

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

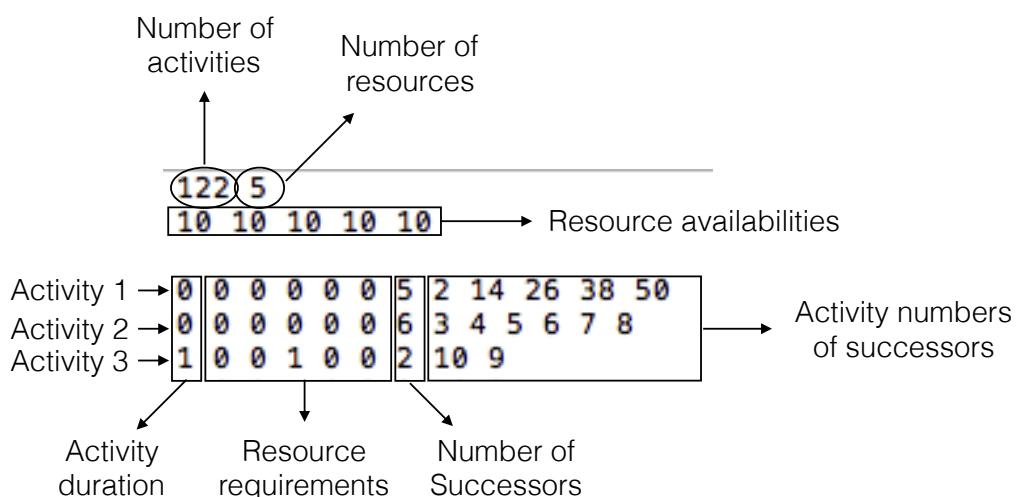
**Reference:** Servranckx, T., and Vanhoucke, M., 2019, "A tabu search procedure for the resource-constrained project scheduling problem with alternative subgraphs", European Journal of Operational Research, 273(3), 841–860

## 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.

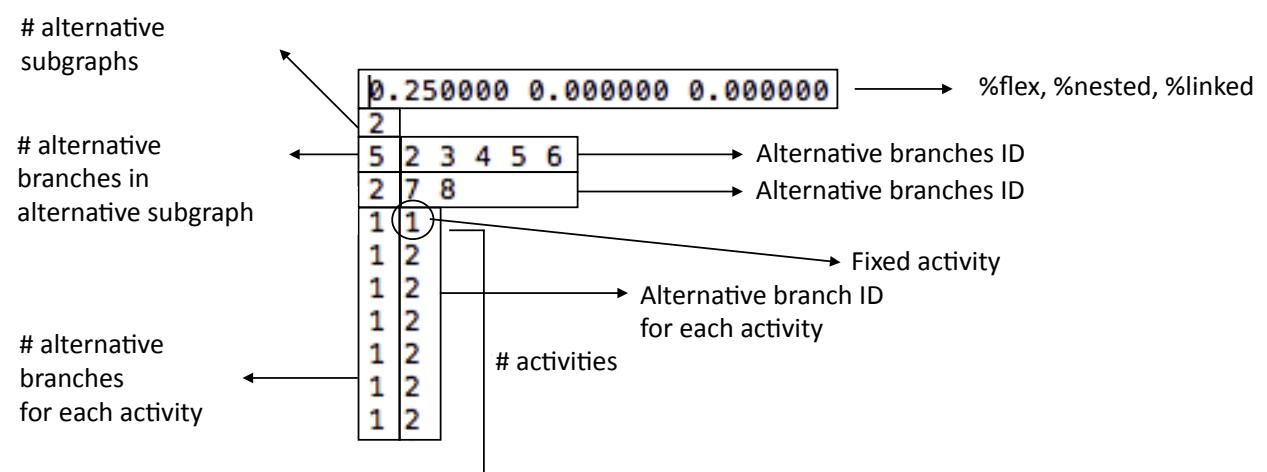
### FileXa

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:

