Assignment 3.2

1. Obtain the elements of the union between two character vectors.

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

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

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| --- |
| #we use union function |
|  | #The union of two sets is everything in the two sets taken together, |
|  | #but counting elements only once that are common to both sets: |
|  | vec1 = c(rownames(mtcars[1:15,])) |
|  | vec1 |
|  | vec2 = c(rownames(mtcars[10:32,])) |
|  | vec2 |
|  |  |
|  | union(vec1,vec2 |

|  |
| --- |
| union(vec1,vec2)  [1] "Mazda RX4" "Mazda RX4 Wag" "Datsun 710"  [4] "Hornet 4 Drive" "Hornet Sportabout" "Valiant"  [7] "Duster 360" "Merc 240D" "Merc 230"  [10] "Merc 280" "Merc 280C" "Merc 450SE"  [13] "Merc 450SL" "Merc 450SLC" "Cadillac Fleetwood"  [16] "Lincoln Continental" "Chrysler Imperial" "Fiat 128"  [19] "Honda Civic" "Toyota Corolla" "Toyota Corona"  [22] "Dodge Challenger" "AMC Javelin" "Camaro Z28"  [25] "Pontiac Firebird" "Fiat X1-9" "Porsche 914-2"  [28] "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,]))

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| --- |
| #we use intersect function |
|  |  |
|  | vec1 = c(rownames(mtcars[1:15,])) |
|  | vec1 |
|  | vec2 = c(rownames(mtcars[10:32,])) |
|  | vec2 |
|  |  |
|  | intersect(vec1,vec2) |

|  |
| --- |
| > intersect(vec1,vec2)  [1] "Merc 280" "Merc 280C" "Merc 450SE"  [4] "Merc 450SL" "Merc 450SLC" "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,]))

setdiff(vec1,vec2)

# elements of vec1 which are not in vec2

setdiff(vec1,vec2)

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

[5] "Hornet Sportabout" "Valiant" "Duster 360" "Merc 240D"

[9] "Merc 230"

# elements of vec2 which are not in vec1

> setdiff(vec2,vec1)

[1] "Lincoln Continental" "Chrysler Imperial" "Fiat 128"

[4] "Honda Civic" "Toyota Corolla" "Toyota Corona"

[7] "Dodge Challenger" "AMC Javelin" "Camaro Z28"

[10] "Pontiac Firebird" "Fiat X1-9" "Porsche 914-2"

[13] "Lotus Europa" "Ford Pantera L" "Ferrari Dino"

[16] "Maserati Bora" "Volvo 142E"

4. Test the quality of two character vectors.

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

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

setequal(vec1,vec2)

vec1 %in% vec2

|  |
| --- |
| > setequal(vec1,vec2)  [1] FALSE  >  > vec1 %in% vec2  [1] FALSE FALSE FALSE FALSE FALSE FALSE FALSE FALSE FALSE TRUE TRUE TRUE TRUE  [14] TRUE TRUE |
|  |
| |  | | --- | | > | |