RESEARCH REVIEW
The Standford Research Institute Problem Solver

The Standford Research Institute Problem Solver(STRIPS) is an automated planning technique developed by Richard Fikes and Nils Nilsson that works by executing a domain and problem to find a goal.

With STRIPS, you first describe the world.You do this by providing objects, actions, preconditions, and effects.These are all the types of things you can do inthe game world.Once the world is described, you then provide a problem set.A problem consists of an initial state and a goal condition.STRIPS can then search all possible states, starting from the initial one, executing various actions, until it reaches the goal.

A common language for writing STRIPS domain and problem sets is the Planning Domain Definition Language(PDDL).PDDL lets you write most of the code with English words, so that it can be clearly read and(hopefully) well understood.It’ s a relatively easy approach to writing simple AI planning problems.

First, divide the features that describe the world into PRIMITIVE and DERIVED Feature.Definite clauses are used to determine the value of derived features from the values of the primitive features in any given state. The STRIPS representation is used to determine the values of primitive features in a state based on the previous state and the action taken by the agent.

The STRIPS representation is based on the idea that most things are not affected by a single action. For each action, STRIPS models when the action is possible and what primitive features are affected by the action. The effect of the action relies on the STRIPS ASSUMPTION.All of the primitive features not mentioned in the description of the action stay unchanged.

The **STRIPS representation** for an action of
1.THE PRECONDITION - which is a set of assignments of values to features that must be true for the action to occur.
2. THE EFFECT - which is a set of resulting assignments of values to those primitive features that change as the result of the action

Primitive feature V has value v after the action act if V=v was on the effect list of actor if V was not mentioned in the effect list of act, andV had value v immediately before act. Non-primitive features can be derived from the values of the primitive features for each time.

When the variables are Boolean, it is sometimes useful to divide the effects into a delete list, which includes those variables made false, and an add list, which includes those variables made true.

REFERENCES:

[1] https://en.wikipedia.org/wiki/STRIPS

[2] http://ai.stanford.edu/~nilsson/OnlinePubs-Nils/PublishedPapers/strips.pdf