Page No.:
Date.

Tutorial 2: To understand state space problem formulation

NAME :- Devang P Shinde

class :- B.E I.T

Roll No :- 61

subject :- ISLAB

DOP	DOC	Marks	Sign

Tutorial 2 : To understand state space problem formulation

Aim : To understand state space based problem solving agent Algorithm known in figure 3 shows first for mulars goal and problem then determines or rather searches an action sequance after when it return the next action to be excuted in sequancial manner

```
Function SIMPLE-PROBLEM SOLVING
AGENT (Percent) returns an action
static : seq, an action sequance initially
    empty: tate, same decription of
the current world world goal,
intially null.
    probem, a problem for mulation
state ← UPDATE_STATE (state, Percent)
if seq is empty then do
    goal ← FORMULATE-GOAL (state)
problem ← formULATE-PROBLEM (state, goal)
seq ← SEARCH (Problem)
action ← FIRST (seq)
 seq ← REST (seq)
return action
```

Figure 3 : Problem Solving agent Architecture

Defining the problem is refined to as a problem formulation. It involve define following stris

INITIAL STALE It is the starting state that the probem is in. Actions It defines which state the system tend to more to when a perticular action is executed by the agent. successive application at translation model gives rise to what is known as state spare earn cost. It is accummulated cost of performing certain seqnanes at actions. This can help in determining weather the action sequance under consider is optimals

In terms at

Thus problem can formally specified by identifying intial state, action itransition model, goal test, optimal solutions in lowest cost of all solution process at finding a solution is called search.

working:- Based on understanding of problem formulation students need to formulate probems. They will clearly shown state space up to denim 5 or till goal node which is shallowest.

*) Navigate to each workshop from HoD IT cabin with minimum number of moves can be climbing or alighting staircase, turning act right, walking etc.

- and puzzle problem

- The missionaries and cannibals probem there are three missionaries and 3 cannibals who must cross a river by boat carres two people. If there are missionaries present on the bank they don't out numbered by cannibals. If they were the cannibels would eat the missionaries. boat cant cross river by itself with no person on

- Two room vacuum cleaner wor

- water Jug problem.