ACADGILD

SESSION 5: Data Management Using R

Assignment 2

PROBLEM STATEMENT

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

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

2. Get those elements that are common to both vectors

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

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

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

4. Test the equality of two character vectors

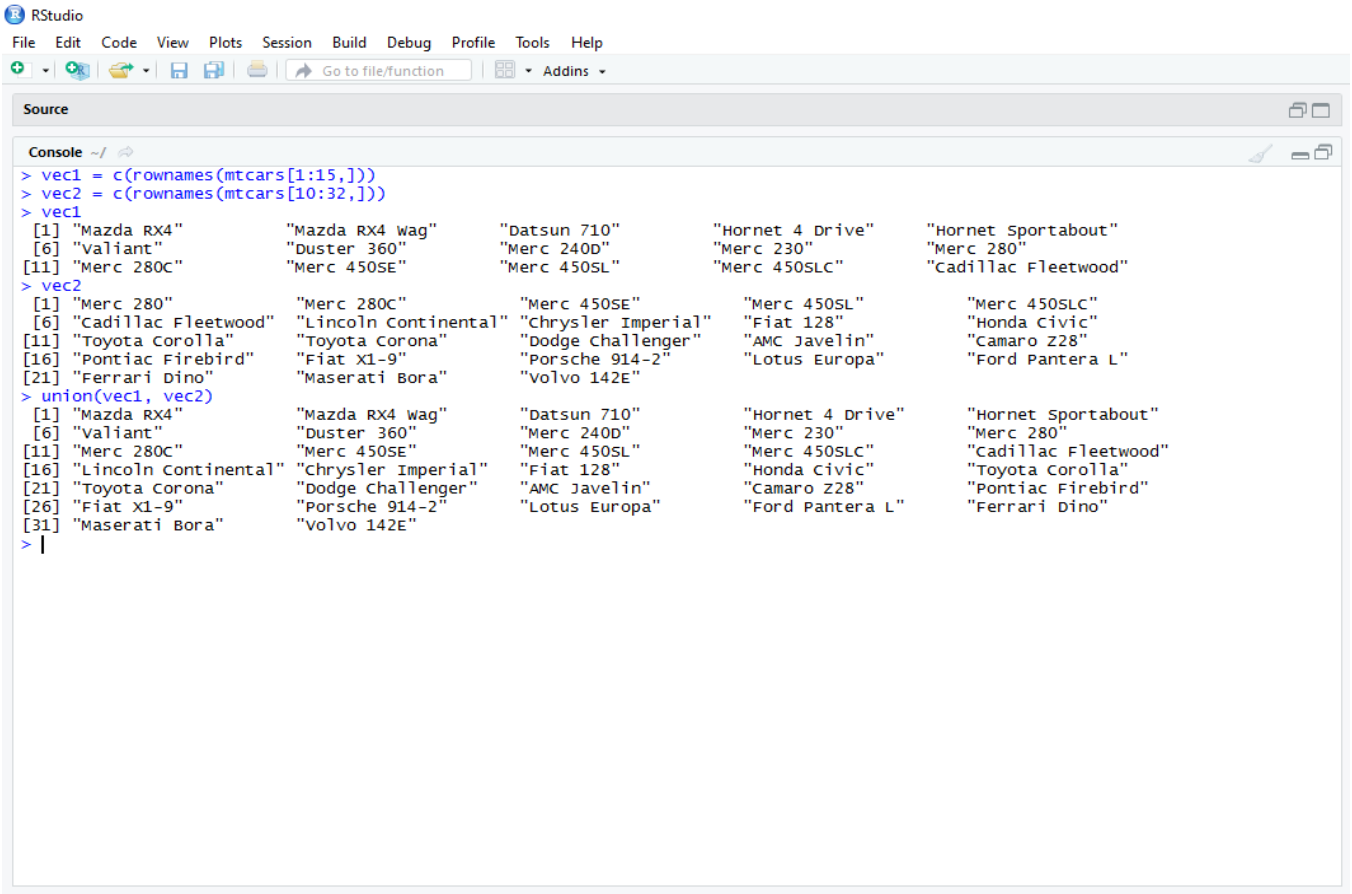
```
vec1 = c(rownames(mtcars[1:15,]))
vec2 = c(rownames(mtcars[11:25,]))
```

SOLUTION :

1. **The R-script for the given problem is as follows:**

```
vec1 = c(rownames(mtcars[1:15,]))
vec2 = c(rownames(mtcars[10:32,]))
vec1
vec2
union(vec1, vec2)       # the union between two character vectors.
```

The output of the R-Script (from Console window) is given as follows:



2. The R-script for the given problem is as follows:

```
vec1 = c(rownames(mtcars[1:15,]))
vec2 = c(rownames(mtcars[10:32,]))
intersect(vec1,vec2)          # names of common elements
which(vec1 %in%  vec2)     # Index of common elements
```

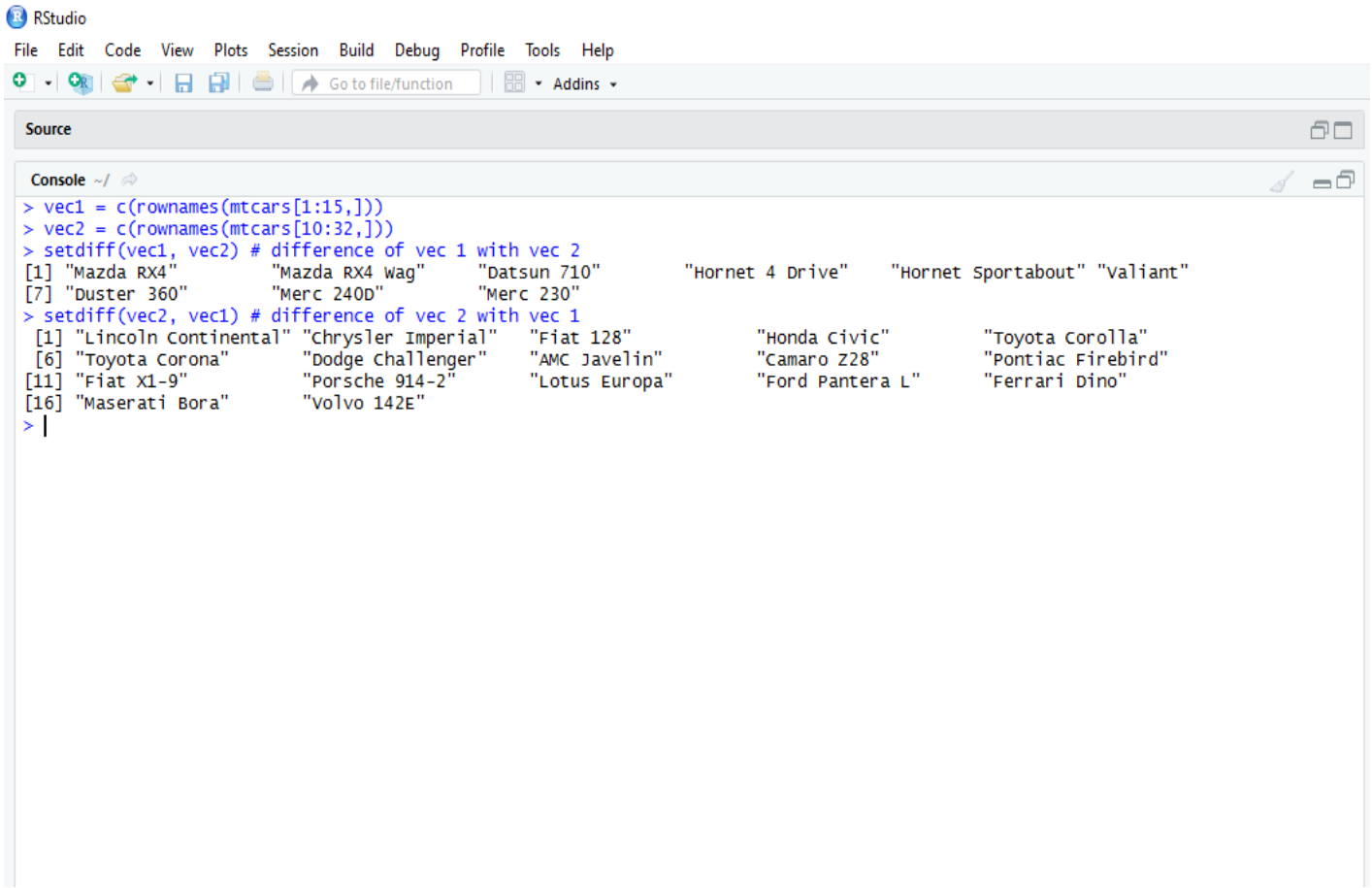
The output of the R-Script (from Console window) is given as follows:

```
> vec1 = c(rownames(mtcars[1:15,]))
> vec2 = c(rownames(mtcars[10:32,]))
> intersect(vec1,vec2)              # names of common elements
 [1] "Merc 280"           "Merc 280C"          "Merc 450SE"
"Merc 450SL"         "Merc 450SLC"
 [6] "Cadillac Fleetwood"
> which(vec1 %in%  vec2)     # Index of common elements
[1] 10 11 12 13 14 15
```

3. **The R-script for the given problem is as follows:**

```
vec1 = c(rownames(mtcars[1:15,]))
vec2 = c(rownames(mtcars[10:32,]))
setdiff(vec1, vec2) # difference of vec 1 with vec 2
setdiff(vec2, vec1) # difference of vec 2 with vec 1
```

The output of the R-Script (from Console window) is given as follows:



4. The R-script for the given problem is as follows:

```
vec1 = c(rownames(mtcars[1:15,]))
vec2 = c(rownames(mtcars[11:25,]))
setequal(vec1, vec2) # is vec1 equal to vec 2
# OR
setequal( union(vec1, vec2), c(setdiff(vec1, vec2), intersect(vec1, vec2),
setdiff(vec1, vec2)))
```

The output of the R-Script (from Console window) is given as follows: