```
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=6578
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_5_7.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 = 273.0
17 The initial lb = -inf      ub = inf
18
19 The current iteration cnt = 0
20     The SP model was solved Optimal 2 and SPObj = 273.0
21     Deterministic Sub problem Status= 2 , is Optimal
22     Master protblem status = 2 , is Optimal
23     lb = 474.0              ub = 474.0
24      MPObj = 474.0    MP_delete_Hua_Obj = 273.0      Hua = 201.0      SPObj = 273.0      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: 5.0  p_i: 29.0  al_i: 17.0     sol_a_i: 17.0 sol_g_i: 0.0  d_i: 39.0   sol_taoi: 17.0    sol_deltai: 37.0 sol_deltai - sol_taoi: 20.0 sol_taoP
   : 17.0 sol_deltaP: 23.0    sol_deltaP - sol_taoP: 6.0  cl_i: 5186037.0    sol_c_i: 5186037.0  sol_gp_i: 0.0 total work: 5536524.0  wasted work: 1.
   3293949416637587
30    i: 1.0 l_i: 5.0  p_i: 24.0  al_i: 43.0     sol_a_i: 43.0 sol_g_i: 0.0  d_i: 72.0   sol_taoi: 43.0    sol_deltai: 70.0 sol_deltai - sol_taoi: 27.0 sol_taoP
   : 43.0 sol_deltaP: 49.0    sol_deltaP - sol_taoP: 6.0  cl_i: 7000335.0    sol_c_i: 7000335.0  sol_gp_i: 0.0 total work: 7909320.0  wasted work: 3.
   4477742713659327
31    i: 2.0 l_i: 4.0  p_i: 12.0  al_i: 58.0     sol_a_i: 58.0 sol_g_i: 0.0  d_i: 80.0   sol_taoi: 58.0    sol_deltai: 78.0 sol_deltai - sol_taoi: 20.0 sol_taoP
   : 58.0 sol_deltaP: 62.0    sol_deltaP - sol_taoP: 4.0  cl_i: 5011582.0    sol_c_i: 5011582.0  sol_gp_i: 0.0 total work: 6195634.0  wasted work: 4.
   49110163705603
32    i: 3.0 l_i: 7.0  p_i: 5.0  al_i: 26.0     sol_a_i: 26.0 sol_g_i: 0.0  d_i: 58.0   sol_taoi: 26.0    sol_deltai: 54.0 sol_deltai - sol_taoi: 28.0 sol_taoP:
   26.0    sol_deltaP: 38.0    sol_deltaP - sol_taoP: 12.0   cl_i: 7330053.0    sol_c_i: 7330053.0  sol_gp_i: 0.0 total work: 7909320.0  wasted work: 2.
   1971560134120254
33    i: 4.0 l_i: 5.0  p_i: 0.0  al_i: 24.0     sol_a_i: 24.0 sol_g_i: 0.0  d_i: 41.0   sol_taoi: 24.0    sol_deltai: 34.0 sol_deltai - sol_taoi: 10.0 sol_taoP:
   24.0    sol_deltaP: 29.0    sol_deltaP - sol_taoP: 5.0  cl_i: 2457593.0    sol_c_i: 2457593.0  sol_gp_i: 0.0 total work: 2636440.0  wasted work: 0.
   6783655232055348
34 Time: 21.000000
35
36
37
38
```