<untitled> #35

MODELS
Model-01   Flashlight
Model-02   Radio
Model-03   Toy Car
Model-04   Ball Point Pen

If model-01 is disassemble in line -- 1; otherwise -- 0 = 1
If model-02 is disassemble in line -- 1; otherwise -- 0 = 0
If model-03 is disassemble in line -- 1; otherwise -- 0 = 1
If model-04 is disassemble in line -- 1; otherwise -- 0 = 1

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Warning: your license will expire in 3 days
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Academic license - for non-commercial use only
Gurobi Optimizer version 9.0.3 build v9.0.3rc0 (win64)
Optimize a model with 79930 rows, 6201 columns and 399696 nonzeros
Model fingerprint: 0xdb25ad08
Variable types: 127 continuous, 6074 integer (6074 binary)
Coefficient statistics:
  Matrix range     [1e+00, 1e+05]
  Objective range  [2e-06, 1e+00]
  Bounds range     [1e+00, 1e+00]
  RHS range        [1e+00, 3e+05]
Presolve removed 65708 rows and 2507 columns
Presolve time: 2.02s
Presolved: 14222 rows, 3694 columns, 69812 nonzeros
Variable types: 113 continuous, 3581 integer (3581 binary)
Found heuristic solution: objective 3.0123700

Root relaxation: objective 3.009370e+00, 131 iterations, 0.02 seconds

    Nodes    |    Current Node    |     Objective Bounds      |     Work
 Expl Unexpl |  Obj  Depth IntInf | Incumbent    BestBd   Gap | It/Node Time

     0     0    3.00937    0    7    3.01237    3.00937  0.10%     -    2s
H    0     0                       3.0113700    3.00937  0.07%     -    2s
     0     0    3.00937    0   28    3.01137    3.00937  0.07%     -    2s
H    0     0                       3.0103700    3.00937  0.03%     -    2s
     0     0    3.00937    0   24    3.01037    3.00937  0.03%     -    2s
     0     0     cutoff    0         3.01037    3.01037  0.00%     -    2s

Cutting planes:
  Learned: 9
  Gomory: 6
  Cover: 9
  Implied bound: 3
  Clique: 9
  MIR: 14
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  StrongCG: 2
  Flow cover: 1
  GUB cover: 1
  Mod-K: 1
  RLT: 2
  Relax-and-lift: 4

Explored 1 nodes (467 simplex iterations) in 2.81 seconds
Thread count was 4 (of 4 available processors)

Solution count 3: 3.01037 3.01137 3.01237

Optimal solution found (tolerance 1.00e-04)
Best objective 3.010370000000e+00, best bound 3.010370000000e+00, gap 0.0000%
<gurobi.Model MIP instance MILP Model: 79930 constrs, 6201 vars, No parameter changes>

Solution Results

Time =  9.66370439529419 second
Total number of stations opened from both sides         :        2.0
Total number of stations opened from only one side      :        1.0
Total number of stations opened                         :        5.0
#### MODEL- m3  ####
(m, i)           (j,s)           Processing Time         Starting Time   Ending Time
('m3', 2)  :     [(1, 1)]        3                       0.0             3.0
('m3', 7)  :     [(1, 1)]        37                      3.0             40.0
('m3', 13) :     [(3, 1)]        2                       28.0            30.0
('m3', 33) :     [(3, 1)]        10                      30.0            40.0
('m3', 49) :     [(2, 2)]        34                      0.0             34.0
('m3', 74) :     [(3, 1)]        11                      0.0             11.0
('m3', 96) :     [(3, 2)]        29                      11.0            40.0
('m3', 97) :     [(3, 1)]        14                      11.0            25.0
#### MODEL- m1  ####
(m, i)           (j,s)           Processing Time         Starting Time   Ending Time
('m1', 1)  :     [(1, 1)]        30                      10.0            40.0
('m1', 3)  :     [(3, 2)]        12                      0.0             12.0
('m1', 6)  :     [(3, 1)]        21                      19.0            40.0
('m1', 7)  :     [(3, 2)]        6                       12.0            18.0
('m1', 9)  :     [(2, 2)]        25                      0.0             25.0
('m1', 10) :     [(3, 1)]        10                      9.0             19.0
#### MODEL- m4  ####
(m, i)           (j,s)           Processing Time         Starting Time   Ending Time
('m4', 1)  :     [(1, 1)]        5                       0.0             5.0
('m4', 4)  :     [(1, 2)]        7                       22.0            29.0
('m4', 6)  :     [(1, 2)]        11                      29.0            40.0
('m4', 9)  :     [(1, 2)]        16                      5.0             21.0
('m4', 11) :     [(3, 1)]        33                      6.0             39.0
('m4', 13) :     [(3, 1)]        6                       0.0             6.0
('m4', 17) :     [(3, 2)]        16                      6.0             22.0
('m4', 18) :     [(2, 2)]        32                      0.0             32.0
```