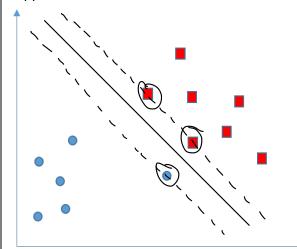
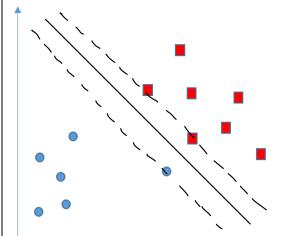
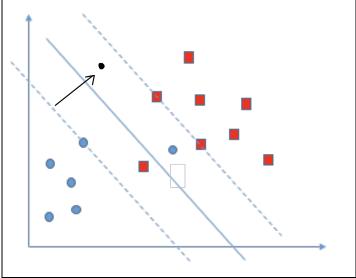
1. Draw a hyperplane (including the margin lines) generated by a linear hard-margin SVM. Circle the support vectors.



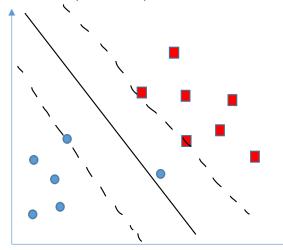
2. Draw a hyperplane (including the margin lines) generated by a linear soft-margin SVM with a large value of C (i.e.  $C \rightarrow \infty$ ).



4. Draw a circle-class data point with slack  $1 < \xi < 2$ 



3. Draw a hyperplane (including the margin lines) generated by a linear soft-margin SVM with a small value of C (i.e.  $C \rightarrow 0$ ).



5. In a soft-margin SVM, which datapoints would be the support vectors? Circle the support vectors here:

