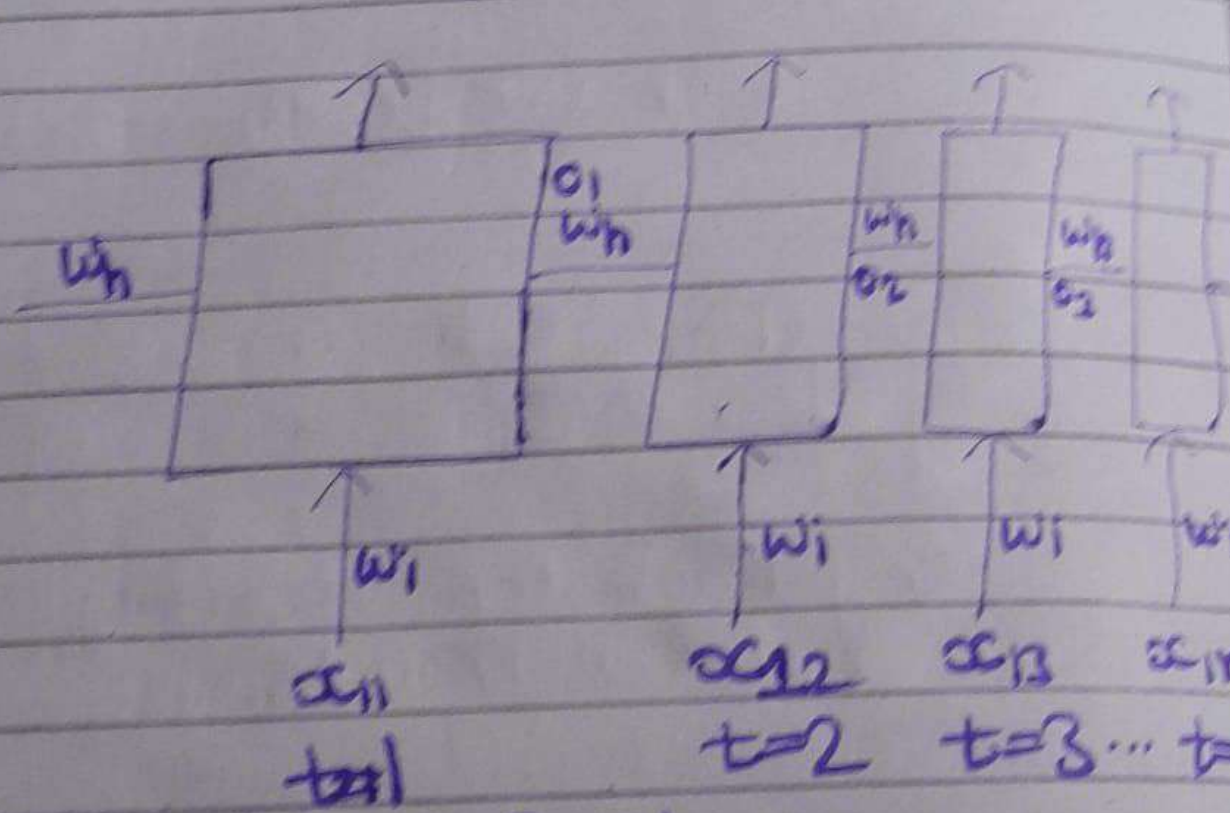
⇒ Bidirectional RNN/ Bidirectional LSTM RNN



⇒ Types of RNN:

1. One to One RNN

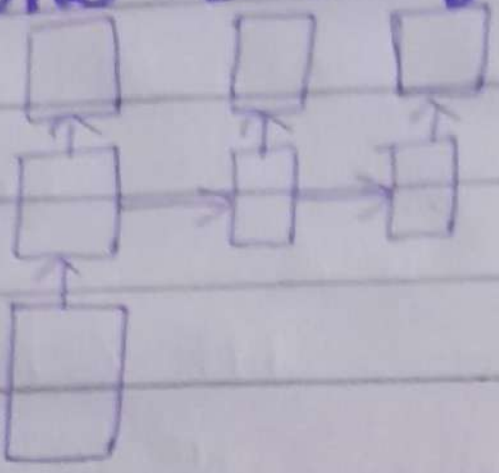
(There is one input and one output)

2. On

e.g

3.

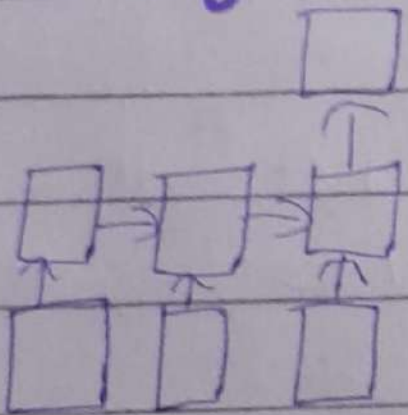
2. One to many



(There is one input and many outputs)

e.g Image Captioning, we give single image and get multiple words as it's caption.

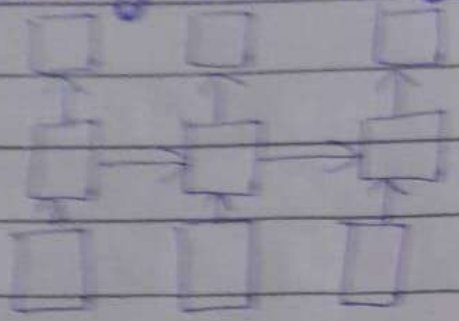
3. many to one:



(There are many inputs but one output)

e.g Image search

- many-to-many



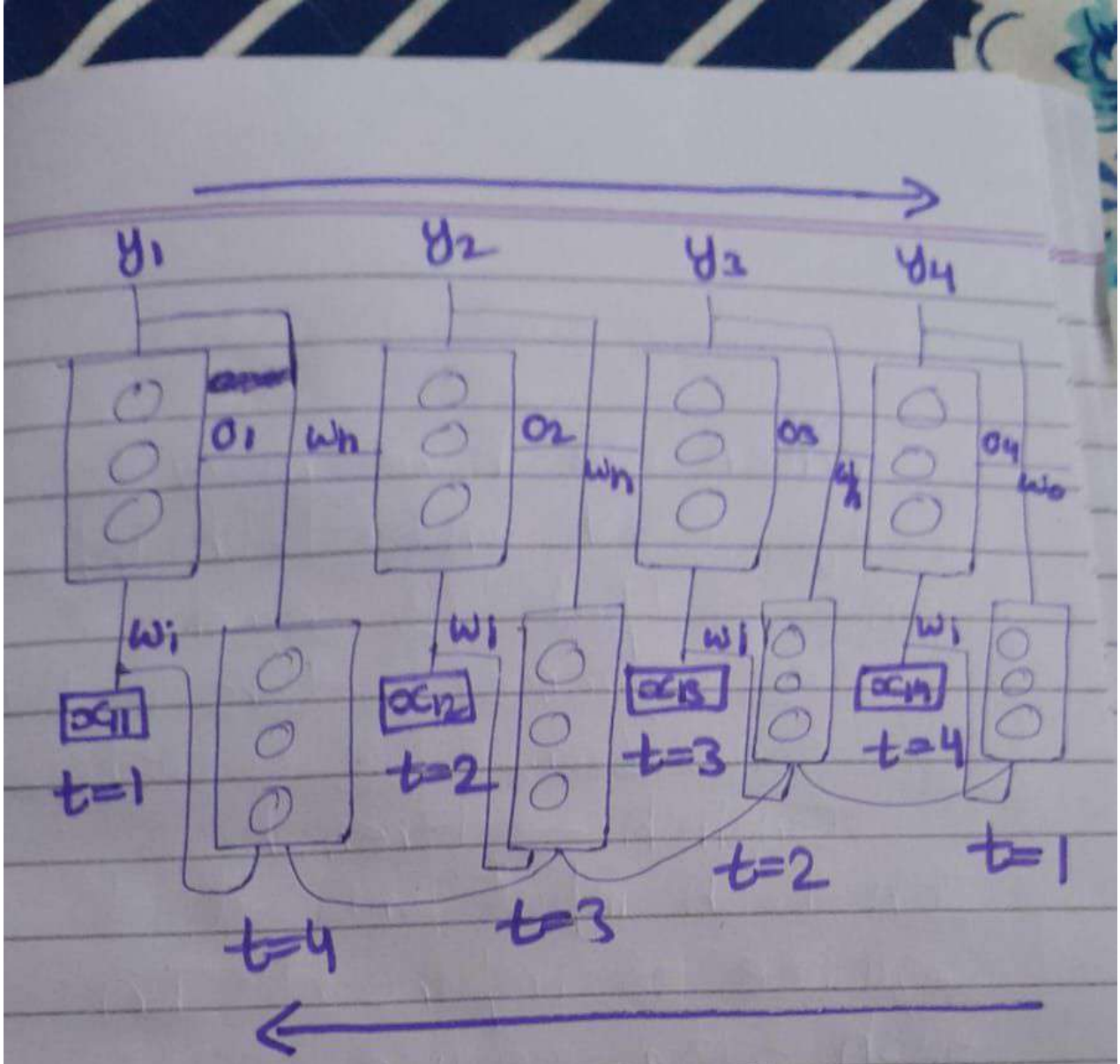
(There are many inputs and many outputs)

Why we use Bidirectional RNN?

Let's suppose we have to predict

"Amir eats _____ in Lahore."

- Now if we use Simple RNN, LSTM, GRU or any variant in this case it will predict only on the basis of previous context i.e "Amir eats" but here the context of upcoming words i.e "in Lahore" is important the we use **Bidirectional RNN.**


y1
y2
y3
y4
o1
o2
o3
o4
wi
wi
wi
wi
wi
t=1
t=2
t=3
t=4
t=4
t=3
t=2
t=1