

# The resource-constrained project scheduling problem with alternative subgraphs (RCPSP-AS)

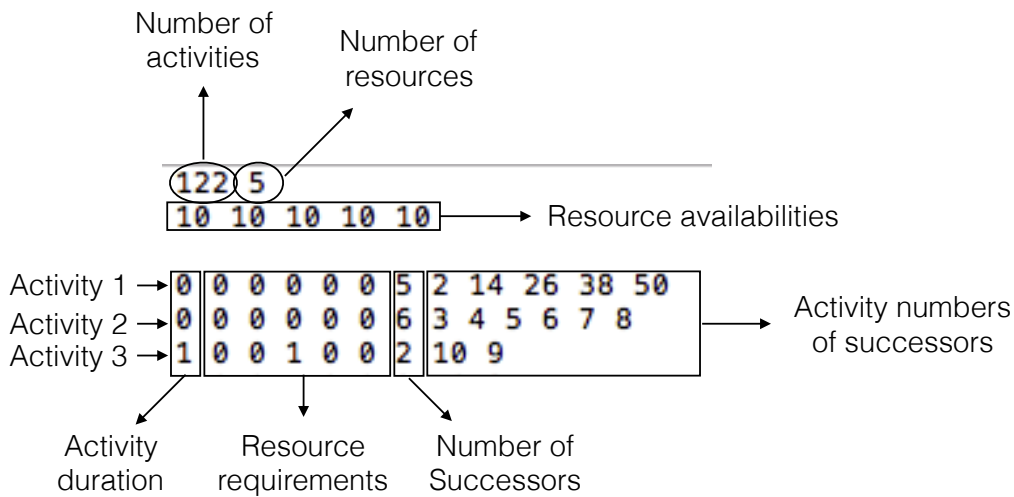
**Reference:** Servranckx, T., and Vanhoucke, M., 2019, "A tabu search procedure for the resource-constrained project scheduling problem with alternative subgraphs", *European Journal of Operational Research*, 273(3), 841–860

## Input files

Each data instance  $X$  consists of two input files: fileXa and fileXb. Additional information on the interpretation of these input files is provided in this document.

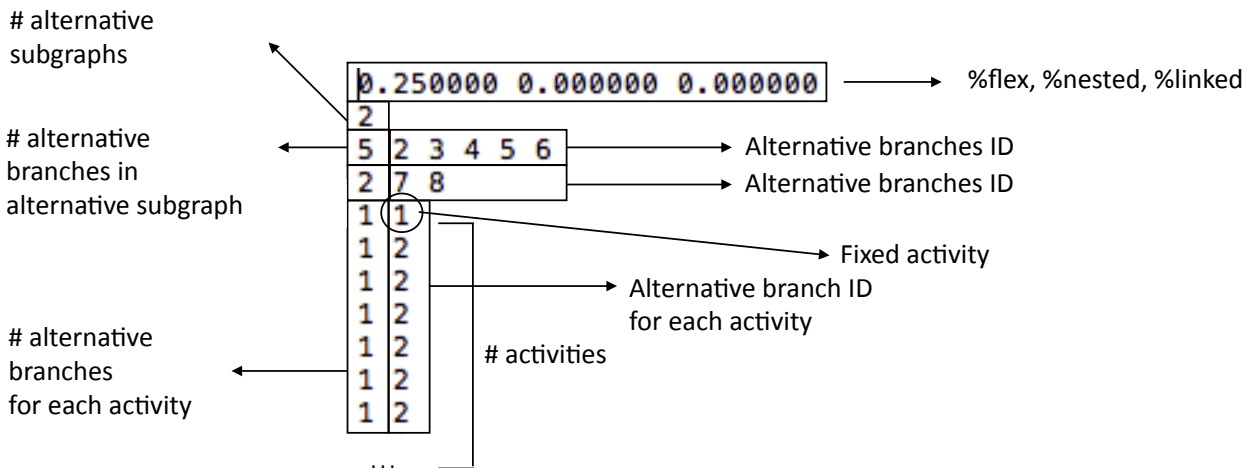
FileXa

This input file shows the overall project network of the data instance with a focus on the topological structure and resource allocation. The project network is generated using the network generator RanGen 2. An explanation of this input file is provided below:



FileXb

This input file shows the alternative project structures of the data instance by means of alternative branches and alternative subgraphs. An explanation of this input file is provided below:



# Extensions for the resource-constrained project scheduling problem with alternative subgraphs (RCPSP-AS)

**Reference:** Servranckx, T., and Vanhoucke, M., 2024, "New datasets for the resource-constrained project scheduling problem with alternative subgraphs. Working Paper Ghent University.

## Input files

On top of the two input files (fileXa and fileXb) introduced above, the extensions are modelled by means of Y additional input files (filecY) for each data instance X. These additional input files are modular and can be combined with each of the original two input files to construct a file with a unique combination of extensions (depending on the specific dataset certain combinations of extensions will be allowed/ignored). Additional information on the interpretation of these input files is provided in this document.

## FilecY

This input file shows a more complex alternative project structure of the data instance in terms of the alternative branches. An explanation of this input file is provided below:

