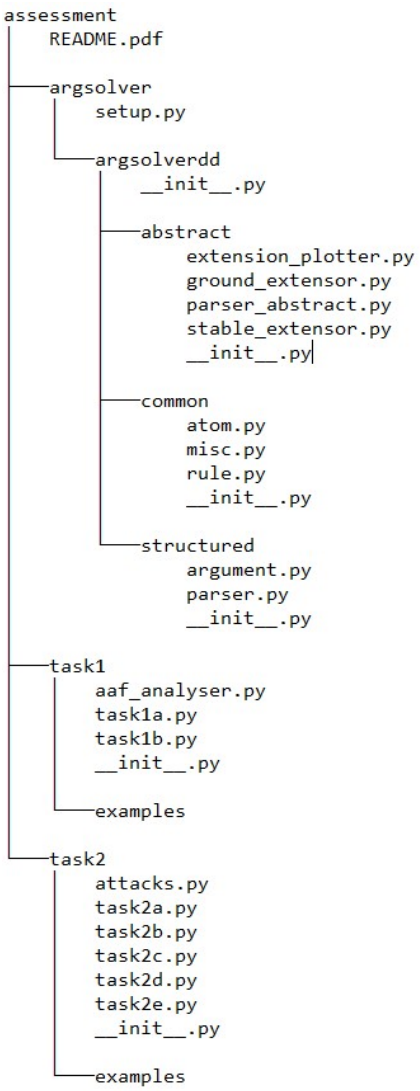
CS551K Assessment - Notes

Running the scripts

The main folder structure is presented below.



Solutions to the assessment questions can be found in folders `task1` and `task2`.

Auxiliary files for the assessment have been put into a package called `argsolverdd` (to avoid name clashes). Before running the solution scripts, please install the package as follows:

1) Navigate into folder `argsolver` (which holds the `argsolverdd` package):

   ```
   cd <path-to-the-main-folder>/argsolver
   ```

2) Install the package:

   ```
   python setup.py install
   ```

(adjusting the command to the system, e.g. swapping `python` for `python3` if needed).

After the installation, please navigate back to the main folder and then to respective solution folders.

Notes for the solutions

Task 1

The solution for task 1b was designed for a 64-bit Python version. 32-bit versions are likely to fail for larger inputs owing to memory issues.

Task 2

The recursive definition of an argument as presented in the lecture slides only allowed arguments to be constructed using other arguments. However, nothing was mentioned regarding arguments with no sub-arguments. In publications on the ASPIC framework, however, there is also a *zero-level* case for the *initial* arguments which do not rely on any other ones [1]. As the latter approach provides a clear starting point for constructing arguments, it was the one implemented in solutions to task 2. For this reason, the script outputs might slightly differ from the expected; e.g. the aforementioned approach results in 9 arguments being defined for the tandem problem, while the lecture slides defined 6 (and additional 3 implicitly). In general, the number of arguments corresponds to the number of rules in the system).

References

[1] S. Modgil and H. Prakken, Abstract rule-based argumentation. In P. Baroni, D. Gabbay, M. Giacomin & L. van der Torre (eds.): *Handbook of Formal Argumentation*, Vol. 1, pp. 286-361. London: College Publications, 2018. [PDF: http://www.cs.uu.nl/groups/IS/archive/henry/rba.pdf] (version July 4th, 2017)