## Perceptron Homework CS 4499/5599

For this assignment you will walk-through one epoch of training in a perceptron.

- Assume a 3 input perceptron plus bias (bias input = 1)
- For an activation function assume that the perceptron outputs 1 if Net > 0, else 0
- Assume a learning rate c of 1 and initial weights all 1
- The update rule is  $w_i' = w_i + \Delta w_i$  where  $\Delta w_i = c(t z) x_i$
- Show weights after each pattern for just one epoch (one time through the dataset) including the final updated weights after the epoch is finished
- Training set

1 0 1 -> 0 1 1 0 -> 0 1 0 1 -> 1 0 1 1 -> 1

Pattern	Target	Weight Vector	Net	Output	ΔW
	•	1 1 1 1		•	