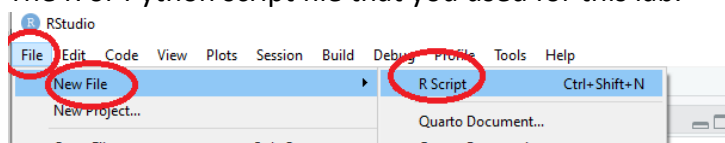


## Exercise 3

1. Calculate and report the covariance for *salary* and *education*.
2. Calculate and report covariance for *salary* and *prestige*.
3. Calculate and report covariance for *education* and *prestige*.
4. Calculate and report Pearson's **correlation coefficients** and the **p-values** for *salary* and *education*.
5. Calculate and report Pearson's **correlation coefficients** and the **p-values** for *salary* and *prestige*.
6. Calculate and report Pearson's **correlation coefficients** and the **p-values** for *education* and *prestige*.
7. For **each of the calculated correlation** coefficients, **explain** the following:
  - a. The **strength** and **direction** of the correlation.
  - b. The **statistical significance** of the test (**p-value**) and emphasize if we can trust the correlation test or if the test cannot be trusted.
8. Pearson's correlation coefficient or covariance can be both used to measure the direction of the relationship between two variables (e.g., education and *salary*). Explain which measure is better and why.

### Deliverables:

- A word document that includes the questions' answers, calculated values, and explanations.
- The R or Python script file that you used for this lab.



- In Python, you can simply click on "save as" to save the Python code as a ".py" file. Jupiter notebook python file extension are also accepted ".ipynb"