Q2: When w is redefined as [w;b] and x=[x,1], where this 1 represents a row of ones as large as x, then the formula becomes and since matrix multiplications work by multplieng the elements of the first matix’ row whit the seconds column it can be said that for each element in the new matrix the formula will be: where n and m are the size of . Doing this for each element corresponds to

This means that now again the formula needs to be minimalized in order to get the lowest possible cost. Just like in the previous exercises and lecture 1 this corresponds to the Wiener filter:

Q3: