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

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

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

Ans :vec1==vec2

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,decreasing = FALSE)---ascending of vec1

sort(vec1,decreasing = TRUE)—descending of vec1

sort(vec2,decreasing = FALSE)---ascending of vec2

sort(vec2,decreasing = TRUE)—descending of vec2

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

Str is a compact way to display the structure of an R object.This allows you to use str as a diagnostic function and an alternative to summary. Str will output the information on one line for each basic structure. Str is best for displaying contents of lists. The goals is to get an output for any R object.

While paste is to concatenate the records.

OUTPUT:

paste(mtcars)

[1] "c(21, 21, 22.8, 21.4, 18.7, 18.1, 14.3, 24.4, 22.8, 19.2, 17.8, 16.4, 17.3, 15.2, 10.4, 10.4, 14.7, 32.4, 30.4, 33.9, 21.5, 15.5, 15.2, 13.3, 19.2, 27.3, 26, 30.4, 15.8, 19.7, 15, 21.4)"

[2] "c(6, 6, 4, 6, 8, 6, 8, 4, 4, 6, 6, 8, 8, 8, 8, 8, 8, 4, 4, 4, 4, 8, 8, 8, 8, 4, 4, 4, 8, 6, 8, 4)"

[3] "c(160, 160, 108, 258, 360, 225, 360, 146.7, 140.8, 167.6, 167.6, 275.8, 275.8, 275.8, 472, 460, 440, 78.7, 75.7, 71.1, 120.1, 318, 304, 350, 400, 79, 120.3, 95.1, 351, 145, 301, 121)"

[4] "c(110, 110, 93, 110, 175, 105, 245, 62, 95, 123, 123, 180, 180, 180, 205, 215, 230, 66, 52, 65, 97, 150, 150, 245, 175, 66, 91, 113, 264, 175, 335, 109)"

[5] "c(3.9, 3.9, 3.85, 3.08, 3.15, 2.76, 3.21, 3.69, 3.92, 3.92, 3.92, 3.07, 3.07, 3.07, 2.93, 3, 3.23, 4.08, 4.93, 4.22, 3.7, 2.76, 3.15, 3.73, 3.08, 4.08, 4.43, 3.77, 4.22, 3.62, 3.54, 4.11)"

[6] "c(2.62, 2.875, 2.32, 3.215, 3.44, 3.46, 3.57, 3.19, 3.15, 3.44, 3.44, 4.07, 3.73, 3.78, 5.25, 5.424, 5.345, 2.2, 1.615, 1.835, 2.465, 3.52, 3.435, 3.84, 3.845, 1.935, 2.14, 1.513, 3.17, 2.77, 3.57, 2.78)"

[7] "c(16.46, 17.02, 18.61, 19.44, 17.02, 20.22, 15.84, 20, 22.9, 18.3, 18.9, 17.4, 17.6, 18, 17.98, 17.82, 17.42, 19.47, 18.52, 19.9, 20.01, 16.87, 17.3, 15.41, 17.05, 18.9, 16.7, 16.9, 14.5, 15.5, 14.6, 18.6)"

[8] "c(0, 0, 1, 1, 0, 1, 0, 1, 1, 1, 1, 0, 0, 0, 0, 0, 0, 1, 1, 1, 1, 0, 0, 0, 0, 1, 0, 1, 0, 0, 0, 1)"

[9] "c(1, 1, 1, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 1, 1, 1, 0, 0, 0, 0, 0, 1, 1, 1, 1, 1, 1, 1)"

[10] "c(4, 4, 4, 3, 3, 3, 3, 4, 4, 4, 4, 3, 3, 3, 3, 3, 3, 4, 4, 4, 3, 3, 3, 3, 3, 4, 5, 5, 5, 5, 5, 4)"

[11] "c(4, 4, 1, 1, 2, 1, 4, 2, 2, 4, 4, 3, 3, 3, 4, 4, 4, 1, 2, 1, 1, 2, 2, 4, 2, 1, 2, 2, 4, 6, 8, 2)"

> str(mtcars)

'data.frame': 32 obs. of 11 variables:

$ mpg : num 21 21 22.8 21.4 18.7 18.1 14.3 24.4 22.8 19.2 ...

$ cyl : num 6 6 4 6 8 6 8 4 4 6 ...

$ disp: num 160 160 108 258 360 ...

$ hp : num 110 110 93 110 175 105 245 62 95 123 ...

$ drat: num 3.9 3.9 3.85 3.08 3.15 2.76 3.21 3.69 3.92 3.92 ...

$ wt : num 2.62 2.88 2.32 3.21 3.44 ...

$ qsec: num 16.5 17 18.6 19.4 17 ...

$ vs : num 0 0 1 1 0 1 0 1 1 1 ...

$ am : num 1 1 1 0 0 0 0 0 0 0 ...

$ gear: num 4 4 4 3 3 3 3 4 4 4 ...

4. Introduce a separator when concatenating the strings.

Ans:paste(vec1,vec2,sep=",")