0109_18([100]_AISC_Shivam Kendy

27 PEAS description of woumpus woold 1) Performance measure: -) + 1000 recoursed points if agent comes out of cave with the gold -) -1000 points penalty for being eaten by wumpus -) -1 for each action and -10 for using an arrow -) The game ends if either agent dies or camp out of the cave 2) Envisonment!) A 4#4 good of rooms -) The agent initially in room square : [11], facing towards right. - Location of weimpus and gold are chosen · roundomly except the first square[11] -) Each square of the cave can be a pit with probability 0.2 except the Ast square. 3) Actuators'-

- -) Left turn
- > Right turn
- -) more forward
- -) Goals
- -) Releage
 - 7 shoot

0109-A18(-18(1009) Shilam kender

a) Sensors: -

- The agent will provide the Stenda if he is in the room adjacent to the wumpy (Mot disgonally)
- I The agent will perceive breeze if he is in the morn directly adjacent to the
- The agent will perceive the glitter in the room where the gold is present
- The agent will perceive the bump if he walks into a wall.
- -) when the wumpus is short, it emits a horrible scream which can be perceived anywhere in the cave
- These percepts can be represented as five element list, in which we will have different indicator for each sensor
- breze, but no glitter, no bump, and no Scream than it can be represented as [Sterch, Breeze, None, None, None]

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8.1

+States: - A State description specifies the location of each of eight files and blank in one of the hine squares

Dinitial State:
Any state can be designated as initial state.

Note that any given goal can be reached
from exactly half of the possible initial

states

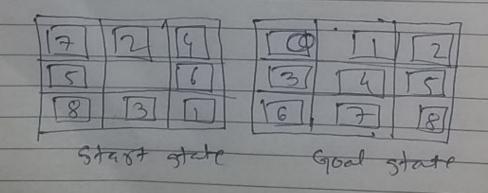
3) Successor function: This generales the legal states that regult
from trying the four action (blank moves,
left, up or down)

4) Goal state:

This checks whether the legal state matches the goal configuration

8) Path Cost :-

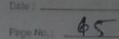
Each step cost 1, so the path cost is humber of steps in the path





0109_18cfloog_AISC_Shiramkondre

The 8-puzzle belongs to the family of sliding blocks puzzle which are often used as test problem for new search algorithm in Al. This general class is known to be as MP-complete so one does not expect to find methods significantly better in worst case than search algorithm described. The 8 puzzle has and is easily solved.



0109_ A181_18CE1009-Shiramkendy

Q.2]

Step 1:

The given facts are!

I) It is a come for an American to sell weapons to the enemy nation.

American (x) 1 weapon(y) 1 sell(n1y12) 11

enemy (7, America)) (riminal (x)

2) (ountry Mono is an Enemy of America

3) Moro has some missiles

-> Owns (Mono, x)

-) missile (x)

a) All the missiles were sold to Hono by colonel West.

Missile (x) 1 Owns (Noro, x) =) Sell West, x,

5) missile is a weapon.

Missile (x)) Weapon (x)

6) Colonel west is America America (West)

Step 2:

Lets convert them to MF

1) ~ America (x) V ~ Weaponly) V ~ Sell x, y, 2) V ~ enemy (2, America) V (riminal (x)

2) Enemy (Noro, America)

3) Owns (Mono, x)

4) missile (x)

B) nmissile(x) u nowns (Nono, A) u sell (west, x,

6) NMissile(x) V weapon(x)

~ American (west) v ~ weepenly) American V asellwestiy, None) or exceptor by)UN sell (west, y, thora) ~ water(y) unnis, 1/4/9)u ~ acres Nongy) warporty) v and Nerrory weapon (x)~ miss bla) amissilely) un ownstrionory) missile W wasng (None, 4) Ownt Nonoin)

x/west

8.2) Francian (vest)

resolution.

a American (west) I weeden cy)

~ Sell(west, y, 2) V ~ enemy (2, Amesia)

Step 3:

