**Introduction to data:** The Taylor Manifest Anxiety Scale was first developed in 1953 to identify individuals who would be good subjects for studies of stress and other related psychological phenomenon. Since then it has been used as a measure of anxiety as general personality trait. Anxiety is a complex psychological construct that includes a multiple of different facets related to extensive worrying that may impair normal functioning. The test has been widely studied and used in research however there are some concerns that it does not measure a single trait but instead measures a basket of loosely related ones and so the score is not that meaningful.

**Procedure:** The test consisted of fifty statements about respondents. Each respondent rated each one as true or false. It took most people four to ten minutes to complete. The data is given in the attached file (anxiety\_datasheet).

**Source:** Taylor, J. (1953). "A personality scale of manifest anxiety". The Journal of Abnormal and Social Psychology, 48(2), 285-290.

**Instructions:** Please analyze the following:

**Report format:** Present the results in a long report format as follows.

1. Introduction
   1. Background of the study
   2. Aims and objectives of the study
2. Methodology
   1. Explain the data set and its source
   2. List variables and their measures (if categorical or numerical and scale of measurement)
3. Analysis
   1. Respondents profile (e.g. gender, age, and anxiety)
   2. Descriptive analysis (central tendency, variation, and shape of anxiety score)
   3. For ANXIETY data, note down any anomalies, outliers, or extreme skews or multi-modalities in your distributions that you can identify using these methods. Calculate the upper and lower bounds for the percentage of data contained in ±1s, ±2s, ±3s to check if the data is normal or not.
   4. Construct a polygon for ANXIETYbased on the *gender* of respondents. Describe differences or similarities that you see in the polygon for *males* and *females*. Describe the distribution of weight for *males* and *females*. Are they more or less symmetric? Or are they skewed?
   5. Make a scatter plot to comment on the relationship between AGE and ANXIETY data
4. Discussion of your results
5. Conclusion
6. References