# Activities

1. Start by loading any necessary packages, the “tidyverse”, “afex”, and “Rmisc” packages are recommended.
2. Read in the data file "James et al 2015 Experiment 2 Data Set.csv”. Explore the data file using View(). Note, you will not analyze all of these variables. Try to find the variables that are relevant to the study description above.
3. The conditions are coded as numerical values, for ease of interpretation later, it might be useful to use the mutate() function, and the case\_when() function to code Condition so 1 = "ReactivationTetris", 2 = "Control", 3 = "TetrisOnly", 4 = "ReactivationOnly”. If you’re game, use the factor() function to specify the order of the levels to the above. Also, it might be a good opportunity to add an ID variable to the dataframe, so each case has a unique ID.
4. You first want to show that all of the conditions have the same number of intrusive memories during the 24-hours prior to the Experimental Task. Conduct an analysis to compare the means of the conditions for the variable Day\_Zero\_Number\_of\_Intrusions. What did you find?
5. You next want to test the effect of the experimental manipulation. In particular, you want to examine whether there is a significant difference between the conditions on the number of memory intrusions on the seven days following the experimental task. Use the variable Day\_One\_to\_Seven\_Number\_of\_Intrusions.
6. If there is a significant difference for the number of memory intrusions (for days 1-7), conduct a planned comparison, to test the following differences:
   1. The reactivation + Tetris condition experienced fewer intrusions than the control group.
   2. The reactivation + Tetris condition experienced fewer intrusions than the Tetris-only group.
   3. The reactivation + Tetris condition experienced fewer intrusions than the reactivation-only group.

table(df$Condition)

contrasts <- list(RTvsC = c(1, -1, 0, 0),

RTvsT = c(1, 0, -1, 0),

RTvsR = c(1, 0, 0, -1))

rl1 <- lsmeans(AoV, ~Condition)

contrast(rl1, contrasts) # Results inconsistent, unclear df in paper.

1. Finally, you want to test whether the conditions differed on the Intrusion-Provocation Task. Use the variable called Number\_of\_Provocation\_Task\_Intrusions.
2. If there is a significant omnibus test in #5, conduct the following planned comparisons:
   1. The reactivation + Tetris condition experienced fewer intrusions than the control group.
   2. The reactivation + Tetris condition experienced fewer intrusions than the Tetris-only group.
   3. The reactivation + Tetris condition experienced fewer intrusions than the reactivation-only group.

rl2 <- lsmeans(AoV1, ~Condition)

contrast(rl2, contrasts) #error in contrast 2 & 3

1. Prepare an APA-style results section for the analyses you completed.
2. Prepare a figure depicting the number of intrusive memories over the seven days following the Experimental Task. Make sure to follow APA-style guidelines (the SummarySE() function from Rmisc may help).