* + Write a summary of the two implementations, R and C++.
    - Did you get the same results?
    - How do the run times compare?
    - How did you measure execution time?
  + Include screen shots of the output of each program
  + Include screen shots of the run times of each program
  + Write out the algorithm you used for training the classifier
  + Cite all references used
  + No required format for the report

**Assignment 4 – Report**

CS 4375.501

Zain Husain & Mike D’Annunzio

**Logistic Regression compared:**

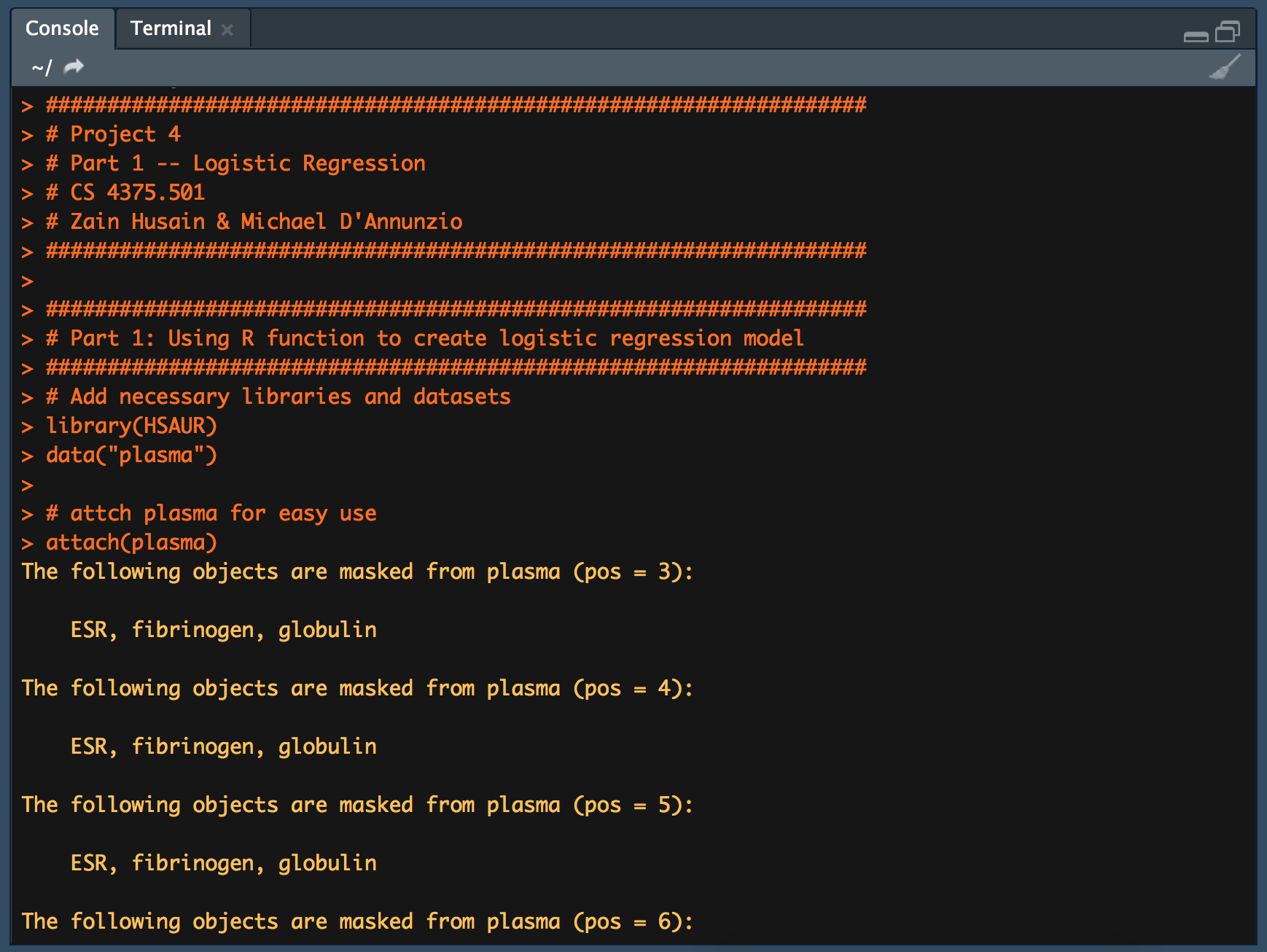
In R it was easy to reproduce the results that we get from the library function.

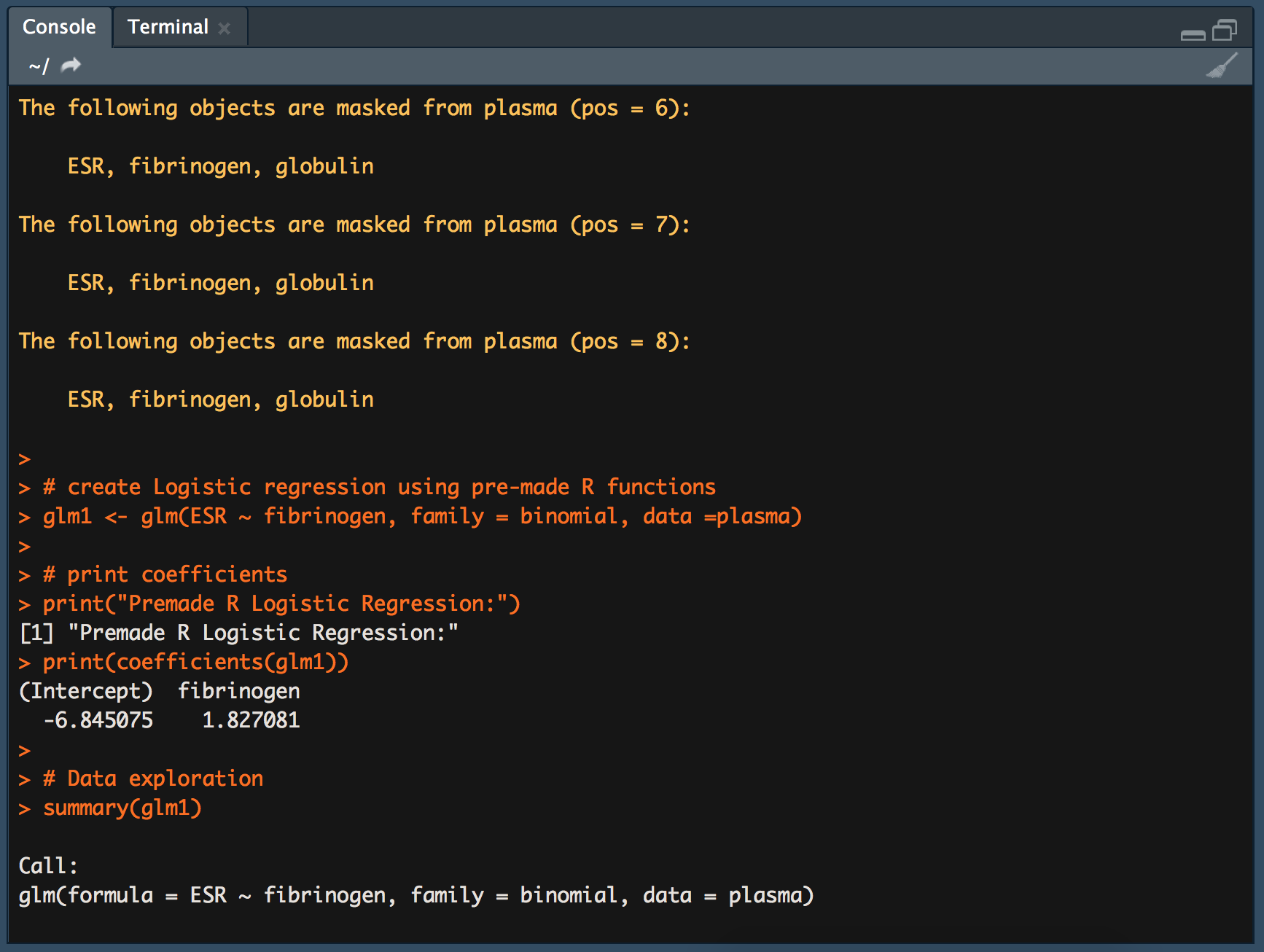
The results from hand-implementation in R directly match with the output from the glm() model.

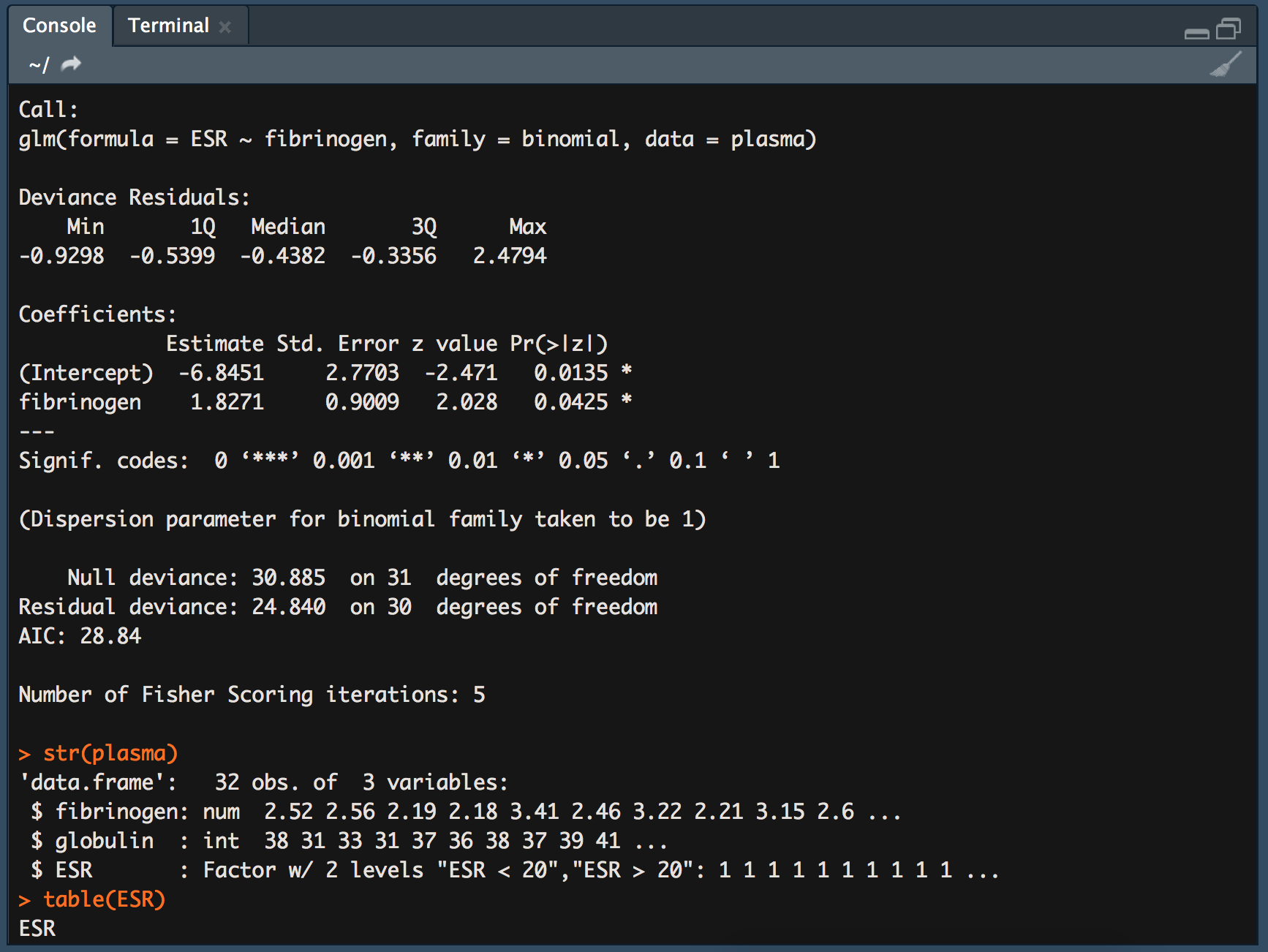
Execution time was measured starting just before the gradient descent loop and stopping just after.

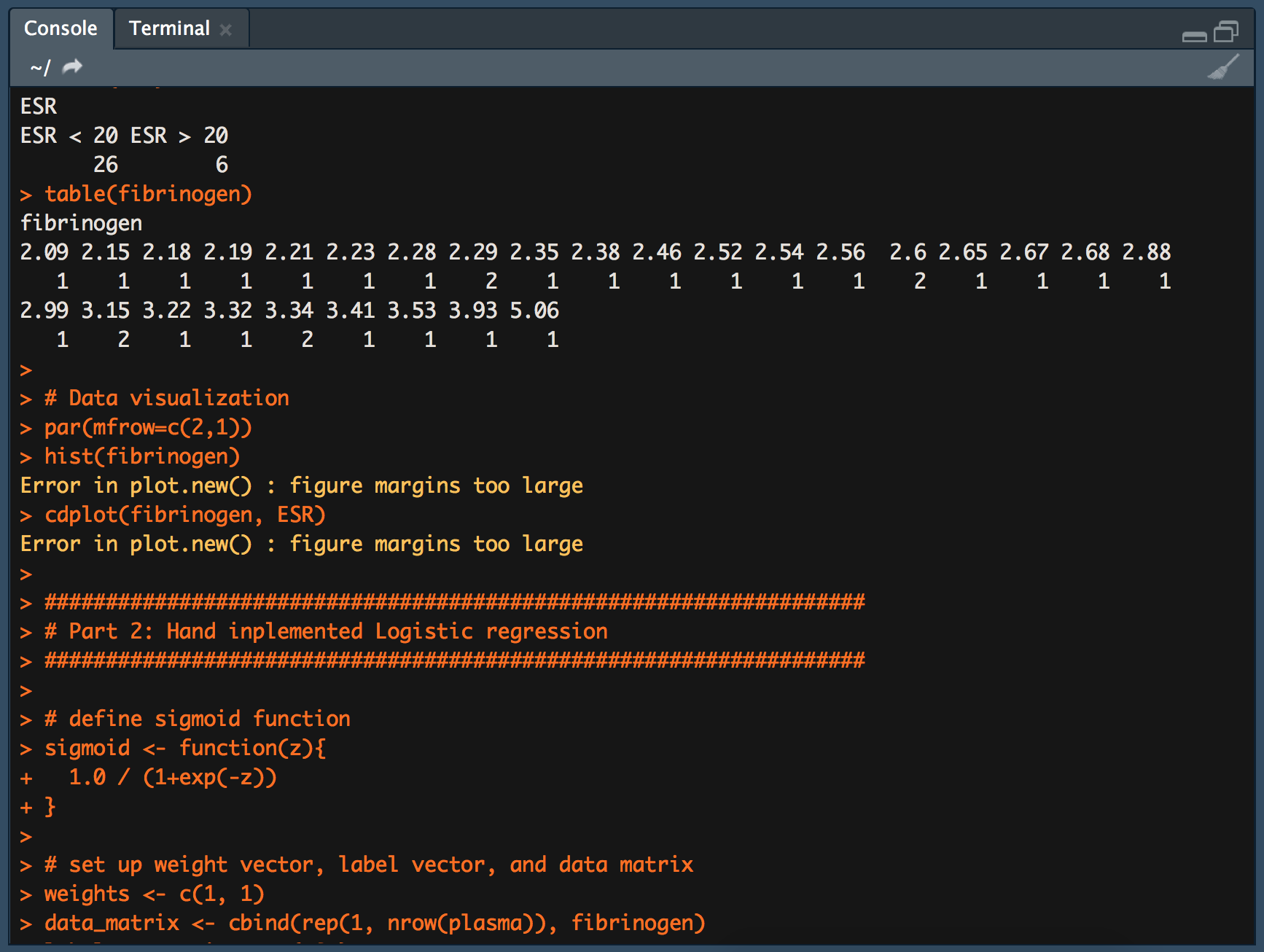
The training algorithm can be seen in screenshot 5, under the comment # gradient descent

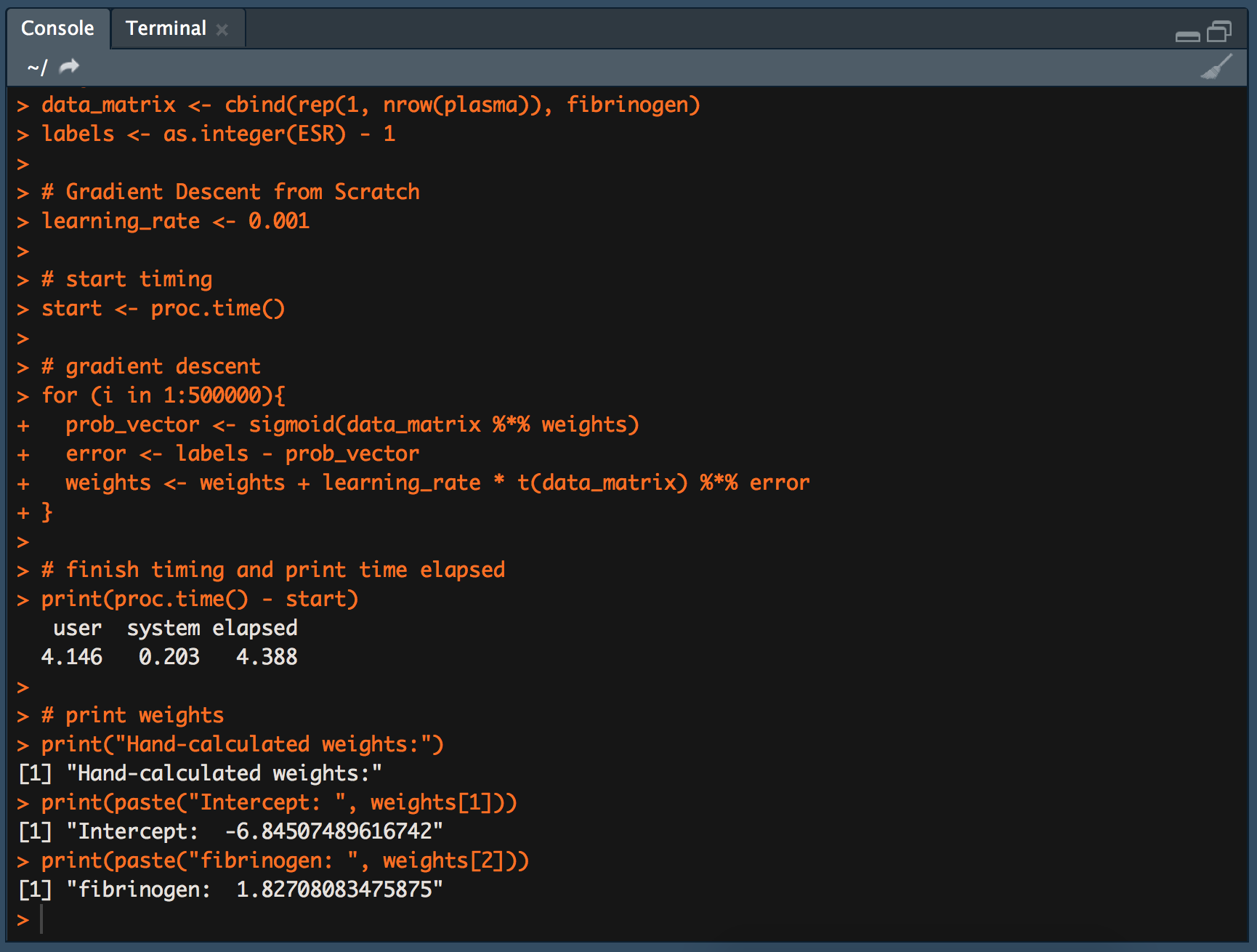
**R:**

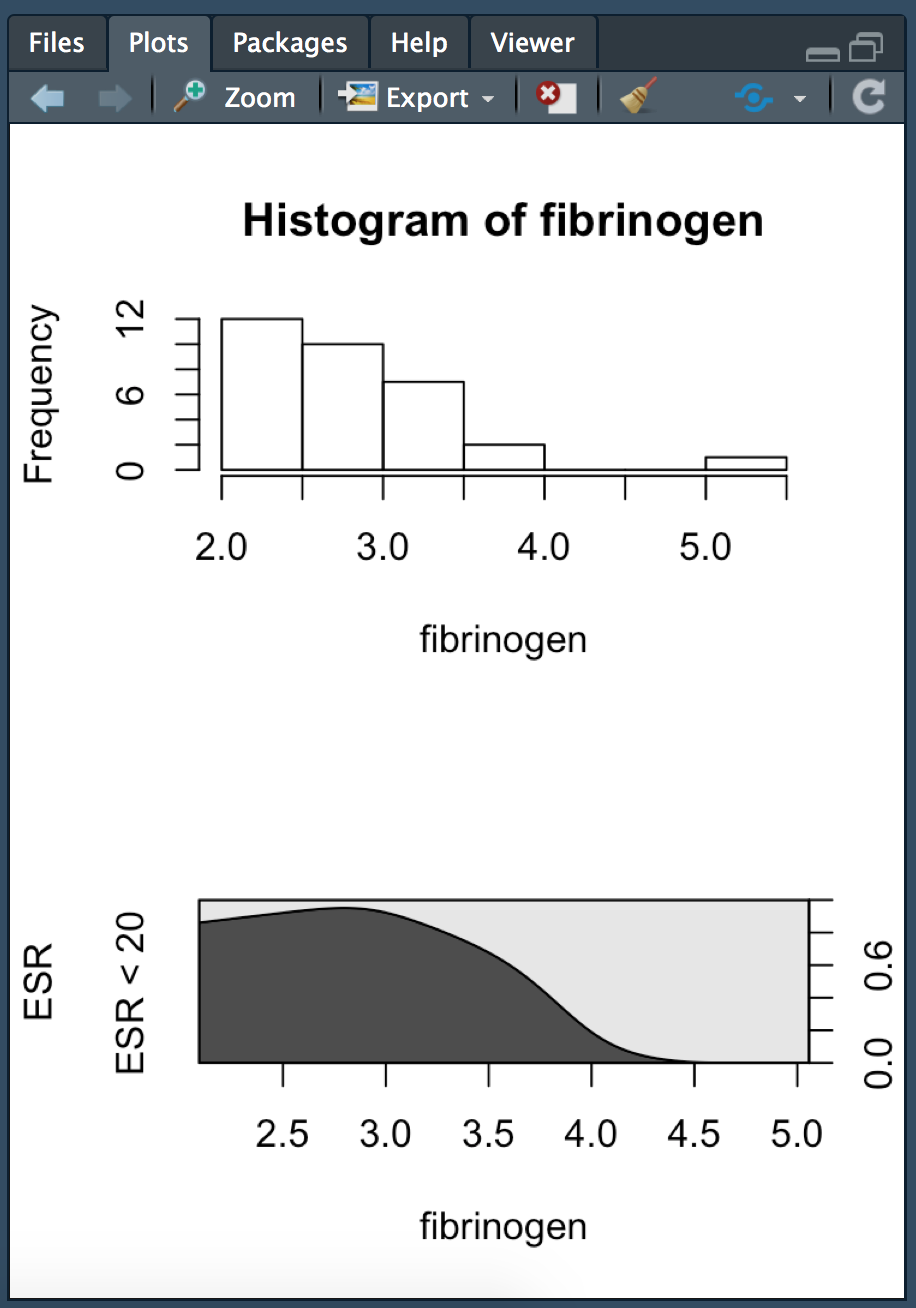












**Naïve Bayes compared:**

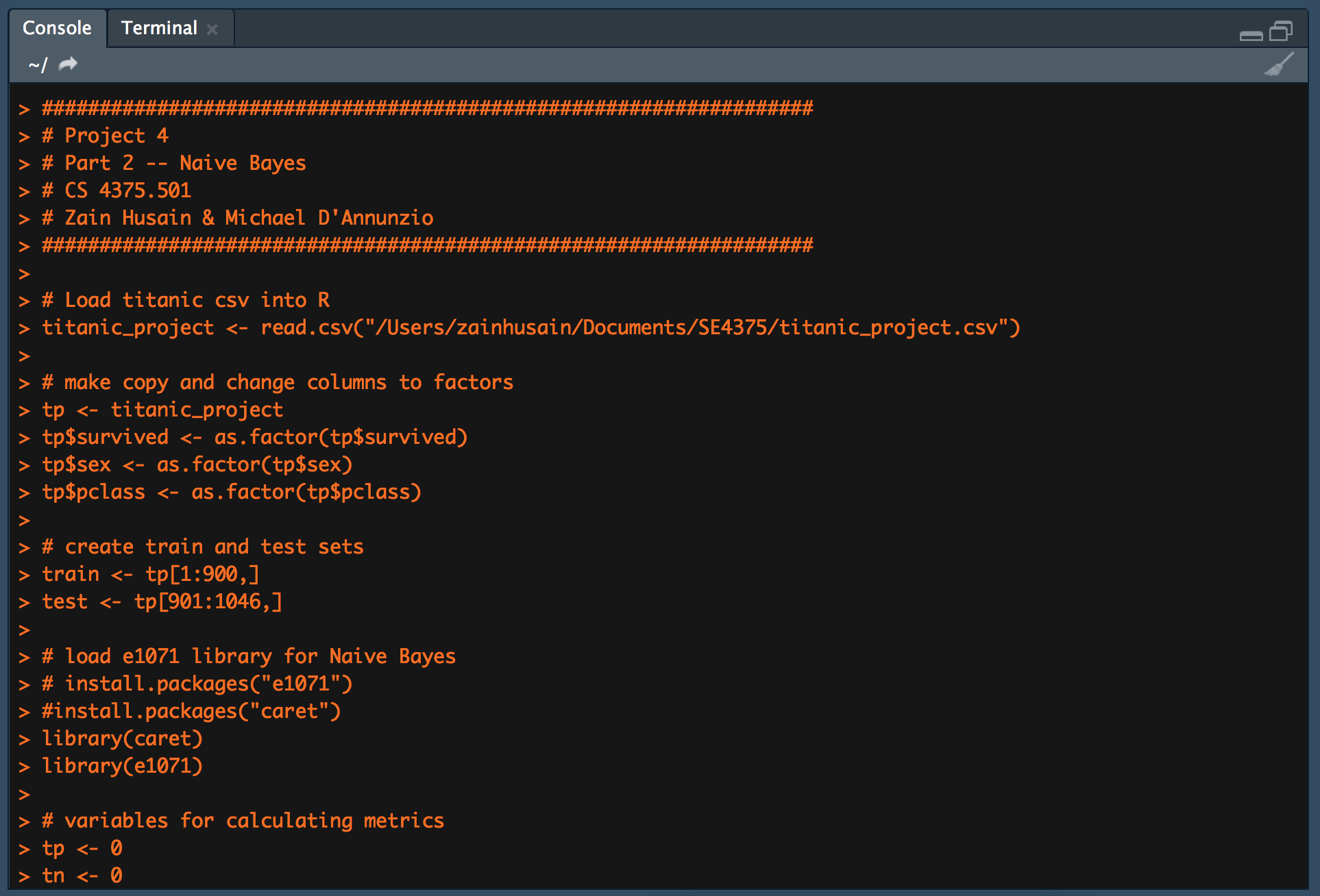
In R it was easy to reproduce the results that we get from the library functions.

The results from hand-implementation in R directly match with the output from the confusionMatrix() function.

Execution time was measured starting just before creating the Naïve Bayes model and stopping just after the computation of the metrics.

The algorithms for metrics can be found in the second and third screenshots.

**R:**

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