## **Learning Algorithm for Cross Entropy Function**

What is a more simplified way of writing the cross entropy loss function

1. From the previous step, we have
2. Cross entropy loss only makes sense for classification problems
3. The rest of the procedure is the same as the sigmoid neuron, except we use Cross-Entropy to minimize the loss and choose the best parameters w & b
4. **Initialise:** w, b randomly
5. **Iterate over data**
   1. Compute ŷ
   2. Compute L(w,b) (Where L is the cross-entropy loss function)
   3. wt+1 = wt - η𝚫wt
   4. bt+1 = bt + η𝚫bt
   5. Pytorch/Tensorflow have functions to compute
6. **Till satisfied**
   1. Number of epochs is reached ( ie 1000 passes/epochs)
   2. Continue till Loss < ε (some defined value)
   3. Continue till Loss(w,b)t+1 ≈ Loss(w,b)t