Tasks:

1) **Analyze both selected quantitative variables and provide answers to the following points.**
   - **(i) Consider fitting a simple regression model for the two variables from the Excel sheet. Which variable would you select as dependent and which as independent ? Explain**
   - **(ii) Calculate the R square, estimates of the intercept and slope. Test the significance of the fit of the model and the significance of the parameters. What do you conclude regarding the fit ?**
   - **(iii) What is the interpretation of the estimate of the slope in your model ? Explain.**
   - **(iv) Pick an arbitrary value of the independent variable and calculate the prediction of the mean of the dependent variable and prediction of the individual value of the dependent variable. Calculate confidence intervals for both predictions. Which of the two intervals is wider ? Why?**
   - **(v) Check for homoskedasticity and for presence/absence of outliers in your model. What are your findings ?**

   While providing answers to the above questions use tools learned in class together with calculating platforms like Excel, Google Sheets and R.

2) **Divide the dependent variable into 5 groups, grouping first 10 into first group, second 10 into second group and so on. Using the ANOVA analysis check whether there is a significant difference among the means of these groups.**