Assignment 5.3

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Batch : DA with R , Excel and Tableau

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

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

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

> vec1

[1] "Mazda RX4" "Mazda RX4 Wag" "Datsun 710" "Hornet 4 Drive" "Hornet Sportabout"

[6] "Valiant" "Duster 360" "Merc 240D" "Merc 230" "Merc 280"

[11] "Merc 280C" "Merc 450SE" "Merc 450SL" "Merc 450SLC" "Cadillac Fleetwood"

> vec2

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

[5] "Cadillac Fleetwood" "Lincoln Continental" "Chrysler Imperial" "Fiat 128"

[9] "Honda Civic" "Toyota Corolla" "Toyota Corona" "Dodge Challenger"

[13] "AMC Javelin" "Camaro Z28" "Pontiac Firebird"

> 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,]))

> vec1

[1] "Mazda RX4" "Mazda RX4 Wag" "Datsun 710" "Hornet 4 Drive" "Hornet Sportabout"

[6] "Valiant" "Duster 360" "Merc 240D" "Merc 230" "Merc 280"

[11] "Merc 280C" "Merc 450SE" "Merc 450SL" "Merc 450SLC" "Cadillac Fleetwood"

> sort(vec1) # vec1 in ascending order

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

[6] "Mazda RX4" "Mazda RX4 Wag" "Merc 230" "Merc 240D" "Merc 280"

[11] "Merc 280C" "Merc 450SE" "Merc 450SL" "Merc 450SLC" "Valiant"

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

[1] "Valiant" "Merc 450SLC" "Merc 450SL" "Merc 450SE" "Merc 280C"

[6] "Merc 280" "Merc 240D" "Merc 230" "Mazda RX4 Wag" "Mazda RX4"

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

> vec2

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

[5] "Cadillac Fleetwood" "Lincoln Continental" "Chrysler Imperial" "Fiat 128"

[9] "Honda Civic" "Toyota Corolla" "Toyota Corona" "Dodge Challenger"

[13] "AMC Javelin" "Camaro Z28" "Pontiac Firebird"

> 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.

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

> vec1

[1] "Mazda RX4" "Mazda RX4 Wag" "Datsun 710" "Hornet 4 Drive" "Hornet Sportabout"

[6] "Valiant" "Duster 360" "Merc 240D" "Merc 230" "Merc 280"

[11] "Merc 280C" "Merc 450SE" "Merc 450SL" "Merc 450SLC" "Cadillac Fleetwood"

> str(vec1)

chr [1:15] "Mazda RX4" "Mazda RX4 Wag" "Datsun 710" "Hornet 4 Drive" "Hornet Sportabout" "Valiant" ...

> paste(vec1)

[1] "Mazda RX4" "Mazda RX4 Wag" "Datsun 710" "Hornet 4 Drive" "Hornet Sportabout"

[6] "Valiant" "Duster 360" "Merc 240D" "Merc 230" "Merc 280"

[11] "Merc 280C" "Merc 450SE" "Merc 450SL" "Merc 450SLC" "Cadillac Fleetwood"

> mode(str(vec1))

chr [1:15] "Mazda RX4" "Mazda RX4 Wag" "Datsun 710" "Hornet 4 Drive" "Hornet Sportabout" "Valiant" ...

[1] "NULL"

> mode(paste(vec1))

[1] "character"

> class(str(vec1))

chr [1:15] "Mazda RX4" "Mazda RX4 Wag" "Datsun 710" "Hornet 4 Drive" "Hornet Sportabout" "Valiant" ...

[1] "NULL"

> class(paste(vec1))

[1] "character

4. Introduce a separator when concatenating the strings.

> x<-c("a","b","c")

> x

[1] "a" "b" "c"

> y<-c("A","B","C")

> y

[1] "A" "B" "C"

> paste(x,y)

[1] "a A" "b B" "c C"

> paste(x,y,sep = ",")

[1] "a,A" "b,B" "c,C"

> paste(x,y,sep = "-")

[1] "a-A" "b-B" "c-C"