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Answer to the Q. no. 1 (a)

a) Lists of blind search algorithms are –

i) Breadth first search
ii) Uniform Cost search
iii) Depth first search
iv) Depth Limited search
v) Iterative Deepening search
vi) Checking for repeated states

Properties are –

i) It has breadth and depth first search
ii) It is easy to use.
iii) It is usable.
iv) It is popular.

Answer number 1 (b)

The four general steps at problem solving are :–

1) Analyze: Understand the root cause.

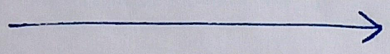
2) Plan: Determine how to resolve the problem.

3) Implement: Put the resolution in place. It is very important to step from four of the steps. It is a very easy step of problem solving.

4) Evaluate: Determine if the resolution is producing the designed results. It is also a very important process.

Answer to the Q. no. 3 (a)

a) 1, 2, 4, 8, 5, 3, 6, 9, 7



Answer to the Q. no. 3 (b)

b) The appropriate search strategy for the above tree is OFS. This is a very important method.

In OFS search strategy, we can find different ways. At first, it starts with the initial state and then left and then right.

But in BFS, we can find difficult ways. Whereas, in OFS, the steps are not complicated. Food strategy doesn't contain using complicated ways. And, we can thus, use the OFS strategy very easily.

Therefore, we found out that, OPS is the food strategy to ~~to~~ to used.

Answer to the Q. no. 4 (a)

An agent that tries to come up with a sequence of actions that will bring the environment into a desired state.

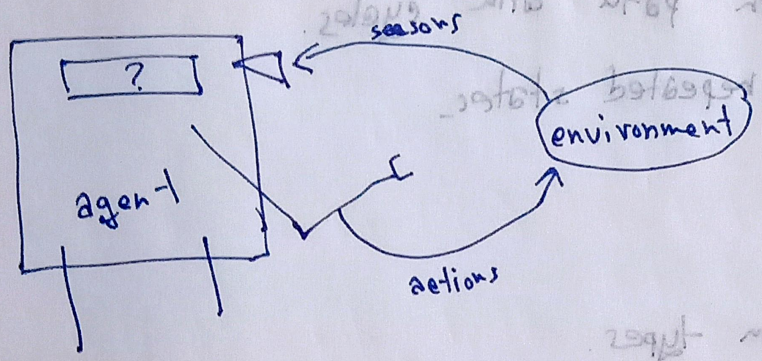


Fig: Problem solving agent

Answer to the Q. no. 4 (b)

Limitations:

The advantages of limitations are:

a) DPS consumes very less memory space.

b) It will reach at the goal node is a lesser time period than BFS if it traverses in the right path.

c) It may find a solution without examining much of search because we may get the desired solution in the very first go.

The disadvantages are:

a) It is possible that many ~~steps~~ states may keep reoccuring. There is no guarantee of finding the goal node.

b) Sometimes the states may also enter into infinite loops.

Answer to the Q. no. 5 (a)

Solution:

a) Do not return to the parent state.

b) Do not create a solution path with cycles.

c) Do not generate any repeated states.

d) Problem formulation.

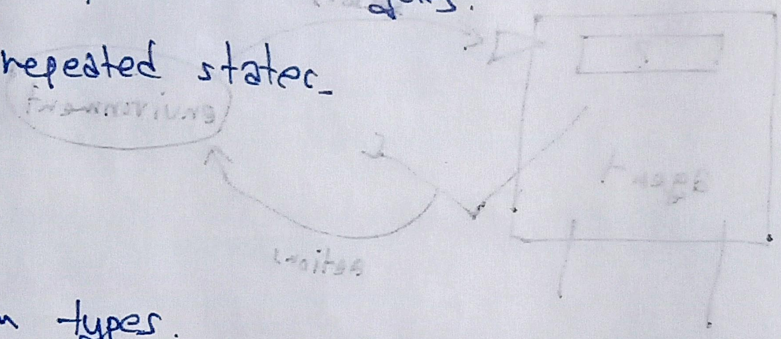
e) Formulating problems.

f) Knowledge and problem types.

g) Vaccum world should be used properly.

h) Example problems should be stored properly.

i) Problem solving performance should be measured properly.



These are the solutions of avoiding repeated states. We can use these steps and gain accuracy properly.

Answer to the Q. no. 5 (b)

Some real world problems are stated below:

i) We can measure incorrectly.

ii) Calculation can be incorrect.

iii) We can write incorrect digits.

iv) We can use false code.

v) It can be complicated

vi) Sometimes we might see incorrect question.

vii) In real world there are many other problems.

These are the real world problems of searching algorithms.