I implemented tasks 1 and 3 in Python. Task 2 I implemented in Excel.

Task 2 – Results Comments.

I supposed a risk-free rate of 2.5%, then calculated the returns for IBM and S&P500. From those values I calculated alpha given that the regression already gives us the beta. I assumed a market risk premium of 5% and calculated the market variance. The expected return result I got was -3%.

The adjusted R squared explains how well the returns on the stock are explained by the fluctuations in the market returns. From the result… it is possible to conclude that the IBM stock prices are not influenced by S&P500 index. The beta for the market is not significant at all given that the statistical test showed a level of significance of 0.6 which is very high. On the other hand, the intercept is significant with p-value of 0.