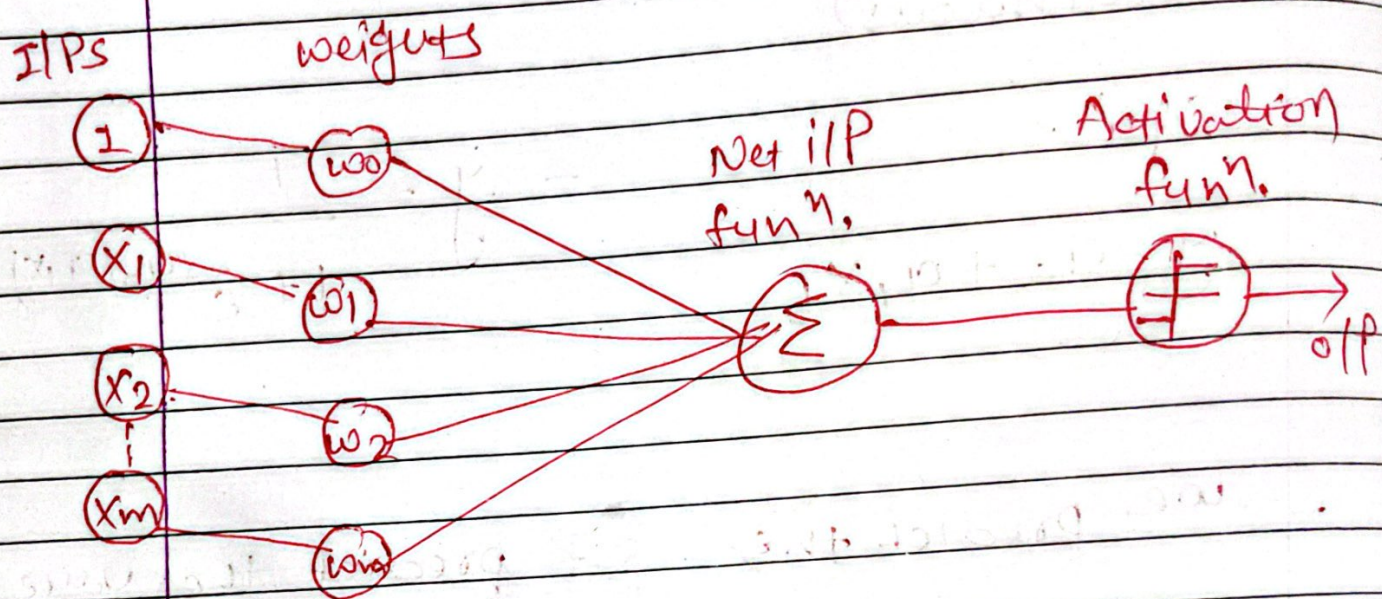


* Perceptrons :- (Basic building blk. of in ANN)

- A Perceptron is an algo. for supervised learning of binary classifiers.

- This algo. enables neurons to learn and processes elements in the training set one at a time.



→ There are two types of Perceptrons

1) Single layer

2) Multilayer

1) Single layer = can learn only linearly separable patterns.

2) Multilayer perceptrons or feed f.w NN with 2 or more layers have the greater processing power.

S-L \rightarrow linear sep. data

Non-linear \rightarrow Non line sep data

Date _____
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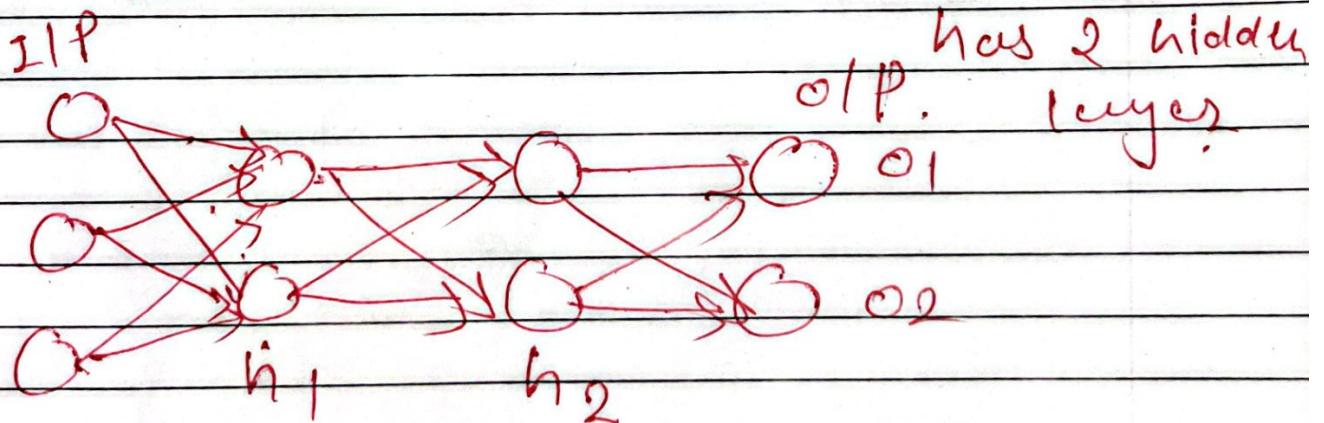
- Perceptron: take real (continuous) valued i/p, calculates ~~the~~ linear combination of these i/p's & gene. op.

O/P = 1 if result $>$ threshold value
-1 otherwise

$$O/P = \begin{cases} 1 & \text{if } w_0 + w_1x_1 + w_2x_2 + \dots + w_nx_n > 0 \\ -1 & \text{otherwise} \end{cases}$$

$w_1, w_2, \dots, w_n \Rightarrow$ ~~weights~~ weights of i/p

* Multilayer NN :-



- Back propagation possible

$\begin{matrix} o_1 \\ o_2 \end{matrix} \begin{cases} \text{Compared with } T_1 \\ T_2 \end{cases}$

If not match then goto Back Propagation