PERCEPTRON($\tau, \mathcal{D}_n$)

$\theta = \begin{bmatrix} 0 & 0 & \cdots & 0 \end{bmatrix}^T$
$\theta_0 = 0$
for $t = 1$ **to** τ
    changed = False
    for $i = 1$ **to** n
        if $y^{(i)} \left(\theta^T x^{(i)} + \theta_0 \right) \leqslant 0$
            $\theta = \theta + y^{(i)} x^{(i)}$
            $\theta_0 = \theta_0 + y^{(i)}$
            changed = True
    if NOT changed
        break
return θ, θ_0