Complete factorial analysis of using the provided data set. State the underlying assumptions for the statistical test; State whether the assumptions have been met. If the assumptions were not met (either in actuality or hypothetically), state what alternatives you have available to you; State the null and alternative (research) hypotheses; Copy your syntax file and paste it into your MS Word Document; For your output file: Select all → Copy all objects → Paste into your MS word document; Create a results table consistent with requirements from the APA style manual; Report the results using correct APA format, for ANOVA, ANCOVA, and Repeated Measures ANOVA models, ensure that you provide interpretations for the main effects and interactions as well as any post-hoc tests; Describe how you would compute the sample size to achieve 80% power, alpha = .05, and the appropriate effect size.

Text:

People's musical tastes tend to change as they get older, so I decided to do some research to find out whether this is true, or whether it's possible to be old and like good music too. First, I got myself two groups of people (45 people in each group): one group contained young people (which I arbitrarily decided was under 40 years of age) and the other group contained more mature individuals (above 40 years of age). This is my first independent variable, **age**, and it has two levels (less than or more than 40 years old). I then split each of these groups of 45 into three smaller groups of 15 and assigned them to listen to either Fugazi, Abba, or Barf Grooks; this is my second independent variable, **music**, and has three levels (Fugazi, Abba, or Barf Grooks). There were different participants in all conditions, which means that of the 45 under forties, 15 listened to Fugazi, 15 listened to Abba and 15 listened to Barf Grooks. After listening to the music, I got each person to rate it on a scale ranging from -100 through 0 to +100. This variable is called **liking**. Conduct a two-way independent ANOVA using the fugazi.sav date set.