```
runfile('C:/Users/elena/Documents/Thesis/Python/Bales_example.py',
wdir='C:/Users/elena/Documents/Thesis/Python')

Find the optimal solution of the Beale's problem  with the simplex method:


        COMPUTATION OF SIMPLEX ALGORITHM:


with the Bland's rule:

        Iteration: 1

Current x: [0. 0. 0. 0. 0. 0. 1.]
Current B: [0, 5, 6]

        Iteration: 2

Current x: [0. 0. 0. 0. 0. 0. 1.]
Current B: [0, 1, 6]

        Iteration: 3

Current x: [0. 0. 0. 0. 0. 0. 1.]
Current B: [2, 1, 6]

        Iteration: 4

Current x: [0. 0. 0. 0. 0. 0. 1.]
Current B: [2, 3, 6]

        Iteration: 5

Current x: [0.016 0.    1.    0.004 0.    0.    0.   ]
Current B: [2, 3, 0]

        Iteration: 6

Current x: [0.04 0.   1.   0.   0.03 0.   0.  ]
Current B: [2, 4, 0]

        Iteration: 7
----------------------------------------
| Found optimal solution at x* =       |
| [0.04 0.   1.   0.   0.03 0.   0.  ] |
|                                      |
| Basis indexes: {0, 2, 4}             |
| Nonbasis indexes: {1, 3, 5, 6}       |
| Optimal cost: -0.05                  |
| Number of iteration: 7.              |
----------------------------------------
```

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COMPUTATION OF SIMPLEX ALGORITHM:

without the Bland's rule:

Iteration: 1

Current x: [0. 0. 0. 0. 0. 0. 1.]
Current B: [0, 5, 6]

Iteration: 2

Current x: [0. 0. 0. 0. 0. 0. 1.]
Current B: [0, 1, 6]

Iteration: 3

Current x: [0. 0. 0. 0. 0. 0. 1.]
Current B: [2, 1, 6]

Iteration: 4

Current x: [0. 0. 0. 0. 0. 0. 1.]
Current B: [2, 3, 6]

Iteration: 5

Current x: [0. 0. 0. 0. 0. 0. 1.]
Current B: [4, 3, 6]

Iteration: 6

Current x: [0. 0. 0. 0. 0. 0. 1.]
Current B: [4, 5, 6]

Iteration: 7

Current x: [0. 0. 0. 0. 0. 0. 1.]
Current B: [0, 5, 6]

Iteration: 8

Current x: [0. 0. 0. 0. 0. 0. 1.]
Current B: [0, 1, 6]

Iteration: 9

Current x: [0. 0. 0. 0. 0. 0. 1.]
Current B: [2, 1, 6]

Iteration: 10

Current x: [0. 0. 0. 0. 0. 0. 1.]
Current B: [2, 3, 6]

```
        Iteration: 11

Current x: [0. 0. 0. 0. 0. 0. 1.]
Current B: [4, 3, 6]

        Iteration: 12

Current x: [0. 0. 0. 0. 0. 0. 1.]
Current B: [4, 5, 6]

        Iteration: 13

Current x: [0. 0. 0. 0. 0. 0. 1.]
Current B: [0, 5, 6]

        Iteration: 14

Current x: [0. 0. 0. 0. 0. 0. 1.]
Current B: [0, 1, 6]

        Iteration: 15

Current x: [0. 0. 0. 0. 0. 0. 1.]
Current B: [2, 1, 6]

Traceback (most recent call last):

TimeoutError: The problem is not solved after 15 iterations.
```