159.372 Intelligent Machines
Assignment 2: AI Planning with STRIPS

Hans W. Guesgen

Introduction

STRIPS (Stanford Research Institute Problem Solver) was a planning system originally designed in the late sixties to serve as the high-level planner of the robot SHAKEY. It introduced many notions and ideas that have influenced AI planning, and although it is now superseded by more efficient and effective planners, it is still used widely in AI courses around the world to study the principles of AI planning.

Since STRIPS is still widely used, it is easy to find code in many languages for this planner. For this assignment, we will use the AIPython code provided on the Web:

https://artint.info/AIPython/

Task

Select one of the STRIPS planners provided in AIPython and install it on your computer. The STRIPS planners depend on other Python code in AIPython, which you need to install as well. Once you have a runnable STRIPS planner, you can continue with creating planning problems.

You are supposed to find two significantly different planning problems and represent them so that your STRIPS planner can solve them. If you have trouble thinking of an adequate problem, start with the monkey-banana problem, which belongs to the classics in AI. However, in the end you should have at least one problem that is not that obvious.

For this assignment, you are supposed to deliver the following via Stream as a ZIP file:

- A description of your STRIPS planner and the code you used to get it working.

- A description of each of the problems, including a description of the operators used to solve the problems.

- Some runtime traces that show how the planner solves these problems.