```
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=22148

import sys; print('Python %s on %s' % (sys.version, sys.platform))
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'])

PyDev console: starting.

Python 3.9.7 (tags/v3.9.7:1016ef3, Aug 30 2021, 20:19:38) [MSC v.1929 64 bit (AMD64)] on win32
>>> 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')
Backend TkAgg is interactive backend. Turning interactive mode on.
Waiting 5s.....

Optimize the  ./R_10_8.xlsx  instance by ECCG for deterministic model

Set parameter MIPGap to value 0.01
      Master protblem status =  2 , is Optimal and MP obj =  302.0
The initial lb =  -inf       ub =  inf

The current iteration cnt =  0
      The SP model was solved Optimal 2 and SPObj =  302.0
      Deterministic Sub problem Status=  2 , is Optimal
      Master protblem status =  2 , is Optimal
      lb =  535.0                  ub =  535.0
       MPObj =  535.0     MP_delete_Hua_Obj =  302.0       Hua =  233.0       SPObj =  302.0       MP_SP_Obj =  233.0         Deter_SP_Obj =  233.0

ub - lb =  0.0

Iteration cycle stopped by termination criterion 1: Because ub - lb <= eps, the iteration stop, and cnt =  0
    i:  0.0  l_i:  5.0   p_i:  0.0   al_i:  30.0       sol_a_i:  30.0  sol_g_i:  0.0   d_i:  49.0    sol_taoi:  30.0    sol_deltai:  49.0  sol_deltai - sol_taoi:  19.0   sol_taoP:  30.0    sol_deltaP:  35.0    sol_deltaP - sol_taoP:  5.0   cl_i:  4837105.0    sol_c_i:  4837105.0    sol_gp_i:  0.0  total work:  5009236.0    wasted work:  0.6528917783071111
    i:  1.0  l_i:  5.0   p_i:  0.0   al_i:  15.0       sol_a_i:  15.0  sol_g_i:  0.0   d_i:  43.0    sol_taoi:  15.0    sol_deltai:  22.0  sol_deltai - sol_taoi:  7.0    sol_taoP:  15.0    sol_deltaP:  17.0    sol_deltaP - sol_taoP:  2.0   cl_i:  1597761.0    sol_c_i:  1597761.0    sol_gp_i:  0.0  total work:  2109152.0    wasted work:  1.9397027810228946
    i:  2.0  l_i:  5.0   p_i:  10.0    al_i:  30.0       sol_a_i:  30.0  sol_g_i:  0.0   d_i:  60.0    sol_taoi:  30.0    sol_deltai:  34.0  sol_deltai - sol_taoi:  4.0    sol_taoP:  30.0  sol_deltaP:  31.0    sol_deltaP - sol_taoP:  1.0   cl_i:  1028378.0    sol_c_i:  1028378.0    sol_gp_i:  0.0  total work:  1318220.0    wasted work:  1.0993688458679127
    i:  3.0  l_i:  5.0   p_i:  0.0   al_i:  6.0        sol_a_i:  6.0   sol_g_i:  0.0   d_i:  21.0    sol_taoi:  6.0   sol_deltai:  11.0  sol_deltai - sol_taoi:  5.0    sol_taoP:  6.0   sol_deltaP:  8.0   sol_deltaP - sol_taoP:  2.0   cl_i:  1166688.0    sol_c_i:  1166688.0    sol_gp_i:  0.0  total work:  1318220.0    wasted work:  0.5747599035062433
    i:  4.0  l_i:  6.0   p_i:  5.0   al_i:  12.0       sol_a_i:  12.0  sol_g_i:  0.0   d_i:  44.0    sol_taoi:  12.0    sol_deltai:  24.0  sol_deltai - sol_taoi:  12.0   sol_taoP:  12.0    sol_deltaP:  15.0    sol_deltaP - sol_taoP:  3.0   cl_i:  3027891.0    sol_c_i:  3027891.0    sol_gp_i:  0.0  total work:  3163728.0    wasted work:  0.5152288692327532
    i:  5.0  l_i:  5.0   p_i:  16.0    al_i:  21.0       sol_a_i:  21.0  sol_g_i:  0.0   d_i:  60.0    sol_taoi:  21.0    sol_deltai:  33.0  sol_deltai - sol_taoi:  12.0   sol_taoP:  21.0  sol_deltaP:  23.0    sol_deltaP - sol_taoP:  2.0   cl_i:  2951581.0    sol_c_i:  2951581.0    sol_gp_i:  0.0  total work:  3031906.0    wasted work:  0.30467220949462154
    i:  6.0  l_i:  5.0   p_i:  5.0   al_i:  29.0       sol_a_i:  29.0  sol_g_i:  0.0   d_i:  59.0    sol_taoi:  29.0    sol_deltai:  34.0  sol_deltai - sol_taoi:  5.0    sol_taoP:  29.0    sol_deltaP:  31.0    sol_deltaP - sol_taoP:  2.0   cl_i:  1294224.0    sol_c_i:  1294224.0    sol_gp_i:  0.0  total work:  1318220.0    wasted work:  0.09101667399978759
    i:  7.0  l_i:  6.0   p_i:  5.0   al_i:  45.0       sol_a_i:  45.0  sol_g_i:  0.0   d_i:  82.0    sol_taoi:  45.0    sol_deltai:  50.0  sol_deltai - sol_taoi:  5.0    sol_taoP:  45.0    sol_deltaP:  47.0    sol_deltaP - sol_taoP:  2.0   cl_i:  1221349.0    sol_c_i:  1221349.0    sol_gp_i:  0.0  total work:  2109152.0    wasted work:  3.3674310813066106
    i:  8.0  l_i:  5.0   p_i:  11.0    al_i:  8.0        sol_a_i:  8.0   sol_g_i:  0.0   d_i:  55.0    sol_taoi:  8.0   sol_deltai:  23.0  sol_deltai - sol_taoi:  15.0  sol_taoP:  8.0    sol_deltaP:  11.0    sol_deltaP - sol_taoP:  3.0   cl_i:  3796097.0    sol_c_i:  3796097.0    sol_gp_i:  0.0  total work:  3954660.0    wasted work:  0.6014284413830772
    i:  9.0  l_i:  5.0   p_i:  21.0    al_i:  13.0       sol_a_i:  13.0  sol_g_i:  0.0   d_i:  43.0    sol_taoi:  13.0    sol_deltai:  22.0  sol_deltai - sol_taoi:  9.0    sol_taoP:  13.0  sol_deltaP:  15.0    sol_deltaP - sol_taoP:  2.0   cl_i:  2349510.0    sol_c_i:  2349510.0    sol_gp_i:  0.0  total work:  2636440.0    wasted work:  1.0883236485563867
Time: 55.000000
```