```
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=46128

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_8_7.xlsx  instance by ECCG for deterministic model

Set parameter MIPGap to value 0.01
      Master protblem status =  2 , is Optimal and MP obj =  378.0
The initial lb =  -inf       ub =  inf

The current iteration cnt =  0
      The SP model was solved Optimal 2 and SPObj =  378.0
      Deterministic Sub problem Status=  2 , is Optimal
      Master protblem status =  2 , is Optimal
      lb =  649.0                  ub =  649.0
       MPObj =  649.0     MP_delete_Hua_Obj =  378.0       Hua =  271.0       SPObj =  378.0       MP_SP_Obj =  271.0         Deter_SP_Obj =  271.0

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:  12.0    aI_i:  24.0      sol_a_i:  24.0  sol_g_i:  0.0    d_i:  42.0    sol_taoi:  24.0    sol_deltai:  42.0  sol_deltai - sol_taoi:  18.0  sol_taoP:  24.0  sol_deltaP:  31.0    sol_deltaP - sol_taoP:  7.0  cI_i:  4508441.0    sol_c_i:  4508441.0    sol_gp_i:  0.0  total work:  4613770.0    wasted work:  0.399512221025322
    i:  1.0  l_i:  5.0   p_i:  6.0  aI_i:  36.0      sol_a_i:  36.0  sol_g_i:  0.0    d_i:  55.0    sol_taoi:  36.0    sol_deltai:  55.0  sol_deltai - sol_taoi:  19.0  sol_taoP:  36.0    sol_deltaP:  43.0    sol_deltaP - sol_taoP:  7.0  cI_i:  4907076.0    sol_c_i:  4907076.0    sol_gp_i:  0.0  total work:  5009236.0    wasted work:  0.3874922243631564
    i:  2.0  l_i:  6.0   p_i:  0.0  aI_i:  47.0      sol_a_i:  47.0  sol_g_i:  0.0    d_i:  73.0    sol_taoi:  47.0    sol_deltai:  73.0  sol_deltai - sol_taoi:  26.0  sol_taoP:  47.0    sol_deltaP:  54.0    sol_deltaP - sol_taoP:  7.0  cI_i:  6632534.0    sol_c_i:  6632534.0    sol_gp_i:  0.0  total work:  7382032.0    wasted work:  2.842841103912852
    i:  3.0  l_i:  6.0   p_i:  6.0  aI_i:  14.0      sol_a_i:  14.0  sol_g_i:  0.0    d_i:  33.0    sol_taoi:  14.0    sol_deltai:  33.0  sol_deltai - sol_taoi:  19.0  sol_taoP:  14.0    sol_deltaP:  22.0    sol_deltaP - sol_taoP:  8.0  cI_i:  4878594.0    sol_c_i:  4878594.0    sol_gp_i:  0.0  total work:  5141058.0    wasted work:  0.9955242675729392
    i:  4.0  l_i:  5.0   p_i:  18.0    aI_i:  21.0      sol_a_i:  21.0  sol_g_i:  0.0    d_i:  31.0    sol_taoi:  21.0    sol_deltai:  31.0  sol_deltai - sol_taoi:  10.0  sol_taoP:  21.0  sol_deltaP:  23.0    sol_deltaP - sol_taoP:  2.0  cI_i:  2411686.0    sol_c_i:  2411686.0    sol_gp_i:  0.0  total work:  2636440.0    wasted work:  0.8524904795861086
    i:  5.0  l_i:  6.0   p_i:  0.0  aI_i:  14.0      sol_a_i:  14.0  sol_g_i:  0.0    d_i:  44.0    sol_taoi:  14.0    sol_deltai:  39.0  sol_deltai - sol_taoi:  25.0  sol_taoP:  14.0    sol_deltaP:  23.0    sol_deltaP - sol_taoP:  9.0  cI_i:  6437196.0    sol_c_i:  6437196.0    sol_gp_i:  0.0  total work:  6591100.0    wasted work:  0.5837568842833518
    i:  6.0  l_i:  6.0   p_i:  23.0    aI_i:  25.0      sol_a_i:  25.0  sol_g_i:  0.0    d_i:  53.0    sol_taoi:  25.0    sol_deltai:  51.0  sol_deltai - sol_taoi:  26.0  sol_taoP:  25.0  sol_deltaP:  33.0    sol_deltaP - sol_taoP:  8.0  cI_i:  6773675.0    sol_c_i:  6773675.0    sol_gp_i:  0.0  total work:  7118388.0    wasted work:  1.3074941967198193
    i:  7.0  l_i:  4.0   p_i:  18.0    aI_i:  37.0      sol_a_i:  37.0  sol_g_i:  0.0    d_i:  55.0    sol_taoi:  37.0    sol_deltai:  54.0  sol_deltai - sol_taoi:  17.0  sol_taoP:  37.0  sol_deltaP:  42.0    sol_deltaP - sol_taoP:  5.0  cI_i:  4218567.0    sol_c_i:  4218567.0    sol_gp_i:  0.0  total work:  4481948.0    wasted work:  0.999002442687867
Time: 69.000000
```