Planning is an important field in AI that combines *search* and *logic*. It focuses on finding a sequence of actions to achieve some predefined goals, or to achieve a goal state from an initial state. Each action can be undertaken under some conditions called "preconditions" and creates change or "effects" on the problem state.

This can be considered as a search problem in general and standard search techniques like BFS or A* can be applied. However one need a general framework or formulation of the planning problem so that algorithm can work on. From that different languages to describe "actions", "state" and their interactions were introduced.

The first language is STRIPS (Stanford Research Institute Problem Solver):
STRIPS was the name for the planning component in Shakey, the robot developed at Stanford Research Institute (SRI). This allows the robot to analyse the commands and the goals and break them down into plan of all needed actions.

It had a big impact on the AI planning field and served as the base for other planning languages afterward. It is composed of states, goals and set of actions. States and goals are conjunctions of positive literals. Actions include preconditions which describe the state requirement to perform actions and postconditions which describe the state after actions are executed.

Next came other languages ADL (Action Description Language) and PDDL (Planning Domain Definition Language)

They are extensions to STRIPS and are more suitable for more complex and realistic problems. For example, compared to STRIPS, **ADL**:
- supports negative literals in states
- doesn't assume that unmentioned literals are false, but rather unknown
- supports quantified variables in goals
- supports disjunctions in goals

PDDL (Planning Domain Definition Language) was an attempt to standardise planning language. This language allows researcher to benchmark problems and compare results.