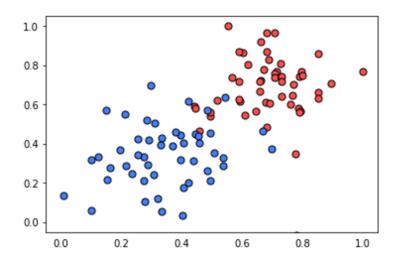
algorithm to separate the following data (given in the file data.csv).



Recall that the perceptron step works as follows. For a point with coordinates (p,q), label y, and prediction given by the equation  $\hat{y} = step(w_1x_1 + w_2x_2 + b)$ :

- If the point is correctly classified, do nothing.
- If the point is classified positive, but it has a negative label, subtract  $\alpha p, \alpha q$ , and  $\alpha$  from  $w_1, w_2$ , and b respectively.
- If the point is classified negative, but it has a positive label, add  $\alpha p, \alpha q,$  and  $\alpha$  to  $w_1, w_2,$  and b respectively.

Then click on test run to graph the solution that the perceptron algorithm gives you. It'll actually draw a set of dotted lines, that show how the algorithm approaches to the best solution, given by the black solid line.

Feel free to play with the parameters of the algorithm (number of epochs, learning rate, and even the randomizing of the initial parameters) to see how your initial conditions can affect the solution!