Load a Excel data file

Excel file required in format 'xlsx'

Drag and drop file here
Limit 200MB per file

Browse files

06-long-term-planning-SA.xlsx
32.9KB

See the Yumbo GitHub repository for sample Excel input files.

Planing horizon

Today: 2024-11-20

Tomorrow: 2024-11-21

Last day: 2025-08-29

Number of days: 282

Report layout

Show experts overview?

Number of columns

5

Task's Gantt chart

Tasks per day

Hours per day stacked

Hours per day

Invoice period workload

Look and feel

Show Charts

Show Table

Show Commitment

Expert	Charts	Table	Commitment
Bożydar	☑	☐	☐

Date ranges

Tasks per day	2024-11-21	2024-12-11
Hours per day	2024-11-21	2024-12-11
Tasks per day stacked	2024-11-21	2024-12-11

Chart colours

Tasks per day

Hours per day

Task's Gantt Chart

Invoicing Periods Workload

Tasks definition

Name	Start	End	Work	Days	Workdays	Avg
p2.e	2024-11-21	2024-12-04	40	14	10	4.0000
p2.m	2024-12-05	2025-04-02	85	119	84	1.0119
p2.f	2025-04-03	2025-04-30	40	28	20	2.0000
p3.e	2024-12-01	2024-12-13	20	13	10	2.0000
p3.m	2024-12-14	2025-05-30	105	168	119	0.8824
p3.f	2025-05-31	2025-06-27	40	28	20	2.0000
p4.e	2024-12-16	2025-01-03	45	19	14	3.2143
p4.m	2025-01-04	2025-06-20	105	168	120	0.8750
p4.f	2025-06-21	2025-07-18	40	28	20	2.0000
p5.e	2024-12-31	2025-01-13	40	14	10	4.0000

Experts names

Name	Comment
Bożydar	Solution Architect role

Links

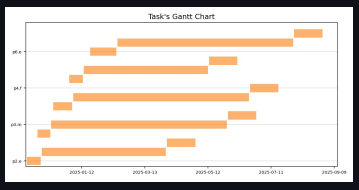
Yumbo. Scheduling, Planning and Resource Allocation

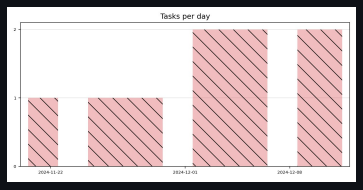
Zbigniew Romanowski, Paweł Koczyk

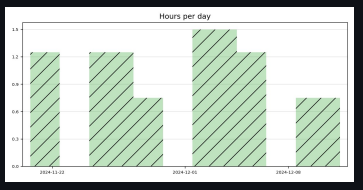
Source code, documentation and sample Excel input files can be found on Yumbo's GitHub repository.

29 January 2025, 19:02:02 PM

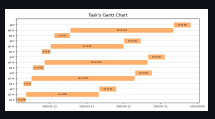
Experts overview

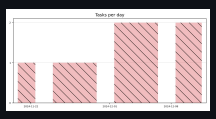


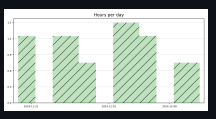




Bożydar Solution Architect role







Solver output at 29 January 2025, 19:02:02 PM

```
max_context = 2
tva cells:    0 at level 0
              26 at levels above 0
tva_hcl = 7, tva_len = 128
rewrites: m = 0, o = 26
0 variables, 0 constraints, 0 objectives
max_context = 3
tva cells:    0 at level 0
              42 at levels above 0
tva_hcl = 8, tva_len = 256
rewrites: m = 20, o = 41
8475 variables, 13942 constraints, 1 objectives
28810 nonzeros

Presolve eliminates 12824 constraints and 7330 variables.
"option presolve 10;" used, but "option presolve 3;" would suffice.
Adjusted problem:
1145 variables:
       548 binary variables
       582 integer variables
       15 linear variables
1118 constraints, all linear; 3372 nonzeros
       9 equality constraints
       1109 inequality constraints
1 linear objective; 15 nonzeros.

presolve results:
       variables omitted:   7330
       constraints omitted: 12824
       ranges relaxed:            1382
       bounds improved:     8048
       nba cycles:          2
       bound row scans:     1297
       row-scan updates:    7
SCIP 9.0.1:   tech:outlev-native = 5
LP Solver <Soplex 7.0.1>: barrier convergence tolerance cannot be set -- tolerance of SCIP and LP solver may differ
LP Solver <Soplex 7.0.1>: fastmip setting not available -- SCIP parameter has no effect
LP Solver <Soplex 7.0.1>: number of threads settings not available -- SCIP parameter has no effect
transformed problem has 1145 variables (548 bin, 582 int, 0 impl, 15 cont) and 1118 constraints
   1118 constraints of type <linear>

original problem has 3372 active (0.263415%) nonzeros and 3372 (0.263415%) check nonzeros

presolving:
(round 1, fast)       18 del vars, 9 del conss, 0 add conss, 3 chg bounds, 0 chg sides, 548 chg coeffs, 0 upgd conss, 0 impls, 0 clqs
(round 2, exhaustive) 18 del vars, 9 del conss, 0 add conss, 3 chg bounds, 0 chg sides, 548 chg coeffs, 548 upgd conss, 0 impls, 0 clqs
(round 3, exhaustive) 18 del vars, 9 del conss, 0 add conss, 3 chg bounds, 0 chg sides, 548 chg coeffs, 1096 upgd conss, 548 impls, 0 clqs
   (0.0s) probing: 51/548 (9.3%) - 0 fixings, 0 aggregations, 0 implications, 0 bound changes
   (0.0s) probing aborted: 50/50 successive totally useless probings
   (0.0s) symmetry computation started: requiring (bin +, int +, cont +), (fixed: bin -, int -, cont -)
   (0.0s) symmetry computation finished: 1 generators found (max: 1500, log10 of symmetry group size: 0.3) (symcode time: 0.00)
dynamic symmetry handling statistics:
   orbitopal reduction:       no components
   orbital reduction:         no components
   lexicographic reduction:    1 permutations with support sizes 480
handled 1 out of 1 symmetry components
cons components found 7 undirected components at node 1, depth 0 (0)
clique table cleanup detected 0 bound changes

presolved problem has 1040 active (0.600993%) nonzeros and 1040 (0.600993%) check nonzeros

presolving (4 rounds: 4 fast, 3 medium, 3 exhaustive):
 726 deleted vars, 705 deleted constraints, 0 added constraints, 3 tightened bounds, 0 added holes, 0 changed sides, 548 changed coefficients
 1096 implications, 0 cliques
presolved problem has 419 variables (203 bin, 216 int, 0 impl, 0 cont) and 413 constraints
     406 constraints of type <varbound>
       7 constraints of type <linear>
Presolving Time: 0.03

 time | node  | left  |LP iter|LP it/n|mem/heur|mdpt |vars |cons |rows |cuts |sepa|confs|strbr|  dualbound   | primalbound  |  gap   | compl.
p 0.0s|     1 |     0 |     1 |     - | vbounds|   0 | 419 | 413 | 413 |   0 |  0 |   0 |   0 | 7.200545e+03 | 1.058724e+04 |  47.03%| unknown
p 0.0s|     1 |     0 |     2 |     - | vbounds|   0 | 419 | 413 | 413 |   0 |  0 |   0 |   0 | 7.200545e+03 | 9.942863e+03 |  38.08%| unknown
  0.0s|     1 |     0 |   160 |     - |    19M |   0 | 419 | 413 | 413 |   0 |  0 |   0 |   0 | 9.915745e+03 | 9.942863e+03 |   0.27%| unknown
r 0.0s|     1 |     0 |   160 |     - |randroun|   0 | 419 | 413 | 412 |   0 |  0 |   0 |   0 | 9.915745e+03 | 9.915745e+03 |   0.00%| unknown
```

```
  0.0s|     1 |     0 |   160 |     - |    19M |   0 | 419 | 413 | 412 |   0 |  0 |   0 |   0 | 9.915745e+03 | 9.915745e+03 |    0.00%| unknown
  0.0s|     1 |     0 |   160 |     - |    19M |   0 | 419 | 413 | 412 |   0 |  0 |   0 |   0 | 9.915745e+03 | 9.915745e+03 |    0.00%| unknown

SCIP Status        : problem is solved [optimal solution found]
Solving Time (sec) : 0.04
Solving Nodes      : 1
Primal Bound       : +9.91574507393737e+03 (3 solutions)
Dual Bound         : +9.91574507393737e+03
Gap                : 0.00 %
WARNING: No dual information available when presolving was performed.
max_context = 3
tva cells:    0 at level 0
              25 at levels above 0
tva_hcl = 7, tva_len = 128
rewrites: m = 20, o = 41
max_context = 3
tva cells:    0 at level 0
              25 at levels above 0
tva_hcl = 7, tva_len = 128
rewrites: m = 20, o = 41
SCIP 9.0.1: optimal solution; objective 9915.745074
157 simplex iterations
1 branching nodes
max_context = 3
tva cells:    0 at level 0
              25 at levels above 0
tva_hcl = 7, tva_len = 128
rewrites: m = 20, o = 41
max_context = 3
tva cells:    0 at level 0
              25 at levels above 0
tva_hcl = 7, tva_len = 128
rewrites: m = 20, o = 41

"option abs_boundtol 5.684341886080802e-14;"
or "option rel_boundtol 2.2179403870163295e-16;"
will change deduced dual values.
```

Statistics on chart creation

Chart title	Chart short name	Number of calls	Total time [s]	Average time [s]	Total nbytes	Average nbytes
Task's Gantt Chart	gimg	1	0.176	0.176	8036	8036
Hours per day (Summary)	himgsum	1	0.165	0.165	6380	6380
Hours per day stacked	simg	1	0.163	0.163	4592	4592
Tasks per day (Summary)	timgsum	1	0.155	0.155	5030	5030
Hours per day	himg	1	0.141	0.141	6380	6380
Tasks per day	timg	1	0.138	0.138	5030	5030
Task's Gantt Chart (Summary)	gimgsum	1	0.132	0.132	3626	3626
Invoicing Periods Workload	wimg	1	0.110	0.110	4448	4448
Plot task with its constrains	bimg	0	0.000	0.000	0	0

Statistics on AMPL solution

Total elapsed time: 0.138 [s]