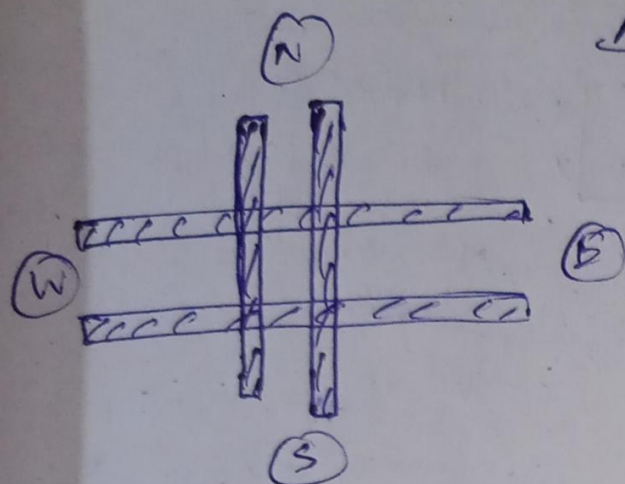
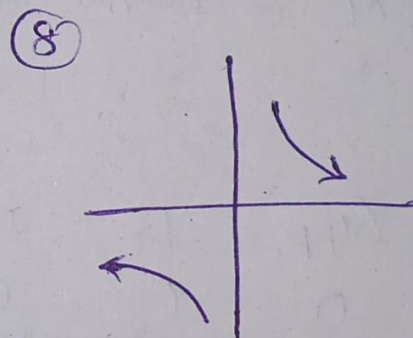
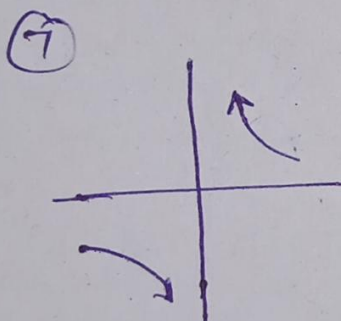
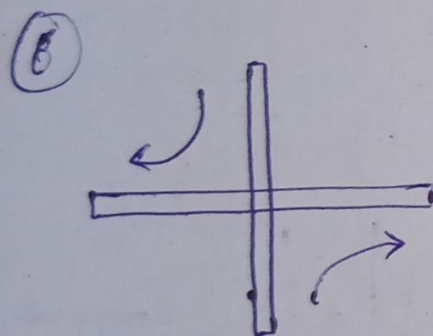
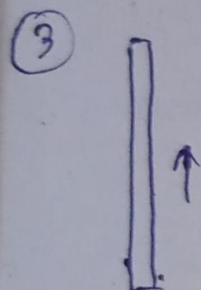
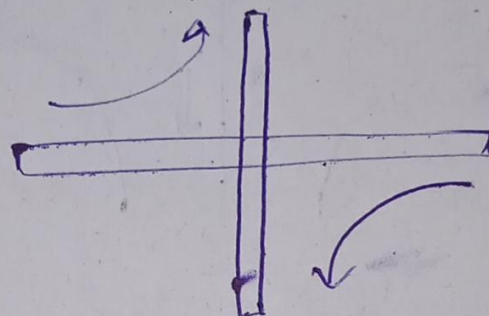


# Artificial Intelligent (AI)

(1) Have to set timer also (2)



(5) → when 1, 2, 3, 4 are off

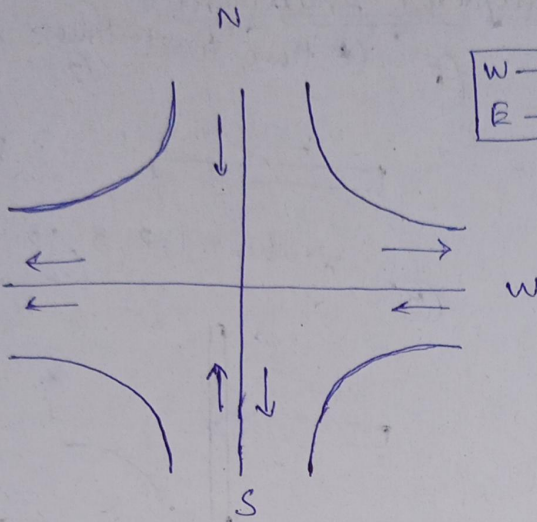


NS	SN	BW	WE	WN	BS	NW	SE	NE	SW	BN	WS
1	1	0	0	0	0	0	0	0	0	0	0
0	0	0	0	1	1	0	0	0	0	0	0
0	0	0	0	0	0	0	0	1	1	0	0
0	0	0	0	0	0	1	1	0	0	0	0
0	0	0	0	0	0	0	0	0	0	1	1
0	0	1	1	0	0	0	0	0	0	0	0



Date: 3/8/24

Using NOT gate  
when one  
direction (left)  
is high  
and (Right)  
is low



$W \rightarrow E$  X  
 $E \rightarrow W$  X

$N \rightarrow S$  [ON]  
 $S \rightarrow N$  [ON]

$N \rightarrow W$  is on  
 $S \rightarrow E$  is on  
 $W \rightarrow E$  is on  
 $E \rightarrow W$  is on  
 $E \rightarrow N$  is on  
 $S \rightarrow W$  is on

• Design the agent & truth table

Case 1

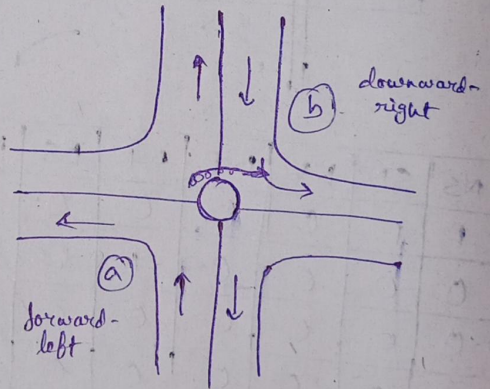
(a)

$G_{FL}$	$G_{FR}$	Y	R
1	0	0	0
0	0	1	0
0	0	0	1

Case 1

(b)

$G_{DL}$	$G_{DR}$	Y	R
0	1	0	0
0	0	1	0
0	0	0	1



Case 2

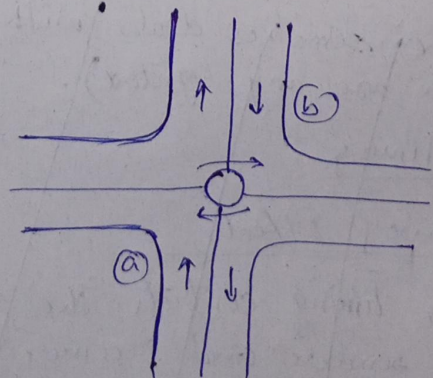
(a)

$G_{FL}$	$G_{FR}$	Y	R
0	1	0	0
0	0	1	0
0	0	0	1

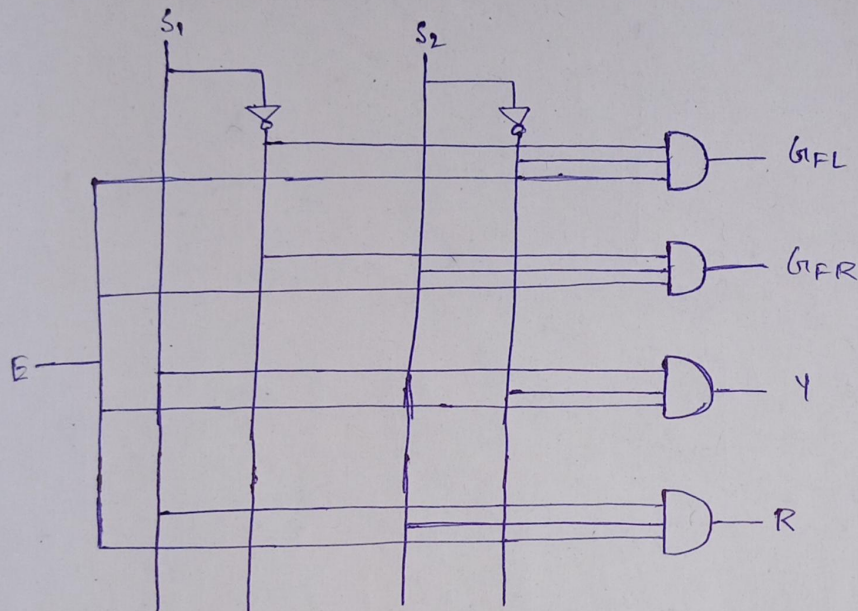
Case 2

(b)

$G_{DL}$	$G_{DR}$	Y	R
1	0	0	0
0	0	1	0
0	0	0	1



$G_{FL}$	$G_{FR}$	$\gamma$	$R$
1	0	0	0
0	1	0	0
0	0	1	0
0	0	0	1



20/8/2024

Qn1) A tower of hanoi has 4 towers & 12 discs. Find a solution taken into consideration that there should not be any change of disk where the lower disk will be at the bottom and the higher disk will be at the top. Find out the no. of iterations which will provide a complete solution of transitions?

### Case Study—

Qn1) In a tic tac toe we will start with the game 'cross' and we will end with any. Subject to the condition, the game will not face draw. ~~Calculate~~ Determine the max. no. of iterations & the min. no. of iterations by which we can easily justify the win or the lose in any specific situation.



[Date - 24/08/24]

- ① A lift is travelling from the ground floor to 20th floor. My stops are 6, 2, 8, 15, 7, 1, 20. Formulate a combination which will ~~give~~ take the minimum travel time to stop all the floors ~~have~~ stated. Initial floor is ground floor.
- ② A person is travelling to Darjeeling and he wants to travel Kalimpong, Mirik, Beltar, Rangpo, Litham, Karshiang and Peling. Plan a proper travel route with a proper logic so that the travelling time & cost will be minimum. Initial travelling position is Bagdogra Airport.

Bagdogra Airport → Darjeeling (68 km) 2h 18min  
Kalimpong (92 km) 3h 20min  
Mirik (47 km) 1h 27min  
Beltar (50 km) 1h 30min  
~~Bagdogra~~ Rangpo (75 km) 2h 31min

3/12

7) Ram is travelling from A to any one of the cinema halls where the actual movie is running. There are 6 points preferred as B, C, D, E, H, F. Assume the estimated cost and a actual cost for hopping point A to F.

Determine which path will give you a proper solution to works the move. Here the source point is A and the destination point is F. Determine the travel path calculating the cost function and prove that only efficient path will give you an optimal solution.



D-18/09/24

## A.I (Knowledge)

- 1) You are running an autonomous machine - which will help you to calculate the taxes, GST, Deduction investment which will give you a tax benefit of your annual profit. What do you think which of the knowledge extremely current autonomous system. Explain with proper justification
- 2) A system which will calculate the fall tolerance of manufacturing competence - The nouch and bolts. It has been assumed 100% of accuracy. Suggest a suitable model for the manufacturing competence. Different



## type of knowledge.

3) Tim,  
Kim, Jim, Robert, Linda are staying in a castle.  
• While team is playing guitar he can not hear the sound of telephone ringing.

Jim is cooking at the kitchen while Linda is helping him in cooking but he is listening music with headphones. Kim is loudly playing music and working around entire castle and time to time - seeing his friend. Robert is writing an article in a room <sup>in a common room</sup> in access to him (everybody) where form is. Suddenly it has been revealed after 2hr. that the Linda is murdered.

Apply suitable knowledge to solve the mystery

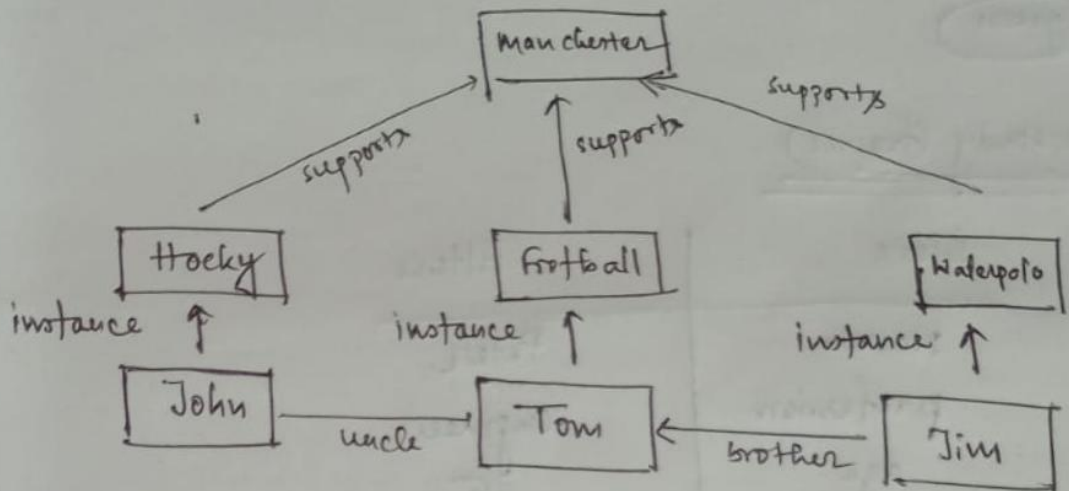
(∵ here, meta knowledge is most important)

- ① Declaration knowledge
  - ② Heuristic knowledge
  - ③ Meta knowledge
- in every case study.

### Case study (Inheritance knowledge) A1

- 1) John plays hockey while Tom plays football, Jim plays waterpolo, Jim is a brother of Tom where ~~Tom~~ John is a uncle of Tom, all belongs to a same club manchester.

⇒



### Case study (Inferential knowledge)

- 1) Every september the rainy season <sup>over</sup> and for all in rainy season the next month winter will come. In winter, people use to wear winter clothes and all ~~clothes~~ <sup>clothes</sup> are cheap.

$$\forall x = \text{september}(x) \text{ ----- } \xrightarrow{\text{over}} \text{rainy season}(x)$$

$$\forall y = \text{rainy season}(y) \text{ ----- } \rightarrow \text{winter will come}(y)$$

$$\forall z = \text{winter } \text{come}(z) \text{ ----- } \rightarrow \text{wear winter clothes}(z)$$

$$\forall A = \text{winter clothes}(A) \text{ ----- } \rightarrow \text{cheap}(A)$$

Or,

$$\forall x = \text{september}(x) \text{ ----- } \xrightarrow{\text{over}} \text{rainy season}(x)$$

$$\forall y = \Delta x \text{ ----- } \rightarrow \text{winter will come}(y)$$

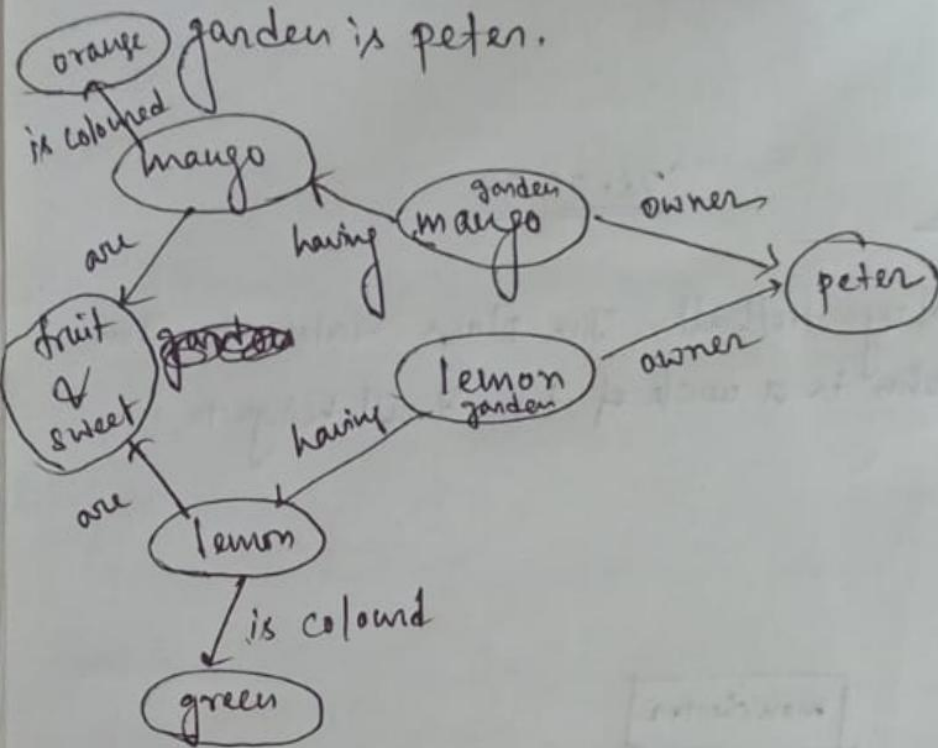
$$\forall z = \Delta y \text{ ----- } \rightarrow \text{wear winter clothes}(z)$$

$$\forall A = \Delta z \text{ ----- } \rightarrow \text{cheap}(A)$$



## Case study (Sematic Network Repres)

A mango garden having all orange colour mangoes and  
the lemon garden having green colour lemons, ~~Orange~~<sup>mangoes</sup> and  
lemon both are fruit and sweet and owner of the  
garden is peter.



## Case study (frame)

Slots	Filters
Name	Peter
profession	engineer
age	25
living city	London
Country	England