```
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=27154
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_10_2.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 = 505.0
17 The initial lb = -inf      ub = inf
18
19 The current iteration cnt = 0
20     The SP model was solved Optimal 2 and SPObj = 505.0
21     Deterministic Sub problem Status= 2 , is Optimal
22     Master protblem status = 2 , is Optimal
23     lb = 848.0              ub = 848.0
24      MPObj = 848.0    MP_delete_Hua_Obj = 505.0       Hua = 343.0      SPObj = 505.0      MP_SP_Obj = 343.0        Deter_SP_Obj = 343.0
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: 6.0  p_i: 6.0  al_i: 56.0     sol_a_i: 56.0 sol_g_i: 0.0  d_i: 75.0  sol_taoi: 56.0   sol_deltai: 75.0 sol_deltai - sol_taoi: 19.0  sol_taoP:
   56.0  sol_deltaP: 60.0   sol_deltaP - sol_taoP: 4.0  cl_i: 4877652.0    sol_c_i: 4877652.0  sol_gp_i: 0.0 total work: 5009236.0  wasted work: 0.
   49909726752742334
30    i: 1.0  l_i: 7.0  p_i: 0.0  al_i: 18.0     sol_a_i: 18.0 sol_g_i: 0.0  d_i: 32.0  sol_taoi: 18.0   sol_deltai: 32.0 sol_deltai - sol_taoi: 14.0  sol_taoP:
   18.0  sol_deltaP: 20.0   sol_deltaP - sol_taoP: 2.0  cl_i: 3690865.0    sol_c_i: 3690865.0  sol_gp_i: 0.0 total work: 3691016.0  wasted work: 0.
   0005727420309204837
31    i: 2.0  l_i: 7.0   p_i: 17.0  al_i: 51.0     sol_a_i: 51.0 sol_g_i: 0.0  d_i: 71.0  sol_taoi: 51.0   sol_deltai: 71.0 sol_deltai - sol_taoi: 20.0  sol_taoP
   : 51.0  sol_deltaP: 54.0   sol_deltaP - sol_taoP: 3.0  cl_i: 5078032.0    sol_c_i: 5078032.0  sol_gp_i: 0.0 total work: 5536524.0  wasted work: 1.
   73905721351151947
32    i: 3.0  l_i: 6.0   p_i: 15.0  al_i: 11.0     sol_a_i: 11.0 sol_g_i: 0.0  d_i: 32.0  sol_taoi: 11.0   sol_deltai: 32.0 sol_deltai - sol_taoi: 21.0  sol_taoP
   : 11.0  sol_deltaP: 14.0   sol_deltaP - sol_taoP: 3.0  cl_i: 5446369.0    sol_c_i: 5446369.0  sol_gp_i: 0.0 total work: 6327456.0  wasted work: 3.
   341957336408187
33    i: 4.0  l_i: 6.0   p_i: 0.0  al_i: 40.0     sol_a_i: 40.0 sol_g_i: 0.0  d_i: 60.0  sol_taoi: 40.0   sol_deltai: 60.0 sol_deltai - sol_taoi: 20.0  sol_taoP:
   40.0   sol_deltaP: 43.0   sol_deltaP - sol_taoP: 3.0  cl_i: 5202834.0    sol_c_i: 5202834.0  sol_gp_i: 0.0 total work: 5536524.0  wasted work: 1.
   2656840284626238
34    i: 5.0  l_i: 4.0   p_i: 7.0  al_i: 22.0     sol_a_i: 22.0 sol_g_i: 0.0  d_i: 44.0  sol_taoi: 22.0   sol_deltai: 44.0 sol_deltai - sol_taoi: 22.0  sol_taoP:
   22.0   sol_deltaP: 26.0   sol_deltaP - sol_taoP: 4.0  cl_i: 5709150.0    sol_c_i: 5709150.0  sol_gp_i: 0.0 total work: 5800168.0  wasted work: 0.
   34523068986967276
35    i: 6.0  l_i: 5.0   p_i: 21.0  al_i: 2.0     sol_a_i: 2.0 sol_g_i: 0.0  d_i: 21.0  sol_taoi: 2.0   sol_deltai: 20.0 sol_deltai - sol_taoi: 18.0  sol_taoP: 2
   .0   sol_deltaP: 5.0  sol_deltaP - sol_taoP: 3.0  cl_i: 4706531.0    sol_c_i: 4706531.0  sol_gp_i: 0.0 total work: 5536524.0  wasted work: 3.
   148158122316457
36    i: 7.0  l_i: 6.0   p_i: 24.0  al_i: 47.0     sol_a_i: 47.0 sol_g_i: 0.0  d_i: 66.0  sol_taoi: 47.0   sol_deltai: 66.0 sol_deltai - sol_taoi: 19.0  sol_taoP
   : 47.0  sol_deltaP: 51.0   sol_deltaP - sol_taoP: 4.0  cl_i: 4994677.0    sol_c_i: 4994677.0  sol_gp_i: 0.0 total work: 5009236.0  wasted work: 0.
   05522219356404849
37    i: 8.0  l_i: 5.0   p_i: 12.0  al_i: 43.0     sol_a_i: 43.0 sol_g_i: 0.0  d_i: 65.0  sol_taoi: 43.0   sol_deltai: 63.0 sol_deltai - sol_taoi: 20.0  sol_taoP
   : 43.0  sol_deltaP: 47.0   sol_deltaP - sol_taoP: 4.0  cl_i: 5174489.0    sol_c_i: 5174489.0  sol_gp_i: 0.0 total work: 5272880.0  wasted work: 0.
   37319643155163784
38    i: 9.0  l_i: 4.0   p_i: 11.0  al_i: 16.0     sol_a_i: 16.0 sol_g_i: 0.0  d_i: 45.0  sol_taoi: 16.0   sol_deltai: 42.0 sol_deltai - sol_taoi: 26.0  sol_taoP
   : 16.0  sol_deltaP: 23.0   sol_deltaP - sol_taoP: 7.0  cl_i: 6782880.0    sol_c_i: 6782880.0  sol_gp_i: 0.0 total work: 7118388.0  wasted work: 1.
   2725796907951632
39 Time: 106.000000
40
41
42
43
```