

SESSION 5 – ASSIGNMENT 5.2

Date: 7th Jan 2019

1. obtain the elements of the union between two-character vectors.

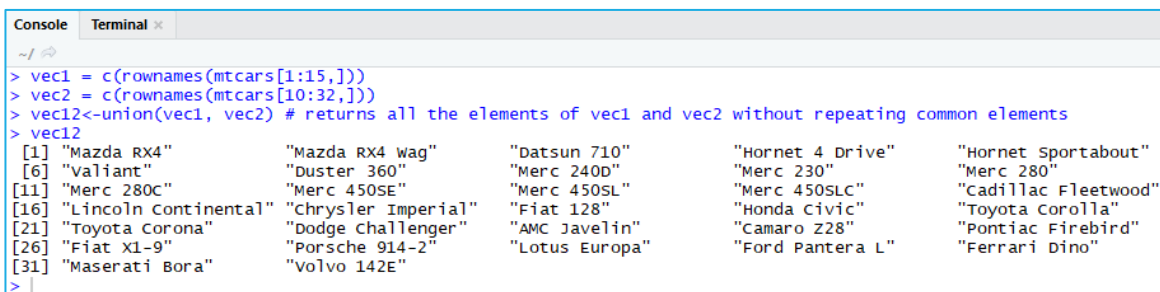
```
vec1 = c(rownames(mtcars[1:15,]))
```

```
vec2 = c(rownames(mtcars[10:32,]))
```

returns all the elements of vec1 and vec2 without repeating common elements

```
vec12<-union(vec1, vec2)
```

vec12



```
Console Terminal x
~/
> vec1 = c(rownames(mtcars[1:15,]))
> vec2 = c(rownames(mtcars[10:32,]))
> vec12<-union(vec1, vec2) # returns all the elements of vec1 and vec2 without repeating common elements
> vec12
[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"
[16] "Lincoln Continental" "Chrysler Imperial"  "Fiat 128"          "Honda Civic"        "Toyota Corolla"
[21] "Toyota Corona"     "Dodge Challenger"   "AMC Javelin"       "Camaro Z28"        "Pontiac Firebird"
[26] "Fiat X1-9"         "Porsche 914-2"      "Lotus Europa"      "Ford Pantera L"    "Ferrari Dino"
[31] "Maserati Bora"     "Volvo 142E"
> |
```

2. Get those elements that are common to both vectors

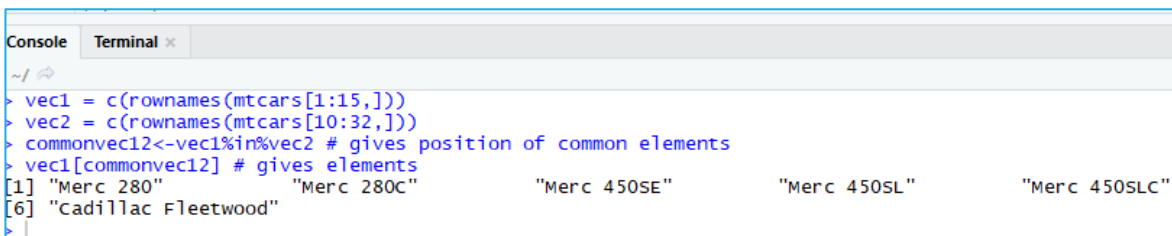
```
vec1 = c(rownames(mtcars[1:15,]))
```

```
vec2 = c(rownames(mtcars[10:32,]))
```

gives position of common elements

```
commonvec12<-vec1%in%vec2
```

gives elements **vec1[commonvec12]**



```
Console Terminal x
~/
> vec1 = c(rownames(mtcars[1:15,]))
> vec2 = c(rownames(mtcars[10:32,]))
> commonvec12<-vec1%in%vec2 # gives position of common elements
> vec1[commonvec12] # gives elements
[1] "Merc 280"           "Merc 280C"          "Merc 450SE"         "Merc 450SL"        "Merc 450SLC"
[6] "Cadillac Fleetwood"
> |
```

3. Get the difference of the elements between two-character vectors.

```
vec1 = c(rownames(mtcars[1:15,]))  
vec2 = c(rownames(mtcars[10:32,]))
```

elements of vec1 which are not present in vec2

```
vec1[!vec1%in%vec2]
```

elements of vec2 which are not present in vec1

```
vec2[!vec2%in%vec1]
```

#elements which are not common in vec1 and vec2

```
union(vec1[!vec1%in%vec2],vec2[!vec2%in%vec1])
```

```
Console Terminal x  
~/I  
> vec1 = c(rownames(mtcars[1:15,]))  
> vec2 = c(rownames(mtcars[10:32,]))  
> vec1[!vec1%in%vec2]# elements of vec1 which are not present in vec2  
[1] "Mazda RX4" "Mazda RX4 wag" "Datsun 710" "Hornet 4 Drive" "Hornet Sportabout"  
[6] "Valiant" "Duster 360" "Merc 240D" "Merc 230"  
> vec2[!vec2%in%vec1]# elements of vec2 which are not present in vec1  
[1] "Lincoln Continental" "Chrysler Imperial" "Fiat 128" "Honda Civic" "Toyota Corolla"  
[6] "Toyota Corona" "Dodge Challenger" "AMC Javelin" "Camaro Z28" "Pontiac Firebird"  
[11] "Fiat X1-9" "Porsche 914-2" "Lotus Europa" "Ford Pantera L" "Ferrari Dino"  
[16] "Maserati Bora" "Volvo 142E"  
> union(vec1[!vec1%in%vec2],vec2[!vec2%in%vec1])#elements which are not common in vec1 and vec2  
[1] "Mazda RX4" "Mazda RX4 wag" "Datsun 710" "Hornet 4 Drive" "Hornet Sportabout"  
[6] "Valiant" "Duster 360" "Merc 240D" "Merc 230" "Lincoln Continental"  
[11] "Chrysler Imperial" "Fiat 128" "Honda Civic" "Toyota Corolla" "Toyota Corona"  
[16] "Dodge Challenger" "AMC Javelin" "Camaro Z28" "Pontiac Firebird" "Fiat X1-9"  
[21] "Porsche 914-2" "Lotus Europa" "Ford Pantera L" "Ferrari Dino" "Maserati Bora"  
[26] "Volvo 142E"
```