SESSION 5 – ASSIGNMENT 5.2

Date: 7th Jan 2019

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

```
vec1 = c(rownames(mtcars[1:15,]))
vec2 = c(rownames(mtcars[11:25,]))

# returns true/false
isTRUE(all.equal(vec1,vec2))
# returns true/false
identical(vec1,vec2)
# returns number of differences
all.equal(vec1,vec2)
```

```
Console   Terminal
~/
> 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,]))

# vec1 in ascending order
sort(vec1)
sort(vec2)
# vec1 in descending order
sort(vec1, decreasing = TRUE)
sort(vec2, decreasing = TRUE)
```

```
> vec1 = c(rownames(mtcars[1:15,]))
> vec2 = c(rownames(mtcars[11:25,]))
> # vec1 in ascending order
> sort(vec1)
 [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(vec2)
 [1] "AMC Javelin"         "Cadillac Fleetwood" "Camaro Z28"         "Chrysler Imperial"  "Dodge Challenger"
 [6] "Fiat 128"            "Honda Civic"        "Lincoln Continental" "Merc 280C"         "Merc 450SE"
[11] "Merc 450SL"          "Merc 450SLC"        "Pontiac Firebird"   "Toyota Corolla"     "Toyota Corona"
> # vec1 in descending order
> sort(vec1, decreasing = TRUE)
 [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"
> sort(vec2, decreasing = TRUE)
 [1] "Toyota Corona"       "Toyota Corolla"     "Pontiac Firebird"   "Merc 450SLC"        "Merc 450SL"
 [6] "Merc 450SE"          "Merc 280C"          "Lincoln Continental" "Honda Civic"       "Fiat 128"
[11] "Dodge Challenger"    "Chrysler Imperial"  "Camaro Z28"         "Cadillac Fleetwood" "AMC Javelin"
>
```

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

#returns the value, class and number of elements

str(vec1)

#returns the value only (or just prints)

paste(vec1)

```
> vec1 = c(rownames(mtcars[1:15,]))
> #returns the value, class and number of elements
> str(vec1)
 chr [1:15] "Mazda RX4" "Mazda RX4 Wag" "Datsun 710" "Hornet 4 Drive" "Hornet Sportabout" "Valiant" "Duster 360" ...
> #returns the value only(or just prints)
> 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"
>
```

4. Introduce a separator when concatenating the strings

x<-c("1","2","3")

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

paste(x,y)

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

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

```
> #Answer No 4 Assignment 5.3
> x<-c("1","2","3")
> y<-c("A","B","C")
> paste(x,y)
[1] "1 A" "2 B" "3 C"
> paste(x,y,sep = ",")
[1] "1,A" "2,B" "3,C"
> paste(x,y,sep = "-")
[1] "1-A" "2-B" "3-C"
>
```