Mixed Models Assignment

Q1 The date file "data1.csv" contains the reaction time data from 80 participants. The participants' task was to respond to a word on the computer screen that was either a synonym for "fast" or a synonym for "slow". We predicted that people will respond more quickly to words that mean "fast" than to words that mean "slow". We thus have one condition with two levels. Each participant saw 16 items – half in one condition, half in the other. Conduct the appropriate mixed model analysis to determine whether our prediction is supported.

Q2 The data file "data2.csv" contains the reaction time data from 40 participants who took part in a 2 (Prime: Positive vs. Negative) x 2 (Target: Positive vs. Negative) repeated measures experiment to measure people's reaction times to reading a target sentence following the presentation of an image that acted as a prime. Specifically, the experiment tested our prediction that people would read a sentence describing an emotion more quickly after having just seen an image representing that emotion, relative to after having seen an image representing a different emotion. The Prime images were either Positive or Negative, and the Target sentences described either Positive or Negative emotions. Each participant saw 32 items. Conduct the appropriate mixed model analysis to determine whether our prediction is supported.

In addition, we also measured whether people moved their eyes to re-look at the image when they had finished reading the sentence. We predicted people would do this more when the sentence and image emotions mismatched. The data file "data3.csv" contains these data, with a '1' in the 'Regress' column corresponding to trials where people re-fixated on the image after reading the sentence, and a '0' corresponding to trials where people did no re-fixate. Again, Your task is to conduct the appropriate mixed models analyses to determine whether the predictions were supported by the data.

This assignment must be produced using R Markdown and this document should include the code you created as well as the appropriate output. Remember to add comments to explain the key steps and decision points.