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Part. A.4

Code verification

We got assigned for reviewing the code for the backwards-algorithm.

Problems founds:
-BetaHat is not calculated correctly when supplied with the data from the course-book.
-The initialization for the infinite wasn't done correctly.

How we verified the code:
We used the example on page 177 in the coursebook to see if we got the correct values, we have supplied our verification code with the mail.

We identified the errors in the code by simply running it once.

We corrected the code by simply swapping the nesting of two for-loops, in the code that we got it calculated element $b(i=1,t=1)$ before calculating $b(i=2,t=2)$ and this lead to errors in the code. This is due to the fact that $b(i=1,t=1)$ depends on that $b(i=2,t=2)$ is already calculated.

Speech Database
For the speech database we selected the following words/phrases:

- turn on
- turn off
- kitchen
-living room
-basement
-lamp
-tv
-oven
-robot

We recorded 15 samples for each word. Between each recording of the same word we changed the pitch and tone a bit as to simulate different persons. In total we gathered 135 recordings.