Assignment - 3

Session 5 – Data

Management using R

**5. Problem statement**

1. Test whether two vectors are exactly equal (element by element).

vec1 = c(rownames(mtcars[1:15,]))

vec2 = c(rownames(mtcars[11:25,]))

Ans:

> ifelse (unique(vec1) == unique(vec2), TRUE, FALSE)

[1] FALSE FALSE FALSE FALSE FALSE FALSE FALSE FALSE FALSE FALSE FALSE FALSE FALSE

[14] FALSE FALSE

> all(ifelse (unique(vec1) == unique(vec2), TRUE, FALSE))

[1] FALSE

2. Sort the character vector in ascending order and descending order.

vec1 = c(rownames(mtcars[1:15,]))

vec2 = c(rownames(mtcars[11:25,]))

Ans:

> sort(vec1)

[1] "Cadillac Fleetwood" "Datsun 710" "Duster 360"

[4] "Hornet 4 Drive" "Hornet Sportabout" "Mazda RX4"

[7] "Mazda RX4 Wag" "Merc 230" "Merc 240D"

[10] "Merc 280" "Merc 280C" "Merc 450SE"

[13] "Merc 450SL" "Merc 450SLC" "Valiant"

> sort(vec1, decreasing = TRUE)

[1] "Valiant" "Merc 450SLC" "Merc 450SL"

[4] "Merc 450SE" "Merc 280C" "Merc 280"

[7] "Merc 240D" "Merc 230" "Mazda RX4 Wag"

[10] "Mazda RX4" "Hornet Sportabout" "Hornet 4 Drive"

[13] "Duster 360" "Datsun 710" "Cadillac Fleetwood"

> sort(vec2)

[1] "AMC Javelin" "Cadillac Fleetwood" "Camaro Z28"

[4] "Chrysler Imperial" "Dodge Challenger" "Fiat 128"

[7] "Honda Civic" "Lincoln Continental" "Merc 280C"

[10] "Merc 450SE" "Merc 450SL" "Merc 450SLC"

[13] "Pontiac Firebird" "Toyota Corolla" "Toyota Corona"

> sort(vec2, decreasing = TRUE)

[1] "Toyota Corona" "Toyota Corolla" "Pontiac Firebird"

[4] "Merc 450SLC" "Merc 450SL" "Merc 450SE"

[7] "Merc 280C" "Lincoln Continental" "Honda Civic"

[10] "Fiat 128" "Dodge Challenger" "Chrysler Imperial"

[13] "Camaro Z28" "Cadillac Fleetwood" "AMC Javelin"

3. What is the major difference between str() and paste() show an example.

paste0(..., collapse = NULL)is a wrapper for paste(..., sep = "", collapse = NULL), which means there is no separator. In other words, with paste0() you can not apply some sort of separator, while you do have that option with paste(), whereas a single space is the default.

str\_c(..., sep = "", collapse = NULL) is equivalent to paste(), which means you do have the option to customize your desired separator. The difference is for str\_c() the default is no separator, so it acts just like paste0() as a default.

x <- LETTERS

x[x %**in**% c("A", "E", "I", "O", "U")] <- NA

y <- letters

y[c(TRUE, FALSE, FALSE)] <- NA

stringr::str\_c(x, y)

paste0(x, y)

**str\_c() warns on inexact recycling**

If inputs are different lengths, and not exact multiples of each other, str\_c() follows the usual vector recycling convention of throwing a warning.

paste0(month.abb, letters)

stringr::str\_c(month.abb, letters)

Paste() and paste0() are both functions from the base package, whereas str\_c() comes from the stringr package.

4. Introduce a separator when concatenating the strings.

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| > vec1  [1] "Mazda RX4" "Mazda RX4 Wag" "Datsun 710"  [4] "Hornet 4 Drive" "Hornet Sportabout" "Valiant"  [7] "Duster 360" "Merc 240D" "Merc 230"  [10] "Merc 280" "Merc 280C" "Merc 450SE"  [13] "Merc 450SL" "Merc 450SLC" "Cadillac Fleetwood"  > vec2  [1] "Merc 280C" "Merc 450SE" "Merc 450SL"  [4] "Merc 450SLC" "Cadillac Fleetwood" "Lincoln Continental"  [7] "Chrysler Imperial" "Fiat 128" "Honda Civic"  [10] "Toyota Corolla" "Toyota Corona" "Dodge Challenger"  [13] "AMC Javelin" "Camaro Z28" "Pontiac Firebird"  > d = paste(vec1,vec2,collapse = ",")  > d  [1] "Mazda RX4 Merc 280C,Mazda RX4 Wag Merc 450SE,Datsun 710 Merc 450SL,Hornet 4 Drive Merc 450SLC,Hornet Sportabout Cadillac Fleetwood,Valiant Lincoln Continental,Duster 360 Chrysler Imperial,Merc 240D Fiat 128,Merc 230 Honda Civic,Merc 280 Toyota Corolla,Merc 280C Toyota Corona,Merc 450SE Dodge Challenger,Merc 450SL AMC Javelin,Merc 450SLC Camaro Z28,Cadillac Fleetwood Pontiac Firebird"  > d = paste(vec1,vec2,sep = ",")  > d  [1] "Mazda RX4,Merc 280C" "Mazda RX4 Wag,Merc 450SE"  [3] "Datsun 710,Merc 450SL" "Hornet 4 Drive,Merc 450SLC"  [5] "Hornet Sportabout,Cadillac Fleetwood" "Valiant,Lincoln Continental"  [7] "Duster 360,Chrysler Imperial" "Merc 240D,Fiat 128"  [9] "Merc 230,Honda Civic" "Merc 280,Toyota Corolla"  [11] "Merc 280C,Toyota Corona" "Merc 450SE,Dodge Challenger"  [13] "Merc 450SL,AMC Javelin" "Merc 450SLC,Camaro Z28"  [15] "Cadillac Fleetwood,Pontiac Firebird" |
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