Formula for Range:

$$t_{(0.7,18)} * \sqrt{\frac{\sum_1^n (y_i - beta1 * x_i - beta0)^2}{n-2}} * \sqrt{1 + \left(\frac{1}{n}\right) + \frac{(LOC_E - avgx)^2}{\sum_1^n (x_i - avgx)^2}}$$

Explanation:

- $t_{(0.7,18)}$ represents the t-statistic (that you will calculate in your program using the process explained in the class) for 70% Confidence interval and 18 degrees of freedom and 2 tails. 0.7 will change to 0.8 or 0.9 as desired in your program.
- X and Y are the two columns of historical information given in first tab of xcel file. LOCe and LOCa values in row 25.
- LOC_E is value for which you are trying to make predictions using linear regression. Basically, values in cells C13 to C15 of xcel file.
- n is the sample size. 20 in the case of current assignment.