

## Session 4: Foundational R Programming II

### Assignment 3

#### A. Problem Statement

Problem Statement: 1.

```
states=rownames(USArrests)
```

a. Get states names with 'w'.

Code :

```
States = rownames(USArrests)
```

```
View(States)
```

```
rownames(USArrests)
```

```
grep("w",rownames(USArrests))
```

```
x<-grep("w",States)
```

```
for (i in 1:length(x)){
```

```
  print(States[x[i]])
```

```
}
```

## Solution :

```
> x<-grep("w", States)
> for (i in 1:length(x)){
+   print(States[x[i]])
+ }
[1] "Del aware"
[1] "Hawai i "
[1] "Iowa"
[1] "New Hampshi re"
[1] "New Jersey"
[1] "New Mexi co"
[1] "New York"
```

b. Get states names with 'W'.

```
States = rownames(USArrests)
```

```
View(States)
```

```
rownames(USArrests)
```

```
#for W
```

```
grep("W",rownames(USArrests))
```

```
y<-grep("W",States)
```

```
for (i in 1:length(y)){
```

```
  print(States[y[i]])
```

```
}
```

### Solution:

```
> y<-grep("W", States)
>
> for (i in 1:length(y)){
+   print(States[y[i]])
+ }
[1] "Washing ton"
[1] "West Vi rgi ni a"
[1] "Wi sconsi n"
[1] "Wyomi ng"
```

## Problem Statement# 2

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

```
States = rownames(USArrests)
```

```
hist(nchar(States), main = "Histogram",
```

```
xlab = "number of characters in US State names",col="Blue")
```

### Solution:

