969 0.0000000e+00 2.715593e+02 1.447504e+09 40s

143398 0.0000000e+00 3.202287e+01 1.134492e+09 45s

144888 3.1329086e+04 0.000000e+00 3.776000e+03 48s

150173 1.4357399e+04 0.000000e+00 6.724663e+05 50s

155781 1.2948510e+04 0.000000e+00 7.335056e+04 55s

158413 1.2263672e+04 0.000000e+00 2.195270e+05 60s

160370 1.1871872e+04 0.000000e+00 7.881585e+04 65s

162254 1.1529072e+04 0.000000e+00 6.547064e+05 70s

163794 1.1216619e+04 0.000000e+00 1.247974e+06 75s

165334 1.0955306e+04 0.000000e+00 9.560791e+06 80s

167031 1.0694186e+04 0.000000e+00 4.478239e+05 85s

168558 1.0513637e+04 0.000000e+00 1.627419e+06 90s

170168 1.0259304e+04 0.000000e+00 6.295060e+05 95s

171695 1.0024315e+04 0.000000e+00 9.501634e+04 100s

173359 9.8203142e+03 0.000000e+00 2.555301e+05 105s

174549 9.7151386e+03 0.000000e+00 1.145299e+05 110s

175716 9.6087268e+03 0.000000e+00 1.456185e+06 115s

177033 9.4573659e+03 0.000000e+00 4.706629e+05 120s

178193 9.3381304e+03 0.000000e+00 7.587014e+06 125s

179510 9.2337582e+03 0.000000e+00 4.661181e+04 130s

180730 9.1037736e+03 0.000000e+00 7.135193e+06 135s

182020 8.9748068e+03 0.000000e+00 4.738834e+05 140s

183694 8.7838928e+03 0.000000e+00 2.746056e+05 145s

185111 8.6694571e+03 0.000000e+00 1.443846e+05 151s

186271 8.6145964e+03 0.000000e+00 9.435747e+04 155s

187797 8.4680995e+03 0.000000e+00 9.813217e+05 160s

189064 8.3967015e+03 0.000000e+00 2.342654e+04 166s

189934 8.3225771e+03 0.000000e+00 9.066855e+04 170s

191285 8.2194652e+03 0.000000e+00 2.657922e+04 176s

192335 8.1570555e+03 0.000000e+00 5.021885e+05 180s

193519 8.1002256e+03 0.000000e+00 1.836929e+06 185s

194606 8.0385206e+03 0.000000e+00 2.944762e+06 190s

195776 7.9712671e+03 0.000000e+00 2.821933e+05 195s

196896 7.8995814e+03 0.000000e+00 1.224174e+05 201s

197910 7.8252437e+03 0.000000e+00 2.957423e+05 205s

198980 7.7766463e+03 0.000000e+00 1.268534e+05 210s

200204 7.7077026e+03 0.000000e+00 6.519258e+05 215s

201161 7.6529857e+03 0.000000e+00 1.108489e+05 220s

202375 7.5919966e+03 0.000000e+00 4.194077e+05 225s

203636 7.5325075e+03 0.000000e+00 1.365055e+05 231s

204633 7.4383662e+03 0.000000e+00 1.089416e+05 236s

205613 7.3865617e+03 0.000000e+00 1.003944e+06 240s

206643 7.3358473e+03 0.000000e+00 1.202755e+05 245s

207730 7.2881667e+03 0.000000e+00 1.767171e+05 250s

208797 7.2273163e+03 0.000000e+00 8.093148e+04 255s

209804 7.1936426e+03 0.000000e+00 6.389450e+05 260s

210814 7.1558338e+03 0.000000e+00 1.711936e+05 265s

211932 7.0976828e+03 0.000000e+00 1.360939e+05 270s

213036 7.0668230e+03 0.000000e+00 8.034173e+04 276s

214171 7.0352539e+03 0.000000e+00 6.391719e+05 281s

215289 6.9992288e+03 0.000000e+00 6.032930e+04 286s

216106 6.9736248e+03 0.000000e+00 3.118226e+04 290s

217227 6.9411968e+03 0.000000e+00 7.898934e+04 295s

218335 6.8961437e+03 0.000000e+00 1.215858e+05 300s

219409 6.8656296e+03 0.000000e+00 8.684469e+04 305s

220510 6.8352014e+03 0.000000e+00 7.934844e+04 310s

221587 6.8116144e+03 0.000000e+00 3.742090e+04 316s

222488 6.7856161e+03 0.000000e+00 5.108510e+04 320s

223623 6.7554448e+03 0.000000e+00 1.631373e+05 325s

224717 6.7185823e+03 0.000000e+00 3.516649e+04 331s

225591 6.6987323e+03 0.000000e+00 2.630894e+04 335s

226726 6.6771424e+03 0.000000e+00 1.420282e+06 341s

227820 6.6517769e+03 0.000000e+00 1.765929e+04 346s

228687 6.6298053e+03 0.000000e+00 5.667342e+04 350s

229795 6.6016831e+03 0.000000e+00 2.110089e+04 356s

230909 6.5764103e+03 0.000000e+00 5.427023e+05 361s

232017 6.5469467e+03 0.000000e+00 1.867299e+05 366s

233091 6.5257731e+03 0.000000e+00 7.681933e+04 371s

234192 6.5012318e+03 0.000000e+00 4.808607e+05 376s

235086 6.4777106e+03 0.000000e+00 5.596062e+04 380s

236207 6.4492307e+03 0.000000e+00 1.372828e+05 386s

237115 6.4349050e+03 0.000000e+00 9.777941e+04 390s

238223 6.4148452e+03 0.000000e+00 9.406547e+05 396s

239131 6.3943207e+03 0.000000e+00 1.031630e+05 401s

240039 6.3764612e+03 0.000000e+00 7.259954e+05 405s

241174 6.3495211e+03 0.000000e+00 1.408684e+05 411s

242082 6.3322201e+03 0.000000e+00 4.509275e+05 416s

242990 6.3144597e+03 0.000000e+00 2.229226e+06 420s

244125 6.2884773e+03 0.000000e+00 3.740919e+04 426s

245033 6.2684635e+03 0.000000e+00 8.988783e+05 430s

246168 6.2476796e+03 0.000000e+00 3.676725e+04 436s

247076 6.2329773e+03 0.000000e+00 2.211133e+04 441s

247984 6.2177687e+03 0.000000e+00 2.324045e+04 445s

249119 6.2020349e+03 0.000000e+00 1.259177e+05 451s

250254 6.1858291e+03 0.000000e+00 4.858799e+04 456s

251162 6.1748622e+03 0.000000e+00 3.043039e+04 460s

252297 6.1595519e+03 0.000000e+00 2.358774e+04 466s

253205 6.1418211e+03 0.000000e+00 4.348139e+04 470s

254113 6.1203004e+03 0.000000e+00 2.659643e+05 475s

255241 6.1016218e+03 0.000000e+00 6.000254e+04 481s

256149 6.0914358e+03 0.000000e+00 3.542542e+04 485s

257284 6.0758446e+03 0.000000e+00 9.761423e+05 491s

258192 6.0650250e+03 0.000000e+00 1.510440e+04 495s

259327 6.0488069e+03 0.000000e+00 2.383163e+05 501s

260235 6.0390170e+03 0.000000e+00 2.963574e+04 505s

261143 6.0255013e+03 0.000000e+00 4.890123e+04 510s

262051 6.0136665e+03 0.000000e+00 1.352108e+05 515s

263186 5.9987810e+03 0.000000e+00 9.043764e+04 521s

264094 5.9890383e+03 0.000000e+00 4.861306e+04 526s

265229 5.9742115e+03 0.000000e+00 1.835724e+05 531s

266137 5.9623861e+03 0.000000e+00 4.429907e+05 535s

267045 5.9533843e+03 0.000000e+00 2.013178e+06 540s

268180 5.9428409e+03 0.000000e+00 1.091253e+05 546s

269088 5.9323520e+03 0.000000e+00 6.288408e+04 551s

269996 5.9231914e+03 0.000000e+00 5.413527e+04 556s

270904 5.9117742e+03 0.000000e+00 5.549023e+04 561s

271812 5.8984232e+03 0.000000e+00 6.394365e+05 565s

272947 5.8814233e+03 0.000000e+00 4.618558e+04 571s

273855 5.8732273e+03 0.000000e+00 4.901826e+04 576s

274763 5.8611630e+03 0.000000e+00 7.937533e+04 580s

275898 5.8511408e+03 0.000000e+00 1.852503e+05 586s

276806 5.8407033e+03 0.000000e+00 1.591359e+04 591s

277714 5.8302964e+03 0.000000e+00 2.364171e+05 596s

278622 5.8207392e+03 0.000000e+00 4.711735e+04 600s

279757 5.8097035e+03 0.000000e+00 2.341345e+04 606s

280665 5.8000285e+03 0.000000e+00 1.893308e+05 610s

281800 5.7891314e+03 0.000000e+00 2.011506e+04 616s

282708 5.7814958e+03 0.000000e+00 1.149405e+04 621s

283616 5.7716481e+03 0.000000e+00 2.338219e+05 626s

284524 5.7623779e+03 0.000000e+00 1.834536e+04 630s

285659 5.7547311e+03 0.000000e+00 3.310340e+07 636s

286567 5.7480874e+03 0.000000e+00 7.169408e+04 641s

287475 5.7391282e+03 0.000000e+00 1.552929e+05 645s

288383 5.7252651e+03 0.000000e+00 4.807395e+04 650s

289518 5.7159033e+03 0.000000e+00 7.384665e+04 656s

290199 5.7110007e+03 0.000000e+00 2.925561e+04 660s

291334 5.7010305e+03 0.000000e+00 2.045421e+04 666s

292242 5.6939528e+03 0.000000e+00 2.265828e+05 671s

293150 5.6894891e+03 0.000000e+00 1.029715e+05 676s

294058 5.6816032e+03 0.000000e+00 1.868283e+04 680s

295193 5.6693518e+03 0.000000e+00 9.066498e+04 686s

296101 5.6599321e+03 0.000000e+00 1.118428e+05 691s

297236 5.6499151e+03 0.000000e+00 6.897975e+05 696s

298144 5.6439676e+03 0.000000e+00 1.727026e+04 700s

299052 5.6358015e+03 0.000000e+00 1.492775e+04 705s

300187 5.6259893e+03 0.000000e+00 6.976840e+05 711s

301095 5.6203434e+03 0.000000e+00 3.157908e+04 715s

302230 5.6133723e+03 0.000000e+00 2.984679e+04 721s

303138 5.6062968e+03 0.000000e+00 8.537938e+04 725s

304273 5.5981523e+03 0.000000e+00 3.137135e+05 731s

305181 5.5922029e+03 0.000000e+00 1.077094e+05 735s

306316 5.5873293e+03 0.000000e+00 1.088230e+06 741s

307451 5.5753315e+03 0.000000e+00 3.563300e+04 745s

308813 5.5661574e+03 0.000000e+00 1.594341e+05 751s

309948 5.5611115e+03 0.000000e+00 4.178848e+04 755s

311310 5.5541834e+03 0.000000e+00 2.494752e+04 760s

312672 5.5461358e+03 0.000000e+00 6.399151e+04 766s

314034 5.5398226e+03 0.000000e+00 3.238615e+04 771s

315169 5.5334882e+03 0.000000e+00 5.066078e+04 776s

316531 5.5291480e+03 0.000000e+00 7.846598e+04 781s

317666 5.5239297e+03 0.000000e+00 1.143235e+05 785s

319028 5.5199508e+03 0.000000e+00 4.264032e+04 790s

320163 5.5144662e+03 0.000000e+00 5.337781e+06 795s

321525 5.5082928e+03 0.000000e+00 6.043961e+06 801s

322887 5.5025010e+03 0.000000e+00 1.082211e+04 805s

324249 5.4961796e+03 0.000000e+00 1.859333e+04 811s

325611 5.4919493e+03 0.000000e+00 1.360911e+04 816s

326973 5.4868637e+03 0.000000e+00 5.593645e+05 821s

328108 5.4823026e+03 0.000000e+00 9.806432e+04 825s

329470 5.4789589e+03 0.000000e+00 1.734104e+05 830s

330832 5.4731888e+03 0.000000e+00 2.723034e+04 835s

332194 5.4685715e+03 0.000000e+00 2.906062e+04 841s

333556 5.4633352e+03 0.000000e+00 5.830721e+04 845s

334918 5.4588570e+03 0.000000e+00 3.016221e+04 851s

336280 5.4478196e+03 0.000000e+00 1.808318e+06 856s

337415 5.4394316e+03 0.000000e+00 1.008378e+05 860s

338777 5.4346758e+03 0.000000e+00 5.491966e+04 866s

339912 5.4316108e+03 0.000000e+00 5.089514e+04 870s

341501 5.4257742e+03 0.000000e+00 3.883985e+03 876s

342636 5.4214785e+03 0.000000e+00 3.647530e+03 880s

344225 5.4174452e+03 0.000000e+00 4.044806e+05 886s

345587 5.4123199e+03 0.000000e+00 9.853649e+03 890s

346949 5.4069101e+03 0.000000e+00 5.850613e+03 895s

348311 5.4015329e+03 0.000000e+00 1.061832e+04 900s

349673 5.3948219e+03 0.000000e+00 2.184176e+04 905s

351035 5.3896646e+03 0.000000e+00 1.039417e+04 910s

352397 5.3836465e+03 0.000000e+00 5.011739e+04 915s

353759 5.3785549e+03 0.000000e+00 7.109908e+03 921s

354894 5.3746626e+03 0.000000e+00 2.669578e+04 925s

356256 5.3684533e+03 0.000000e+00 8.515872e+03 930s

Concurrent spin time: 194.57s

Solved with dual simplex

Root relaxation: objective 4.943303e+03, 540348 iterations, 931.44 seconds

Another try with MIP start

Nodes | Current Node | Objective Bounds | Work

Expl Unexpl | Obj Depth IntInf | Incumbent BestBd Gap | It/Node Time

H 0 0 7096.1784952 0.00000 100% - 1111s

0 0 4943.30343 0 445 7096.17850 4943.30343 30.3% - 1111s

0 0 5540.25670 0 395 7096.17850 5540.25670 21.9% - 1176s

0 0 5640.52551 0 391 7096.17850 5640.52551 20.5% - 1193s

0 0 5669.66390 0 388 7096.17850 5669.66390 20.1% - 1204s

0 0 5672.17046 0 384 7096.17850 5672.17046 20.1% - 1207s

0 0 5672.26083 0 384 7096.17850 5672.26083 20.1% - 1208s

0 0 5672.26803 0 384 7096.17850 5672.26803 20.1% - 1208s

0 0 5750.85875 0 346 7096.17850 5750.85875 19.0% - 1226s

0 0 5771.16624 0 324 7096.17850 5771.16624 18.7% - 1236s

0 0 5794.07944 0 320 7096.17850 5794.07944 18.3% - 1249s

0 0 5794.72944 0 317 7096.17850 5794.72944 18.3% - 1252s

0 0 5794.79478 0 318 7096.17850 5794.79478 18.3% - 1253s

0 0 5813.77777 0 309 7096.17850 5813.77777 18.1% - 1276s

0 0 5821.10736 0 304 7096.17850 5821.10736 18.0% - 1291s

0 0 5821.93164 0 305 7096.17850 5821.93164 18.0% - 1297s

0 0 5822.09491 0 306 7096.17850 5822.09491 18.0% - 1300s

0 0 5833.17588 0 301 7096.17850 5833.17588 17.8% - 1316s

0 0 5835.07321 0 302 7096.17850 5835.07321 17.8% - 1322s

0 0 5835.22862 0 303 7096.17850 5835.22862 17.8% - 1323s

0 0 5838.99030 0 294 7096.17850 5838.99030 17.7% - 1337s

0 0 5839.57222 0 301 7096.17850 5839.57222 17.7% - 1343s

0 0 5839.70205 0 301 7096.17850 5839.70205 17.7% - 1346s

0 0 5842.17889 0 297 7096.17850 5842.17889 17.7% - 1356s

0 0 5842.68939 0 296 7096.17850 5842.68939 17.7% - 1362s

0 0 5842.78085 0 297 7096.17850 5842.78085 17.7% - 1364s

0 0 5844.86334 0 298 7096.17850 5844.86334 17.6% - 1368s

0 0 5844.86334 0 297 7096.17850 5844.86334 17.6% - 1403s

0 2 5844.86334 0 297 7096.17850 5844.86334 17.6% - 1744s

1 4 5853.25191 1 295 7096.17850 5844.86493 17.6% 10408 1760s

3 8 5854.60023 2 292 7096.17850 5853.25629 17.5% 10570 1798s

7 12 5856.82763 3 291 7096.17850 5854.62617 17.5% 8283 1806s

11 16 5861.14460 4 291 7096.17850 5854.62617 17.5% 6396 1813s

15 20 5870.54611 5 287 7096.17850 5854.62617 17.5% 6203 1836s

19 24 5879.34300 6 285 7096.17850 5854.62617 17.5% 5900 1868s

23 28 5896.76690 7 283 7096.17850 5854.62617 17.5% 5995 1876s

27 32 5901.33803 8 285 7096.17850 5854.62617 17.5% 5632 1884s

31 36 5925.80560 8 280 7096.17850 5854.62617 17.5% 5305 1911s

35 40 5934.51510 9 284 7096.17850 5854.62617 17.5% 5947 1964s

39 45 5939.72392 10 284 7096.17850 5854.62617 17.5% 6055 2015s

44 50 5963.18604 10 279 7096.17850 5854.62617 17.5% 6237 2058s

49 59 5981.94564 11 278 7096.17850 5854.62617 17.5% 6214 2067s

58 67 6011.57121 13 269 7096.17850 5854.62617 17.5% 5584 2076s

66 76 6036.15123 14 273 7096.17850 5854.62617 17.5% 5186 2084s

75 87 6062.04630 16 268 7096.17850 5854.62617 17.5% 4819 2091s

86 97 6091.38552 19 264 7096.17850 5854.62617 17.5% 4380 2099s

96 109 6112.58373 22 269 7096.17850 5854.62617 17.5% 4123 2107s

108 123 6125.77402 25 268 7096.17850 5854.62617 17.5% 3814 2115s

122 136 6186.00166 30 253 7096.17850 5854.62617 17.5% 3513 2121s

135 154 6212.88009 34 250 7096.17850 5854.62617 17.5% 3296 2128s

H 141 154 7081.6395595 5854.62617 17.3% 3181 2128s

153 169 6241.24255 40 242 7081.63956 5854.62617 17.3% 3004 2135s

168 186 6240.50874 42 244 7081.63956 5854.62617 17.3% 2829 2142s

185 207 6256.40393 48 235 7081.63956 5854.62617 17.3% 2647 2148s

206 231 6303.92403 53 226 7081.63956 5854.62617 17.3% 2445 2154s

230 235 6328.23004 62 221 7081.63956 5854.62617 17.3% 2247 2240s

234 264 6331.91749 63 219 7081.63956 5854.62617 17.3% 2222 2247s

263 283 6342.61518 71 215 7081.63956 5854.62617 17.3% 2027 2299s

H 281 283 7046.6064357 5854.62617 16.9% 1935 2299s

282 323 6412.11527 78 201 7046.60644 5854.62617 16.9% 1930 2306s

322 327 6529.15304 89 178 7046.60644 5854.62617 16.9% 1742 2387s

326 368 6537.87738 90 177 7046.60644 5854.62617 16.9% 1725 2394s

367 412 6672.24077 99 162 7046.60644 5854.62617 16.9% 1579 2401s

411 460 6794.42036 115 137 7046.60644 5854.62617 16.9% 1449 2407s

459 464 6861.27281 127 122 7046.60644 5854.62617 16.9% 1331 2525s

463 507 6861.48306 128 121 7046.60644 5854.62617 16.9% 1322 2532s

506 533 6974.21845 146 103 7046.60644 5856.83503 16.9% 1246 2586s

H 525 533 7041.5468565 5856.83503 16.8% 1227 2586s

H 526 533 7040.3351337 5856.83503 16.8% 1225 2586s

538 570 5896.25394 4 287 7040.33513 5856.83503 16.8% 1208 2595s

575 632 5939.94851 8 284 7040.33513 5856.83503 16.8% 1174 2606s

637 698 5973.54281 9 276 7040.33513 5856.83503 16.8% 1091 2615s

705 746 5995.50426 12 277 7040.33513 5856.83503 16.8% 1018 2626s

759 769 6028.78210 14 278 7040.33513 5856.83503 16.8% 981 2641s

788 791 6074.75245 16 272 7040.33513 5856.83503 16.8% 984 2673s

818 801 6093.15425 17 274 7040.33513 5856.83503 16.8% 1006 2690s

828 813 6123.82054 19 272 7040.33513 5856.83503 16.8% 1033 2707s

840 827 6168.38190 22 265 7040.33513 5856.83503 16.8% 1059 2723s

854 844 6204.90279 26 257 7040.33513 5856.83503 16.8% 1080 2770s

871 865 6275.01376 32 257 7040.33513 5856.83503 16.8% 1108 2789s

892 893 6318.17848 38 249 7040.33513 5856.83503 16.8% 1119 2805s

920 922 6389.58468 45 228 7040.33513 5856.83503 16.8% 1120 2824s

949 956 6474.64559 55 210 7040.33513 5856.83503 16.8% 1123 2841s

983 990 6582.36268 68 195 7040.33513 5856.83503 16.8% 1116 2860s

1017 1029 6643.11759 86 180 7040.33513 5856.83503 16.8% 1115 2878s

1057 1030 7021.74409 155 297 7040.33513 5856.83503 16.8% 1107 3841s

1059 1031 6304.50927 54 447 7040.33513 5856.83503 16.8% 1105 4912s

Cutting planes:

Gomory: 14

Projected implied bound: 16

MIR: 2514

Flow cover: 25

Explored 1059 nodes (2523742 simplex iterations) in 5000.22 seconds

Thread count was 8 (of 8 available processors)

Solution count 5: 7040.34 7041.55 7046.61 ... 7096.18

Time limit reached

Best objective 7.040335133720e+03, best bound 5.856835026911e+03, gap 16.8103%

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Multi-objectives: stopped in 5000.32 seconds, solution count 5

Time Limit reached

Process finished with exit code 0