define generatecode

a,b,c,d = random 1-9

if (all letter combinations) are the same

repeat generatecode

ask user for input

if user enters exit:

ensure they want to exit  
 stop the program  
else if the user enters repeating numbers or a number that is more than 4 digits;  
 print “invalid integer”  
 ask the user for another input

for digit in code:

compare digit to entire code

if similar  
 add 1 to bulls

elif similar and sameplace:  
add 1 to cows  
remove 1 from bulls

ask user if they want to loop  
if not end the program