**Homework 8:**

1. RQ: Does increasing the bitrate (independent variable) from 2000 kbps to 6000 kbps for the first game using a resolution of 1080p and a framerate of 60 fps (conditions 36 and 50) significantly improve the video quality ratings (dependent variable). Use the ratings provided in the gaming video quality dataset. In case of an extreme outlier, the participant can be completely removed from the dataset.

**Loading the dataset**

Simply import the dataset into SPSS.

**Filtering for the given conditions**

We have to filter the data according to the given conditions which are 50 and 36.

Data > select cases. In the cases set the conditions shown. This will filter all the unselected conditions.

**Filtering for game 1**

Now we have to filter the games. We only require game 1 to stay.

Transform > Recode into different variables. Make to a new variable “game\_num” according to the conditions defined in the picture. “game\_num” will be used to filter for game1

**Detecting the outliers**

Now that we have the required data, we will now try to find the outliers in bitrate and VQ variables. As shown in the plots, there are no outliers.

Analyze > Descriptive Statistics > Explore… > Add “bitrate” and “VQ” to “Dependent List”

> Click on “Statistics…” button > In the “Statistics” modal, check the option “Outliers”

> Click on “Plots…” button > In the “Plots” modal check the option “Normality plots with tests” and under the “Descriptive”-section uncheck “Stem-and-leaf”

**Preparing the for t test**

Now we have to the VQ for 2000 bitrate and 6000 bitrate. We do this by making a new variable using if case condition.

Transform > Compute variable. Add VQ2000 as a target variable and VQ as an expression. Select if case to be bitrate = 2000. This is shown in the figure below. Repeat this for bitrate of 6000. We have two new variables now. VQ2000 and VQ6000.

**Performing the t test**

Now compute the paired t tests on VQ2000 and VQ6000. Analyze > paired samples t test. Add VQ2000 and VQ6000 and variable 1 and 2 respectively.