

PDDL Handbook

Steps for using PDDL to solve a planning problem

1. Identify what should be included in the problem of interest
2. Choose an appropriate PDDL language
3. Choose a python-parser that supports the choice of PDDL
4. Choose a solver for the selected PDDL

Revision history

Version	Arthur	Date	Contents
0.1	Jintian Cai	2024.12.16	Draft version

Introductions to PDDL

1. The [wiki site](#) gives a good summary of all versions of PDDL, together with their variants.
 - a. The vanilla version (PDDL 1.0, or people may refer to STRIPS) is one of the most used versions of PDDL
 - b. P-PDDL and RDDDL support problems that involve uncertainties in decision making.
2. A very brief intro to PDDL: <https://www.cs.toronto.edu/~sheila/2542/s14/A1/introtopddl2.pdf>

3. Planning wiki <https://planning.wiki/> : as its name suggests.

PDDL parser

The community provides a few Python libraries for converting PDDL files into Python classes, allowing for writing/modifying content and then saving it. However, it is important to note that different parsers correspond to different PDDL levels, so caution is advised when using them.

1. <https://pypi.org/project/pddl/#description>
 - a. A library supports PDDL 3.1
2. <https://editor.planning.domains/>
 - a. An online PDDL editor that supports PDDL file writing/uploading/validating, with some online solvers and visualization tools.
3. <https://github.com/remykarem/py2pddl>
 - a. A library supports PDDL 1.2
4. <https://github.com/pucrs-automated-planning/pddl-parser?tab=readme-ov-file>
5. <https://github.com/hfoffani/pddl-lib>
6. <https://github.com/aig-upf/tarski>
 - a. I've used this library before. It did not work because of a mismatch in PDDL level with the solver.

PDDL solver

1. IPC <https://www.icaps-conference.org/competitions/>
 - a. A website that records the annual planning international competition (IPC), featuring solver records from various branches each year.
2. Fast-downward <https://www.fast-downward.org/>
 - a. A library collects many existing solvers, easy to use.
3. Online planner <https://editor.planning.domains/>
 - a. PDDL online solver

Miscellaneous

1. A guide book of RDDL https://users.cecs.anu.edu.au/~ssanner/IPPC_2011/RDDL.pdf
2. PDDL 2.1 <https://arxiv.org/abs/1106.4561>