



ACADGILD

SESSION 5: Data Management Using R

Assignment 3

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1. Introduction

This assignment will help you understand the concepts learnt in the session.

2. Objective

This assignment will test your skills on Performing SET operations in R.

3. Prerequisites

Not applicable.

4. Associated Data Files

Not applicable.

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: `library(dplyr)`

`#exactly equal`

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

```
> library(dplyr)  
> #exactly equal  
> vec1 = c(rownames(mtcars[1:15,]))  
> vec2 = c(rownames(mtcars[11:25,]))  
> identical(vec1,vec2)  
[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(c(vec1,vec2))`

`sort(c(vec1, vec2), decreasing = T)`

```
> sort(c(vec1,vec2))
[1] "AMC Javelin"      "Cadillac Fleetwood" "Cadillac Fleetwood" "Camaro Z28"
[5] "Chrysler Imperial" "Datsun 710"        "Dodge Challenger"  "Duster 360"
[9] "Fiat 128"         "Honda Civic"       "Hornet 4 Drive"    "Hornet Sportabout"
[13] "Lincoln Continental" "Mazda RX4"        "Mazda RX4 Wag"     "Merc 230"
[17] "Merc 240D"        "Merc 280"         "Merc 280C"         "Merc 280C"
[21] "Merc 450SE"       "Merc 450SE"       "Merc 450SL"        "Merc 450SL"
[25] "Merc 450SLC"      "Merc 450SLC"      "Pontiac Firebird"  "Toyota Corolla"
[29] "Toyota Corona"   "Valiant"
```

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

ANS: `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)
```

```
> stringr::str_c(x, y)
[1] NA "Bb" "Cc" NA NA "Ff" NA "Hh" NA NA "Kk" "Ll" NA "Nn" NA NA "Qq" "Rr" NA "Tt"
[21] NA NA "Ww" "Xx" NA "Zz"
> paste0(x, y)
[1] "NANA" "Bb" "Cc" "DNA" "NAe" "Ff" "GNA" "Hh" "NAi" "JNA" "Kk" "Ll" "MNA" "Nn"
[15] "NAo" "PNA" "Qq" "Rr" "SNA" "Tt" "NAu" "VNA" "Ww" "Xx" "YNA" "Zz"
> |
```

4. Introduce a separator when concatenating the strings

ANS: # introducing separator and concatenate

```
paste(month.abb, "is the", nth, "month of the year.", sep = "_* _")
```

```
> paste(month.abb, "is the", nth, "month of the year.", sep = "_* _")
[1] "Jan_*_is the_*_1st_*_month of the year." "Feb_*_is the_*_2nd_*_month of the year."
[3] "Mar_*_is the_*_3rd_*_month of the year." "Apr_*_is the_*_4th_*_month of the year."
[5] "May_*_is the_*_5th_*_month of the year." "Jun_*_is the_*_6th_*_month of the year."
[7] "Jul_*_is the_*_7th_*_month of the year." "Aug_*_is the_*_8th_*_month of the year."
[9] "Sep_*_is the_*_9th_*_month of the year." "Oct_*_is the_*_10th_*_month of the year."
[11] "Nov_*_is the_*_11th_*_month of the year." "Dec_*_is the_*_12th_*_month of the year."
> |
```

