ECO 602 – DataCamp Assignment
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Q1 (1 pt.): What type of data is contained in the variable a?

- Character

Q2 (1 pt.): What type of data is contained in the variable b1?

- Numeric

Q3 (1 pt.): What type of data is contained in the variable b2?

- Character

Q4 (2 pts.): Explain what happens when you try to add b1 and b2 and why.

- I get the following error "Error in b1 + b2 : non-numeric argument to binary operator"
- This is because b2 is stored in the R environment as character data, so R does not recognize it as a number. We can't use arithmetic functions in R for non-numeric data.

Q5 (1 pt.): Are the variables b1 and c1 the same type? Why or why not?

- Variables b1 and c1 are both numeric. However, variable b1 has a decimal value so it is only numeric. Variable c1 includes a list of whole numbers, so it can also be categorized as integers.

Q6 (3 pts.): Explain what happens when you add b1 and c1. Consider both the number of elements in each variable and the data types.

- Adding b1 and c1 results in a list of 4 numbers - 45.6 46.6 47.6 48.6 because adding two vectors in R results in the sum of all elements. Variable c1 contains 4 integer elements, so the one numeric element from b1 is added to each integer contained in c1. The result is a list of numeric data which is no longer integers due to the decimal values from b1.

Q7 (1 pt.): Show the R code you used to create v1.

- v1 <- c(-2:2)

Q8 (1 pt.): Show the R code you used to create v2.

- v2 <- c(v1*3)

Q9 (1 pt.): Show the R code you used to calculate the sum of elements in v2.

- sum(v2)

Q10 (1 pt.): Show the code you used to create mat_1.

- vec_4 <- c(1:12)
- mat_1 <- matrix(vec_4, byrow= TRUE, nrow = 3)
- mat_1

Q11 (1 pt.): Show the code you used to create mat_2.

- vec_4 <- c(1:12)
- mat_2 <- matrix(vec_4, byrow= FALSE, nrow = 3)
- mat_2

Q12 (2 pts.): Show the R code you used to create my_list_1.

- my_list_1 <- list (two = 5.2, one = "five point two", three = 0:5)

Q13 (1 pt.): Show valid R code that selects the third element of the list.

- my_list_1[[3]]

Q14 (1 pt.): Show the R code that selects the list element with the name “one”. Note: there are at least two ways to do this!

- my_list_1$one
- OR
- my_list_1[["one"]]

Q15 (3 pts.): Show the R code that you used to create my_bool_vec.

- my_vec = rep(1:3, 5)
- my_vec
- my_bool_vec <- my_vec == 3
- my_bool_vec

Q16 (2 pts.): Show the R code that you used to subset my_vec using my_bool_vec.

- my_vec[my_bool_vec == TRUE]