```
1  D:\Python\Python\setroute\python.exe "D:\Python\Pycharm\setroute\PyCharm Community Edition 2021.2.3\plugins\python-ce\helpers\pydev\pydevconsole.py" --
   mode=client --port=7307
2
3  import sys; print('Python %s on %s' % (sys.version, sys.platform))
4  sys.path.extend(['E:\\1 □□□□\\3 □□□□\\1 □□□□□□□\\1 □□□□□□□□\\1_□□□□□□_□□□□\\1_LW _□□□□1\\4 □□□□\\3 python_code\\9 Code for this
   paper', 'E:/1 □□□□/3 □□□□□/1 □□□□□□/1 □□□□□□□□/1_□□□□□□_□□□□/1_LW _□□□□1/4 □□□□/3 python_code/9 Code for this paper'])
5
6  PyDev console: starting.
7
8  Python 3.9.7 (tags/v3.9.7:1016ef3, Aug 30 2021, 20:19:38) [MSC v.1929 64 bit (AMD64)] on win32
9  >>> runfile('E:/1 □□□□/3 □□□□□/1 □□□□□□/1 □□□□□□□□/1_□□□□□□_□□□□/1_LW _□□□□1/4 □□□□/3 python_code/9 Code for this paper/
   main_ECCG_deterministic.py', wdir='E:/1 □□□□/3 □□□□□/1 □□□□□□/1 □□□□□□□□/1_□□□□□□_□□□□/1_LW _□□□□1/4 □□□□/3 python_code/
   9 Code for this paper')
10 Backend TkAgg is interactive backend. Turning interactive mode on.
11 Waiting 5s......
12
13 Optimize the  ./R_7_4.xlsx  instance by ECCG for deterministic model
14
15 Set parameter MIPGap to value 0.01
16      Master protblem status = 2 , is Optimal and MP obj = 314.0
17 The initial lb = -inf      ub = inf
18
19 The current iteration cnt = 0
20      The SP model was solved Optimal 2 and SPObj = 314.0
21      Deterministic Sub problem Status= 2 , is Optimal
22      Master protblem status = 2 , is Optimal
23      lb = 515.0              ub = 515.0
24       MPObj = 515.0    MP_delete_Hua_Obj = 314.0      Hua = 201.0      SPObj = 314.0      MP_SP_Obj = 201.0      Deter_SP_Obj = 201.0
25
26 ub - lb = 0.0
27
28 Iteration cycle stopped by termination criterion 1: Because ub - lb <= eps, the iteration stop, and cnt = 0
29     i: 0.0  l_i: 7.0  p_i: 27.0  al_i: 38.0     sol_a_i: 38.0 sol_g_i: 0.0  d_i: 58.0  sol_taoi: 38.0   sol_deltai: 58.0  sol_deltai - sol_taoi: 20.0  sol_taoP
   : 38.0  sol_deltaP: 42.0   sol_deltaP - sol_taoP: 4.0  cl_i: 5109254.0   sol_c_i: 5109254.0  sol_gp_i: 0.0  total work: 5272880.0   wasted work: 0.
   6206323678900335
30     i: 1.0  l_i: 4.0  p_i: 22.0  al_i: 7.0     sol_a_i: 7.0  sol_g_i: 0.0  d_i: 31.0  sol_taoi: 7.0   sol_deltai: 31.0  sol_deltai - sol_taoi: 24.0  sol_taoP: 7
   .0   sol_deltaP: 11.0   sol_deltaP - sol_taoP: 4.0  cl_i: 6280473.0   sol_c_i: 6280473.0  sol_gp_i: 0.0  total work: 6327456.0   wasted work: 0.
   17820621747508003
31     i: 2.0  l_i: 4.0  p_i: 18.0  al_i: 48.0     sol_a_i: 48.0 sol_g_i: 0.0  d_i: 69.0  sol_taoi: 48.0   sol_deltai: 69.0  sol_deltai - sol_taoi: 21.0  sol_taoP
   : 48.0  sol_deltaP: 53.0   sol_deltaP - sol_taoP: 5.0  cl_i: 5302051.0   sol_c_i: 5302051.0  sol_gp_i: 0.0  total work: 6591100.0   wasted work: 4.
   889354584212043
32     i: 3.0  l_i: 7.0  p_i: 11.0  al_i: 0.0     sol_a_i: 0.0  sol_g_i: 0.0  d_i: 23.0  sol_taoi: 0.0  sol_deltai: 23.0  sol_deltai - sol_taoi: 23.0  sol_taoP: 0
   .0   sol_deltaP: 7.0  sol_deltaP - sol_taoP: 7.0  cl_i: 5897603.0   sol_c_i: 5897603.0  sol_gp_i: 0.0  total work: 5931990.0   wasted work: 0.
   13042967031299782
33     i: 4.0  l_i: 5.0  p_i: 6.0  al_i: 20.0     sol_a_i: 20.0 sol_g_i: 0.0  d_i: 38.0  sol_taoi: 20.0   sol_deltai: 38.0  sol_deltai - sol_taoi: 18.0  sol_taoP:
   20.0    sol_deltaP: 25.0  sol_deltaP - sol_taoP: 5.0  cl_i: 4491204.0   sol_c_i: 4491204.0  sol_gp_i: 0.0  total work: 5009236.0   wasted work: 1.
   964892051402649
34     i: 5.0  l_i: 7.0  p_i: 11.0  al_i: 40.0     sol_a_i: 40.0 sol_g_i: 0.0  d_i: 61.0  sol_taoi: 40.0   sol_deltai: 60.0  sol_deltai - sol_taoi: 20.0  sol_taoP
   : 40.0  sol_deltaP: 44.0   sol_deltaP - sol_taoP: 4.0  cl_i: 5209900.0   sol_c_i: 5209900.0  sol_gp_i: 0.0  total work: 5800168.0   wasted work: 2.
   238882735810411
35     i: 6.0  l_i: 6.0  p_i: 0.0  al_i: 13.0     sol_a_i: 13.0 sol_g_i: 0.0  d_i: 42.0  sol_taoi: 13.0   sol_deltai: 35.0  sol_deltai - sol_taoi: 22.0  sol_taoP:
   13.0   sol_deltaP: 19.0   sol_deltaP - sol_taoP: 6.0  cl_i: 5768056.0   sol_c_i: 5768056.0  sol_gp_i: 0.0  total work: 6327456.0   wasted work: 2.
   121800609913368
36 Time: 53.000000
37
38
39
40
```