```
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=51603

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_9_2.xlsx  instance by ECCG for deterministic model

Set parameter MIPGap to value 0.01
        Master protblem status =  2 , is Optimal and MP obj =  467.0
The initial lb =  -inf        ub =  inf

The current iteration cnt =  0
        The SP model was solved Optimal 2 and SPObj =  467.0
        Deterministic Sub problem Status=  2 , is Optimal
        Master protblem status =  2 , is Optimal
        lb =  847.0                   ub =  847.0
         MPObj =  847.0      MP_delete_Hua_Obj =  467.0        Hua =  380.0        SPObj =  467.0        MP_SP_Obj =  380.0          Deter_SP_Obj =  380.0

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:  4.0   p_i:  21.0    al_i:  65.0       sol_a_i:  65.0  sol_g_i:  0.0    d_i:  74.0    sol_taoi:  65.0    sol_deltai:  74.0  sol_deltai - sol_taoi:  9.0    sol_taoP:  65.0  sol_deltaP:  67.0     sol_deltaP - sol_taoP:  2.0  cl_i:  2306928.0     sol_c_i:  2306928.0    sol_gp_i:  0.0  total work:  2504618.0    wasted work:  0.749836901275963
     i:  1.0  l_i:  4.0   p_i:  25.0    al_i:  6.0        sol_a_i:  6.0   sol_g_i:  0.0    d_i:  16.0    sol_taoi:  6.0    sol_deltai:  16.0  sol_deltai - sol_taoi:  10.0   sol_taoP:  6.0    sol_deltaP:  8.0    sol_deltaP - sol_taoP:  2.0  cl_i:  2452992.0     sol_c_i:  2452992.0    sol_gp_i:  0.0  total work:  3163728.0    wasted work:  2.6958170866774895
     i:  2.0  l_i:  7.0   p_i:  18.0    al_i:  8.0        sol_a_i:  8.0   sol_g_i:  0.0    d_i:  24.0    sol_taoi:  8.0    sol_deltai:  24.0  sol_deltai - sol_taoi:  16.0   sol_taoP:  8.0    sol_deltaP:  13.0     sol_deltaP - sol_taoP:  5.0  cl_i:  3969979.0     sol_c_i:  3969979.0    sol_gp_i:  0.0  total work:  4218304.0    wasted work:  0.9418951313134378
     i:  3.0  l_i:  4.0   p_i:  17.0    al_i:  65.0       sol_a_i:  65.0  sol_g_i:  0.0    d_i:  73.0    sol_taoi:  65.0    sol_deltai:  73.0  sol_deltai - sol_taoi:  8.0    sol_taoP:  65.0  sol_deltaP:  68.0     sol_deltaP - sol_taoP:  3.0  cl_i:  1963640.0     sol_c_i:  1963640.0    sol_gp_i:  0.0  total work:  1977330.0    wasted work:  0.051926082141069016
     i:  4.0  l_i:  6.0   p_i:  12.0    al_i:  11.0       sol_a_i:  11.0  sol_g_i:  0.0    d_i:  25.0    sol_taoi:  11.0    sol_deltai:  25.0  sol_deltai - sol_taoi:  14.0   sol_taoP:  11.0  sol_deltaP:  14.0     sol_deltaP - sol_taoP:  3.0  cl_i:  3679063.0     sol_c_i:  3679063.0    sol_gp_i:  0.0  total work:  3822838.0    wasted work:  0.5453376522886924
     i:  5.0  l_i:  5.0   p_i:  7.0   al_i:  38.0       sol_a_i:  38.0  sol_g_i:  0.0    d_i:  53.0    sol_taoi:  38.0    sol_deltai:  50.0  sol_deltai - sol_taoi:  12.0   sol_taoP:  38.0     sol_deltaP:  42.0     sol_deltaP - sol_taoP:  4.0  cl_i:  2903940.0     sol_c_i:  2903940.0    sol_gp_i:  0.0  total work:  3691016.0    wasted work:  2.985374216746825
     i:  6.0  l_i:  4.0   p_i:  13.0    al_i:  61.0       sol_a_i:  61.0  sol_g_i:  0.0    d_i:  79.0    sol_taoi:  61.0    sol_deltai:  77.0  sol_deltai - sol_taoi:  16.0   sol_taoP:  61.0  sol_deltaP:  66.0     sol_deltaP - sol_taoP:  5.0  cl_i:  4137393.0     sol_c_i:  4137393.0    sol_gp_i:  0.0  total work:  4218304.0    wasted work:  0.3068949037338229
     i:  7.0  l_i:  6.0   p_i:  7.0   al_i:  53.0       sol_a_i:  53.0  sol_g_i:  0.0    d_i:  68.0    sol_taoi:  53.0    sol_deltai:  67.0  sol_deltai - sol_taoi:  14.0   sol_taoP:  53.0     sol_deltaP:  55.0     sol_deltaP - sol_taoP:  2.0  cl_i:  3534144.0     sol_c_i:  3534144.0    sol_gp_i:  0.0  total work:  3691016.0    wasted work:  0.5950144892354842
     i:  8.0  l_i:  7.0   p_i:  0.0   al_i:  42.0       sol_a_i:  42.0  sol_g_i:  0.0    d_i:  64.0    sol_taoi:  42.0    sol_deltai:  61.0  sol_deltai - sol_taoi:  19.0   sol_taoP:  42.0     sol_deltaP:  47.0     sol_deltaP - sol_taoP:  5.0  cl_i:  4756792.0     sol_c_i:  4756792.0    sol_gp_i:  0.0  total work:  5272880.0    wasted work:  1.9575184718787455
Time: 46.000000
```