Session 5 – Data

Management using R

Assignment - 3

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

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

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

isTRUE(all.equal(vec1,vec2)) # returns true/false

[1] FALSE

> identical(vec1,vec2) # returns true/false

[1] FALSE

> all.equal(vec1,vec2) # returns number of differences

[1] "15 string mismatches"

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

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

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

sort(vec1) # vec1 in ascending order

[1] "Cadillac Fleetwood" "Datsun 710" "Duster 360" "Hornet 4 Drive"

[5] "Hornet Sportabout" "Mazda RX4" "Mazda RX4 Wag" "Merc 230"

[9] "Merc 240D" "Merc 280" "Merc 280C" "Merc 450SE"

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

> sort(vec1, decreasing = TRUE) # vec1 in descending order

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

[5] "Merc 280C" "Merc 280" "Merc 240D" "Merc 230"

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

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

sort(vec2) # vec2 in ascending order

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

[5] "Dodge Challenger" "Fiat 128" "Honda Civic" "Lincoln Continental"

[9] "Merc 280C" "Merc 450SE" "Merc 450SL" "Merc 450SLC"

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

> sort(vec2, decreasing = TRUE) # vec2 in descending order

[1] "Toyota Corona" "Toyota Corolla" "Pontiac Firebird" "Merc 450SLC"

[5] "Merc 450SL" "Merc 450SE" "Merc 280C" "Lincoln Continental"

[9] "Honda Civic" "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.

str(mtcars$mpg) # structure gives the class of variable, number of values/ elements

num [1:32] 21 21 22.8 21.4 18.7 18.1 14.3 24.4 22.8 19.2 ...

> paste(mtcars$mpg) # just prints / shows the actual elemnts

[1] "21" "21" "22.8" "21.4" "18.7" "18.1" "14.3" "24.4" "22.8" "19.2" "17.8" "16.4"

[13] "17.3" "15.2" "10.4" "10.4" "14.7" "32.4" "30.4" "33.9" "21.5" "15.5" "15.2" "13.3"

[25] "19.2" "27.3" "26" "30.4" "15.8" "19.7" "15" "21.4"

4. Introduce a separator when concatenating the strings.

paste(rownames(mtcars[1,]), rownames(mtcars[10,]), sep = " ")

[1] "Mazda RX4 Merc 280"