Yumbo. Scheduling, Planning and Resource Allocation

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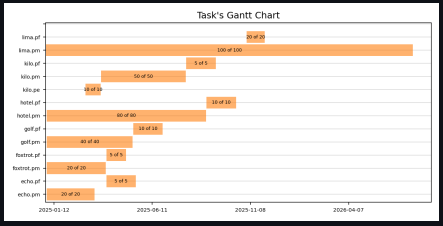
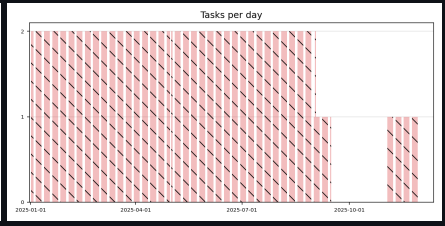
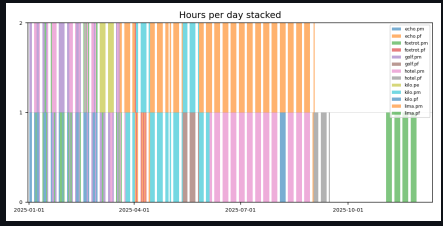
Source code, documentation and sample Excel input files can be found on Yumbo's GitHub repository.

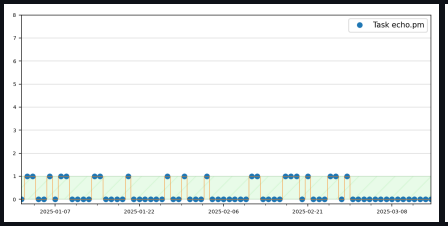
16 January 2025, 08:45:22 AM

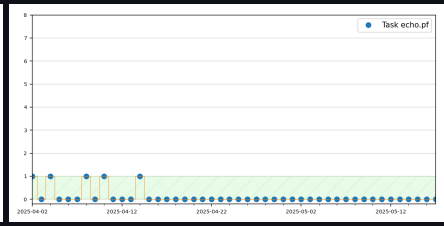
PM.Lisa the 1st unit

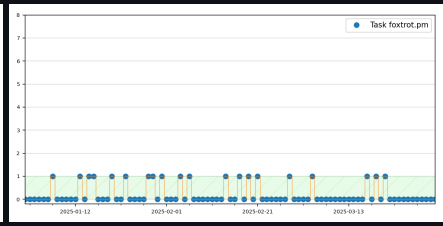


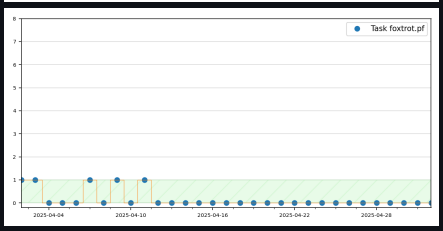


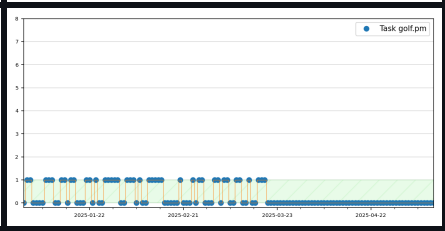


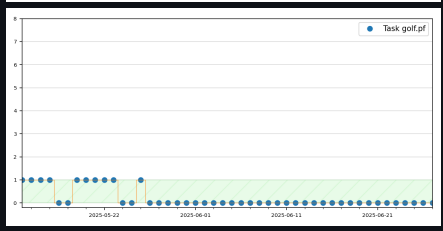


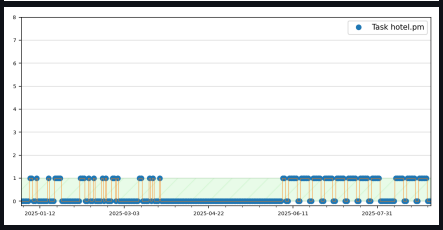


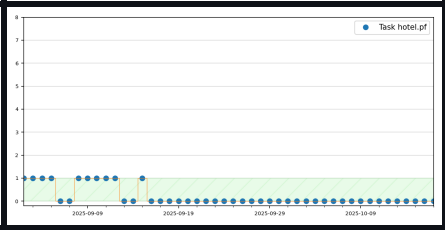


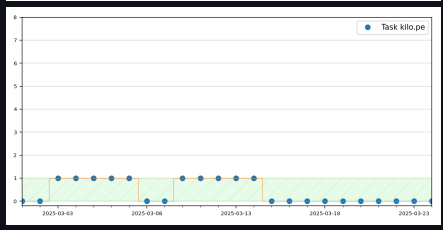


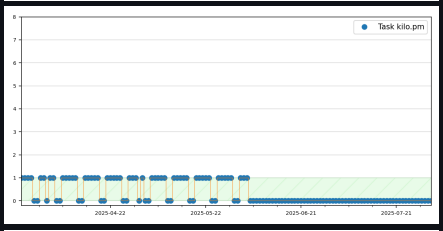


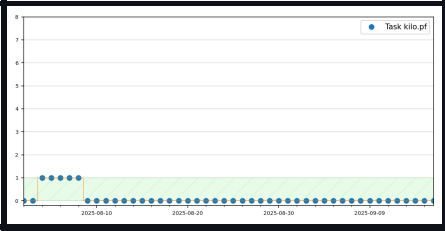


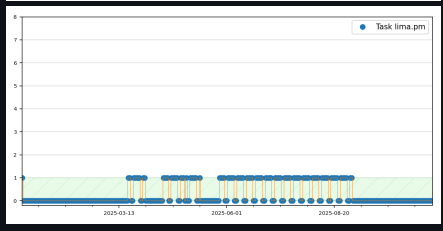


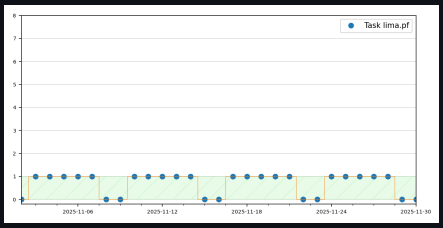












Solver output at 06 January 2025, 08:45:24 AM

```
HiGHS 1.7.1:   tech:outlev = 1
Running HiGHS 1.7.1 (git hash: dcf3811): Copyright (c) 2024 HiGHS under MIT licence terms
Coefficient ranges:
  Matrix [1e+00, 8e+00]
  Cost   [1e+00, 1e+00]
  Bound  [1e+00, 5e+01]
  RHS    [2e+00, 1e+02]
Presolving model
1915 rows, 1770 cols, 5103 nonzeros  0s
195 rows, 860 cols, 1663 nonzeros  0s
195 rows, 860 cols, 1663 nonzeros  0s

Solving MIP model with:
   195 rows
   860 cols (860 binary, 0 integer, 0 implied int., 0 continuous)
   1663 nonzeros

        Nodes      |    B&B Tree     |            Objective Bounds              |  Dynamic Constraints |       Work
     Proc. InQueue |  Leaves   Expl. | BestBound       BestSol              Gap |   Cuts   InLp Confl. |  LpIters     Time

         0       0         0   0.00%   45.01087277     inf                  inf        0       0       0        0    0.0s
 T       0       0         0   0.00%   45.01087277   1473.102637        96.94%        0       0       0      317    0.0s

Solving report
  Status            Optimal
  Primal bound      1473.102637076
  Dual bound        1473.102637076
  Gap               0% (tolerance: 0.01%)
  Solution status   feasible
                    1473.102637076 (objective)
                    0 (bound viol.)
                    0 (int. viol.)
                    0 (row viol.)
  Timing            0.01 (total)
                    0.01 (presolve)
                    0.00 (postsolve)
  Nodes             1
  LP iterations     317 (total)
                    0 (strong br.)
                    0 (separation)
                    0 (heuristics)
HiGHS 1.7.1: optimal solution; objective 1473.102637
317 simplex iterations
1 branching nodes

"option abs_boundtol 7.105427357601002e-15;"
or "option rel_boundtol 1.5730624397762519e-16;"
will change deduced dual values.
```

Load a Excel data file

Excel file required in format 'xlsx'

Drag and drop file here

Limit 200MB per file

Browse files

12-PM.Lisa.xlsx 47.2KB

See the Yumbo's GitHub repository for sample Excel input files.

Show skipped items in Excel input file?

Today: 2024-12-30

Python date format: %Y-%m-%d

Hours per day: 8

Customise report

Number of columns: 3

Col 1: Task's Gantt chart

Col 2: Tasks per day

Col 3: Hours per day stacked

Col 4: Hours per day

Show all experts?

Expert	Show?	Table?	Commitment?
PM.Lisa	☑	☐	☑

Show experts overview?

Tasks definition

Name	Start day	End day	Work	Days	Workdays	Avg
foxtrot.pf	2025-04-02	2025-05-02	5	31	22	0.23
golf.pm	2025-01-01	2025-05-12	40	132	92	0.43
golf.pf	2025-05-13	2025-06-27	10	46	34	0.29
hotel.pm	2025-01-01	2025-09-01	80	244	172	0.47
hotel.pf	2025-09-02	2025-10-17	10	46	34	0.29
kilo.pe	2025-03-01	2025-03-24	10	24	16	0.62
kilo.pm	2025-03-25	2025-08-01	50	130	93	0.54
kilo.pf	2025-08-02	2025-09-16	5	46	32	0.16
lima.pm	2024-12-31	2025-11-01	100	501	355	0.25
lima.pf	2025-11-02	2025-11-30	20	29	20	1.00

Experts names

Name	Comment
PM.Lisa	the 1st unit

Links

Expert	Task
PM.Lisa	echo.pm
PM.Lisa	echo.pf
PM.Lisa	foxtrot.pm
PM.Lisa	foxtrot.pf
PM.Lisa	golf.pm
PM.Lisa	golf.pf
PM.Lisa	hotel.pm
PM.Lisa	hotel.pf
PM.Lisa	kilo.pe
PM.Lisa	kilo.pm

Bounds xbday

Expert	Task	Start day	End day	Lower	Upper
PM.Lisa	echo.pm	2025-01-01	2025-03-15	0	1
PM.Lisa	echo.pf	2025-04-02	2025-05-17	0	1
PM.Lisa	foxtrot.pm	2025-01-01	2025-04-01	0	1
PM.Lisa	foxtrot.pf	2025-04-02	2025-05-02	0	1
PM.Lisa	golf.pm	2025-01-01	2025-05-12	0	1
PM.Lisa	golf.pf	2025-05-13	2025-06-27	0	1
PM.Lisa	hotel.pm	2025-01-01	2025-09-01	0	1
PM.Lisa	hotel.pf	2025-09-02	2025-10-17	0	1
PM.Lisa	kilo.pe	2025-03-01	2025-03-24	0	1
PM.Lisa	kilo.pm	2025-03-25	2025-08-01	0	1

Bounds xbsum

Expert	Task	Start day	End day	Lower	Upper

empty

Bounds ubday

Expert	Start day	End day	Lower	Upper
PM.Lisa	2025-01-01	2025-12-11	0	2

Bounds ubsum

Expert	Task	Start day	End day	Lower	Upper

empty

Expert bounds and preferences

Expert	Start day	End day	Lower	Upper

empty

Invoicing periods

Name	Start day	End day	Days	Workdays
January.2025	2024-12-31	2025-01-15	36	22
February.2025	2025-01-16	2025-02-13	29	21
March.2025	2025-02-14	2025-03-16	31	21
April.2025	2025-03-17	2025-04-14	29	21
May.2025	2025-04-15	2025-05-18	34	23
June.2025	2025-05-19	2025-06-18	31	23
July.2025	2025-06-19	2025-07-17	29	21
August.2025	2025-07-18	2025-08-17	31	21
September.2025	2025-08-18	2025-09-15	29	21
October.2025	2025-09-16	2025-10-15	30	22

Invoicing periods bounds

Expert	Period	Lower	Upper
PM.Lisa	January.2025	0	180
PM.Lisa	February.2025	0	180
PM.Lisa	March.2025	0	180
PM.Lisa	April.2025	0	180
PM.Lisa	May.2025	0	180
PM.Lisa	June.2025	0	180
PM.Lisa	July.2025	0	180
PM.Lisa	August.2025	0	180
PM.Lisa	September.2025	0	180
PM.Lisa	October.2025	0	180