**Data Management Using R 5.1**

1. How many vowels are there in the names of USA state?
2. > states = rownames(USArrests)
3. > library(stringr)
4. > str\_count(states,"a")
5. [1] 3 2 1 2 2 1 0 2 1 1 2 1 0 2 1 2 0 2 1 2 2 1 1 0 0 2 2 2 1 0 0 0 2 2 0 2 0 2 1 2 2 0 1 1 0 1 1 1 0 0
6. > str\_count(tolower(states),"a")
7. [1] 4 3 2 3 2 1 0 2 1 1 2 1 0 2 1 2 0 2 1 2 2 1 1 0 0 2 2 2 1 0 0 0 2 2 0 2 0 2 1 2 2 0 1 1 0 1 1 1 0 0
8. > vowels = c("a","e","i","o","u")
9. > num\_vowels = vector (mode = "integer",length = 5)
10. > for(j in seq\_along(vowels))
11. + {
12. + num =
13. + str\_count(tolower(states),vowels[j])
14. + num\_vowels[j] = sum(num)
15. + }
16. > names(num\_vowels) = vowels
17. > num\_vowels
18. a e i o u
19. 61 28 44 36 8

2. visualize the vowels distribution

barplot(num\_vowels,main = "vowels distribution in name of USA states", xlab = "vowels", ylab = "counts", col = "red", ylim = c(0,80))

