



**ACADGILD**

# SESSION 4: FOUNDATIONAL R PROGRAMMING-II

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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 foundational R Programming- writing functions.

## **3. Prerequisites**

Not applicable.

## **4. Associated Data Files**

Not applicable.

## 5. Problem Statement

1. states=rownames(USArrests)

- Get states names with 'w'.

**ANS:** library(dplyr)

```
states=rownames(USArrests)
#states that starts with "w"-----
grep("w",rownames(USArrests))
x=grep("w", states)
for(i in 1:length(x)){
  print(states[x[i]])
}
```

```
> grep("w",rownames(USArrests))
[1] 8 11 15 29 30 31 32
> x=grep("w", states)
> for(i in 1:length(x)){
+   print(states[x[i]])
+ }
[1] "Delaware"
[1] "Hawaii"
[1] "Iowa"
[1] "New Hampshire"
[1] "New Jersey"
[1] "New Mexico"
[1] "New York"
>
```

- Get states names with 'W'.

**ANS: #States that start with "W"**

```
grep("W", states)
X=grep("W", states)
for (i in 1:length(X)) {
  print(states[x[i]])
}
```

```
>
> #States that start with "W"
> grep("W", states)
[1] 47 48 49 50
> X=grep("W", states)
> for (i in 1:length(X)) {
+   print(states[x[i]])
+ }
[1] "Delaware"
[1] "Hawaii"
[1] "Iowa"
[1] "New Hampshire"
>
>
```

2. **Prepare a histogram of the number of characters in each US state.**

```
ANS: an <- c(0)
      for(i in 1:50){
        temp <- states[i]
        len <- nchar(temp)
        an <- c(an,len)
      }
      hist(an[2:50],xlab="No. of characters in each state", main =
            "Histogram",col = "grey")
      nchar(states)
```



