The Bureau of Labor Statistics provides data on the year-to-year percentage changes in the wages and salaries of workers in private industries, including both “white-collar” and “blue-collar” occupations. Is there evidence of a linear relationship between the yearly changes in the wages and salaries of “white-collar” (Y) and “blue-collar” (X) workers over the given time period? Begin to answer the question by estimating a simple linear regression model.

1. Construct a 95% confidence interval for the model’s slope (i.e. β₁) parameter. Interpret the interval estimate to answer the question posed above.
2. Interpret the ANOVA table for this model. In particular, does the explanatory variable included in this simple regression model provide at least some power in explaining the variation in the dependent variable?
3. Report a *p* – value for this hypothesis test.
4. What is the relationship between the t-ratio for the estimated coefficient of the explanatory variable and the *F*-ratio found in the ANOVA section of the output?
5. Do these two test statistic values provide the same indication regarding a possible relationship between yearly changes in the wages and salaries of white collar and blue-collar workers? Explain why or why not.