```
 1  "E:\1 □□□□\3 □□□□□\1 □□□□□□\1 □□□□□□□□\1_□□□□□□_□□□□\1_LW_□□□□\4 □□□□\3 python_code\1 exzample\2 □□□□□□\9 Code for
    this paper\Scripts\python.exe" "D:\Python\Pycharm\setroute\PyCharm Community Edition 2021.2.3\plugins\python-ce\helpers\pydev\pydevconsole.py" --mode=
    client --port=28322
 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_□□□□\\4 □□□□\\3 python_code\\9 Code for this
    paper', 'E:/1 □□□□/3 □□□□□/1 □□□□□□/1 □□□□□□□□/1_□□□□□□_□□□□/1_LW_□□□□/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_□□□□/4 □□□□/3 python_code/9 Code for this paper/
    main_RO_CCG_ExtendedByMe.py', wdir='E:/1 □□□□/3 □□□□□/1 □□□□□□/1 □□□□□□□□/1_□□□□□□_□□□□/1_LW_□□□□/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_6_1.xlsx instance by ECCG
14
15      Master protblem status = 2 , is Optimal and MP obj = 203.0
16  The initial lb = -inf      ub = inf
17
18  The current iteration cnt = 0
19      The SP model was solved Optimal 2 and SPObj = 203.0
20      Deterministic Sub problem Status= 2 , is Optimal
21      Master protblem status = 2 , is Optimal
22      lb = 336.0              ub = 336.0
23       MPObj = 336.0    MP_delete_Hua_Obj = 212.0      Hua = 124.0     SPObj = 203.0      Deter_SP_Obj = 124.0
24
25  ub - lb = 0.0
26
27  Iteration cycle stopped by termination criterion 1: Because ub - lb <= eps, the iteration stop, and cnt = 0
28    i: 0.0  l_i: 5.0  p_i: 20.0  al_i: 2.0      sol_a_i: 2.0  sol_g_i: 0.0  d_i: 11.0  sol_taoi: 2.0  sol_deltai: 11.0 sol_deltai - sol_taoi: 9.0   sol_taoP: 2
    .0   sol_deltaP: 4.0  sol_deltaP - sol_taoP: 2.0  cl_i: 2292581.0    sol_c_i: 2292581.0  sol_gp_i: 0.0  total work: 2636440.0   wasted work: 1.
    3042549802005734
29    i: 1.0  l_i: 6.0  p_i: 14.0  al_i: 7.0      sol_a_i: 7.0  sol_g_i: 0.0  d_i: 27.0  sol_taoi: 7.0  sol_deltai: 27.0 sol_deltai - sol_taoi: 20.0 sol_taoP: 7
    .0   sol_deltaP: 11.0   sol_deltaP - sol_taoP: 4.0  cl_i: 5270879.0    sol_c_i: 5270879.0  sol_gp_i: 0.0  total work: 5272880.0   wasted work: 0.
    0075897801580919173
30    i: 2.0  l_i: 7.0  p_i: 7.0  al_i: 2.0      sol_a_i: 2.0  sol_g_i: 0.0  d_i: 15.0  sol_taoi: 2.0  sol_deltai: 15.0 sol_deltai - sol_taoi: 13.0 sol_taoP: 2.0
    sol_deltaP: 6.0  sol_deltaP - sol_taoP: 4.0  cl_i: 3408100.0    sol_c_i: 3408100.0  sol_gp_i: 0.0  total work: 3427372.0   wasted work: 0.
    07309857231721564
31    i: 3.0  l_i: 4.0  p_i: 20.0  al_i: 22.0      sol_a_i: 22.0 sol_g_i: 0.0  d_i: 50.0  sol_taoi: 22.0  sol_deltai: 50.0 sol_deltai - sol_taoi: 28.0 sol_taoP
    : 22.0 sol_deltaP: 27.0   sol_deltaP - sol_taoP: 5.0  cl_i: 7366651.0    sol_c_i: 7366651.0  sol_gp_i: 0.0  total work: 7382032.0   wasted work: 0.
    05834003428866198
32    i: 4.0  l_i: 5.0  p_i: 0.0  al_i: 23.0      sol_a_i: 24.0 sol_g_i: 0.2  d_i: 62.0  sol_taoi: 24.0    sol_deltai: 43.0 sol_deltai - sol_taoi: 19.0 sol_taoP:
    24.0    sol_deltaP: 30.0    sol_deltaP - sol_taoP: 6.0  cl_i: 4857867.0    sol_c_i: 5536523.800000001    sol_gp_i: 0.4290234811589375   total work:
    5536524.0   wasted work: 7.585987136249713e-07
33    i: 5.0  l_i: 6.0  p_i: 5.0  al_i: 30.0      sol_a_i: 38.0 sol_g_i: 1.0  d_i: 70.0  sol_taoi: 38.0    sol_deltai: 66.0 sol_deltai - sol_taoi: 28.0 sol_taoP:
    38.0    sol_deltaP: 46.0    sol_deltaP - sol_taoP: 8.0  cl_i: 7318466.0    sol_c_i: 7928256.0  sol_gp_i: 0.7709765188410624   total work: 8172964.0
    wasted work: 0.928175873526422
34  Time: 29.000000
35
36
37
38
```