```
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=24778

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_7_2.xlsx  instance by ECCG for deterministic model

Set parameter MIPGap to value 0.01
      Master protblem status =  2 , is Optimal and MP obj =  298.0
The initial lb =  -inf       ub =  inf

The current iteration cnt =  0
      The SP model was solved Optimal 2 and SPObj =  298.0
      Deterministic Sub problem Status=  2 , is Optimal
      Master protblem status =  2 , is Optimal
      lb =  530.0                  ub =  530.0
       MPObj =  530.0     MP_delete_Hua_Obj =  298.0       Hua =  232.0       SPObj =  298.0       MP_SP_Obj =  232.0         Deter_SP_Obj =  232.0

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:  6.0   p_i:  28.0    aI_i:  55.0      sol_a_i:  55.0  sol_g_i:  0.0    d_i:  63.0    sol_taoi:  55.0    sol_deltai:  63.0  sol_deltai - sol_taoi:  8.0    sol_taoP:  55.0  sol_deltaP:  59.0    sol_deltaP - sol_taoP:  4.0  cI_i:  2094947.0    sol_c_i:  2094947.0    sol_gp_i:  0.0  total work:  2109152.0    wasted work:  0.05387947383593027
    i:  1.0  l_i:  6.0   p_i:  28.0    aI_i:  20.0      sol_a_i:  20.0  sol_g_i:  0.0    d_i:  28.0    sol_taoi:  20.0    sol_deltai:  28.0  sol_deltai - sol_taoi:  8.0    sol_taoP:  20.0  sol_deltaP:  22.0    sol_deltaP - sol_taoP:  2.0  cI_i:  2103876.0    sol_c_i:  2103876.0    sol_gp_i:  0.0  total work:  2636440.0    wasted work:  2.0200118341399764
    i:  2.0  l_i:  6.0   p_i:  18.0    aI_i:  23.0      sol_a_i:  23.0  sol_g_i:  0.0    d_i:  49.0    sol_taoi:  23.0    sol_deltai:  49.0  sol_deltai - sol_taoi:  26.0  sol_taoP:  23.0  sol_deltaP:  31.0    sol_deltaP - sol_taoP:  8.0  cI_i:  6799974.0    sol_c_i:  6799974.0    sol_gp_i:  0.0  total work:  6986566.0    wasted work:  0.7077422585000986
    i:  3.0  l_i:  7.0   p_i:  11.0    aI_i:  34.0      sol_a_i:  34.0  sol_g_i:  0.0    d_i:  42.0    sol_taoi:  34.0    sol_deltai:  42.0  sol_deltai - sol_taoi:  8.0    sol_taoP:  34.0  sol_deltaP:  35.0    sol_deltaP - sol_taoP:  1.0  cI_i:  1978935.0    sol_c_i:  1978935.0    sol_gp_i:  0.0  total work:  2109152.0    wasted work:  0.49391224530048095
    i:  4.0  l_i:  5.0   p_i:  6.0   aI_i:  24.0      sol_a_i:  24.0  sol_g_i:  0.0    d_i:  42.0    sol_taoi:  24.0    sol_deltai:  39.0  sol_deltai - sol_taoi:  15.0  sol_taoP:  24.0    sol_deltaP:  32.0    sol_deltaP - sol_taoP:  8.0  cI_i:  3727432.0    sol_c_i:  3727432.0    sol_gp_i:  0.0  total work:  3954660.0    wasted work:  0.8618743457086071
    i:  5.0  l_i:  4.0   p_i:  0.0   aI_i:  1.0       sol_a_i:  1.0   sol_g_i:  0.0    d_i:  18.0    sol_taoi:  1.0   sol_deltai:  11.0  sol_deltai - sol_taoi:  10.0  sol_taoP:  1.0   sol_deltaP:  5.0   sol_deltaP - sol_taoP:  4.0  cI_i:  2561723.0    sol_c_i:  2561723.0    sol_gp_i:  0.0  total work:  2636440.0    wasted work:  0.28340110148533626
    i:  6.0  l_i:  6.0   p_i:  0.0   aI_i:  42.0      sol_a_i:  42.0  sol_g_i:  0.0    d_i:  74.0    sol_taoi:  42.0    sol_deltai:  66.0  sol_deltai - sol_taoi:  24.0  sol_taoP:  42.0    sol_deltaP:  48.0    sol_deltaP - sol_taoP:  6.0  cI_i:  6213536.0    sol_c_i:  6213536.0    sol_gp_i:  0.0  total work:  6327456.0    wasted work:  0.4320978288904735
Time: 28.000000
```