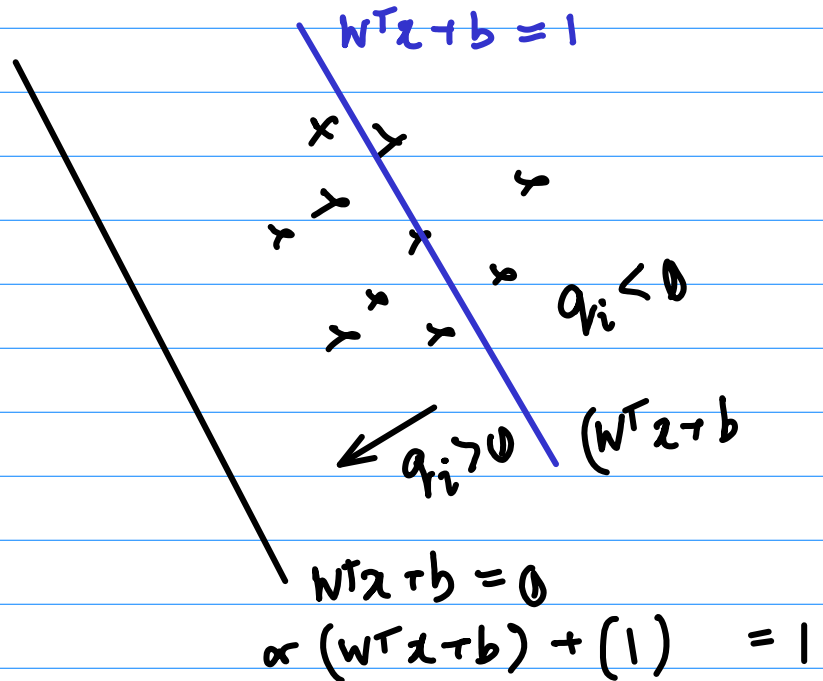


$$y_i (w^T x^i + b) + q_i = 1$$

Consider  $y_i = 1$ .

Since  $q_i$  is unrestricted in sign,  $q_i > 0$  will correspond to samples on one side of

$w^T x + b = 1$  and  $q_i < 0$  to samples on the other side.



Similarly, you can examine the hyperplane

$$w^T x + b = -1.$$