

Grading Q6:

The implementation of DES in R (function *HoltWinters*) does not allow us to set directly $\alpha = \beta$, which is the version of DES that is explained in class.

There are different ways around this:

1. We can get the two smoothed sequences by applying twice the *HoltWinters* function with the same α (and β set to zero). This amounts to using an exponential smoother twice (which is exactly what was done in class). Alternatively, the function *filter* can be used in the two steps.
Full mark of 12 will be given to anybody who uses this method.
2. Another way is to call *HoltWinters* with a pre-specified value of α and β (where both are the same). We repeat this step for many α -s and then choose the best α . This is the method suggested in the description of the problem (as for this we have to specify some initial values).
Full mark of 12 will be given to anybody who uses this method.
3. The easiest solution would be to let *HoltWinters* choose the optimal α and β independently. However, this will not be the same as the method described in class (although the results should be close). **Mark of 7** will be given to anybody who uses this method.