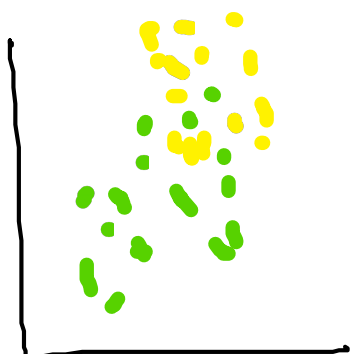


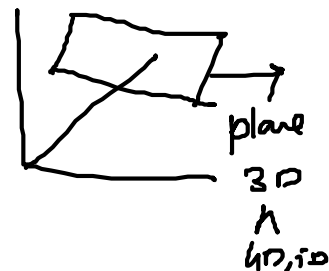
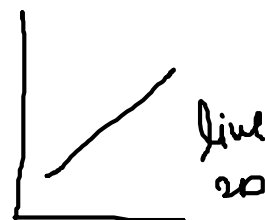
width margin possible



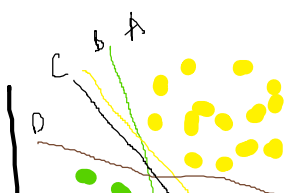
$q = 10$   $R = 60$   
hyperplane / decision boundary

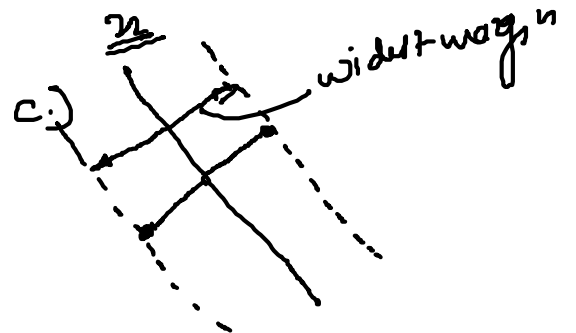
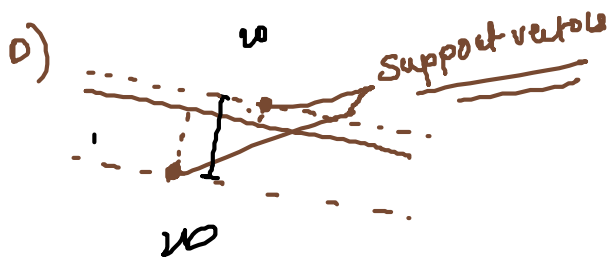
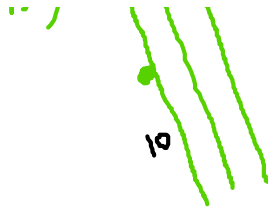
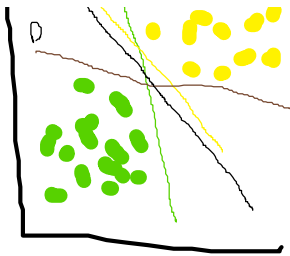


# hyperplane

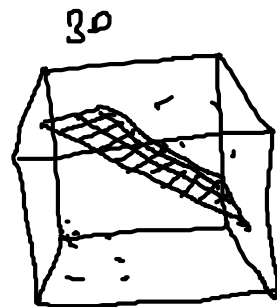


Hyperplane



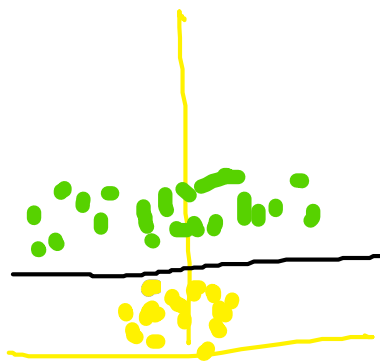
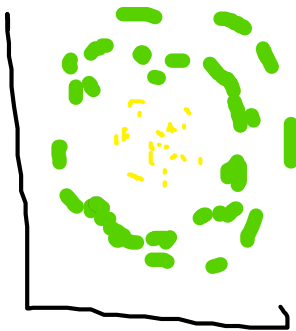


→ line



→ plane

more than 3D  
↓  
hyperplane



# kernel trick (fn):

$C =$  Regularize

→

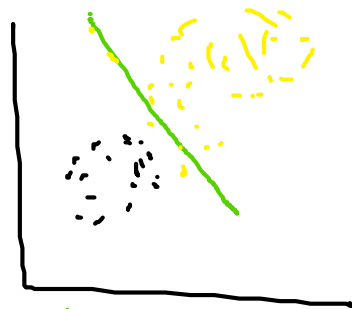
tries to control error



low c 2 less error



high c = high error



high c.



low c

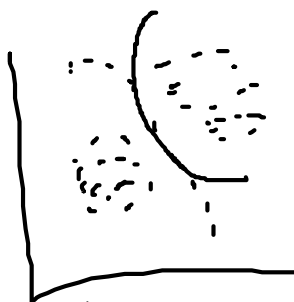
$c = 0.001$   
 $= 1$   
 $= 100$



#  $\gamma$  Gamma: RBF

how much curvature we want in decision boundary

Gamma high: - more curvature  
 low: - low curvature



low gamma

high gamma

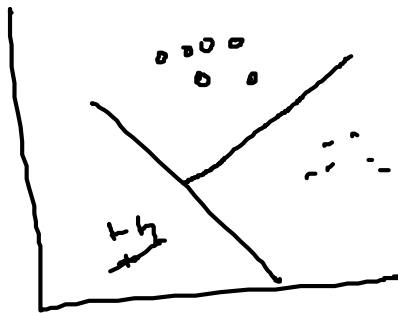
low gamma

$C \neq \gamma = 0, 1, 2, 3$

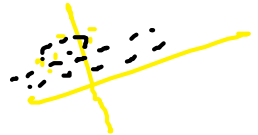
# # Multiclass

1) OVR  $\rightarrow$  one vs Rest

2) OVO  $\rightarrow$  one vs one

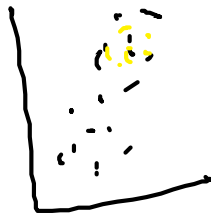


OVR



OVO

default : OVR



hi