

Coding in R

Instructions

1. Open a new .Rmd file in RStudio, and use it to complete the following exercises.
2. Feel free to discuss your solutions with your neighbors as you work.

Exercises

1. Create a vector called `my_vec` consisting of the numbers 50 through 100.
2. Create a new vector called `less_than_60`, where an element is `TRUE` if the corresponding element in `my_vec` is less than 60, and `FALSE` otherwise. (Do this algorithmically by applying a condition to `my_vec`; don't create this vector from scratch.)
3. Write code that can confirm that the length of the two vectors are the same.
4. Apply the `sum()` function to the `less_than_60` vector. How does the output relate to the elements of `less_than_60`?
5. Modify `my_vec` so that the value at index 10 is 100.
6. Obtain the indices of the maximum values of `my_vec` using functions described in class.
7. Apply the `which.max()` function to `my_vec`. Although we haven't seen this function before, the name of the function gives indication what it does. Does the result of `which.max()` differ from what you obtained in part 6? If so, how?
8. Create a 5 x 2 matrix called `my_mat` of the values 1 through 10, where the first column holds the values 1-5 and the second column holds the values 6 - 10. *Hint:* Run `?matrix` in the console to view the help file for the `matrix()` function.
9. Create a data frame called `my_df` with 2 columns and 5 rows, where the first column consists of the numbers 1 - 5 and is named `low`, and the second column consists of the numbers 6 - 10 and is named `high`.
10. Append to the `my_df` data frame the character vector consisting of the first 5 letters of the alphabet; call this vector `alphabet`.