

SESSION 4: FOUNDATIONAL R PROGRAMMING-II

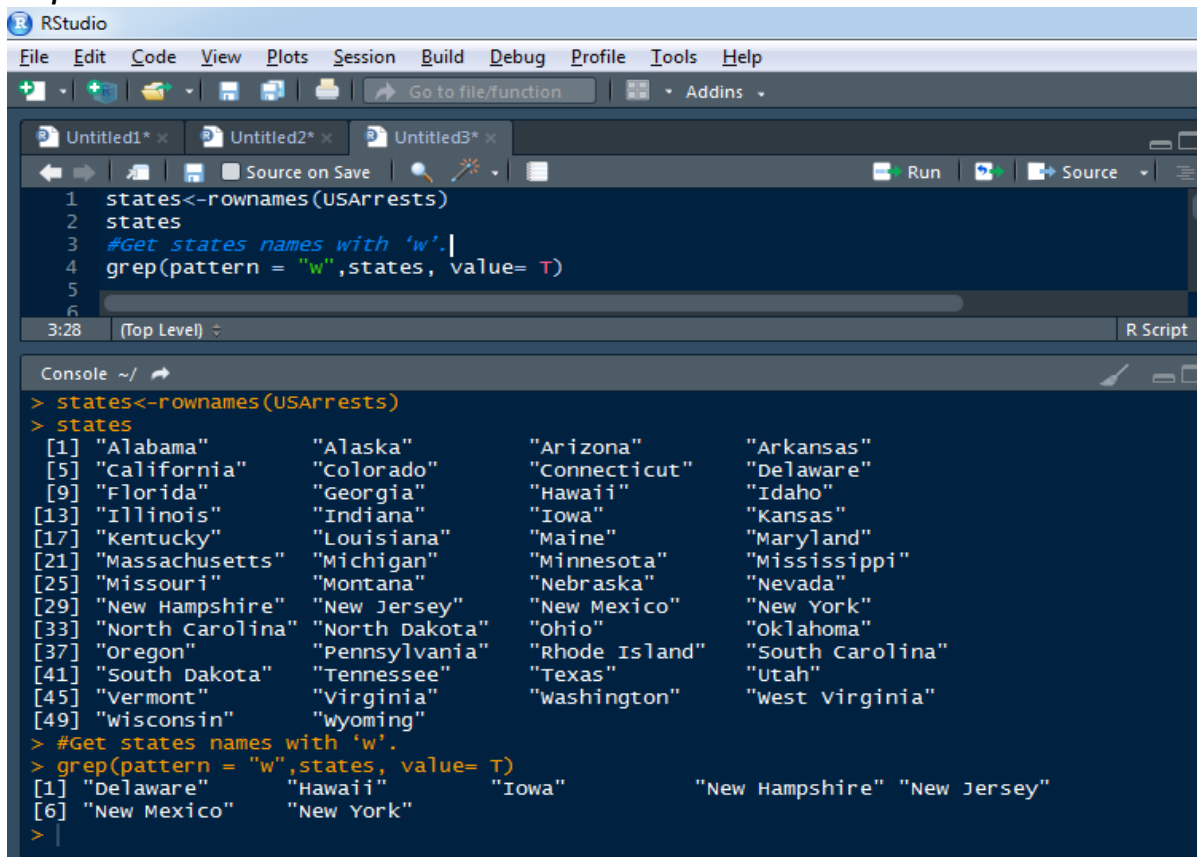
Assignment 3

1. `states=rownames(USArrests)`
 - Get states names with 'w'.

Answer:

```
states<-rownames(USArrests)
states
#Get states names with 'w'.
grep(pattern = "w",states, value= T)
```

Output:



The screenshot shows the RStudio interface. The script editor contains the following code:

```
1 states<-rownames(USArrests)
2 states
3 #Get states names with 'w'.
4 grep(pattern = "w",states, value= T)
5
```

The console output shows the result of the `grep` function:

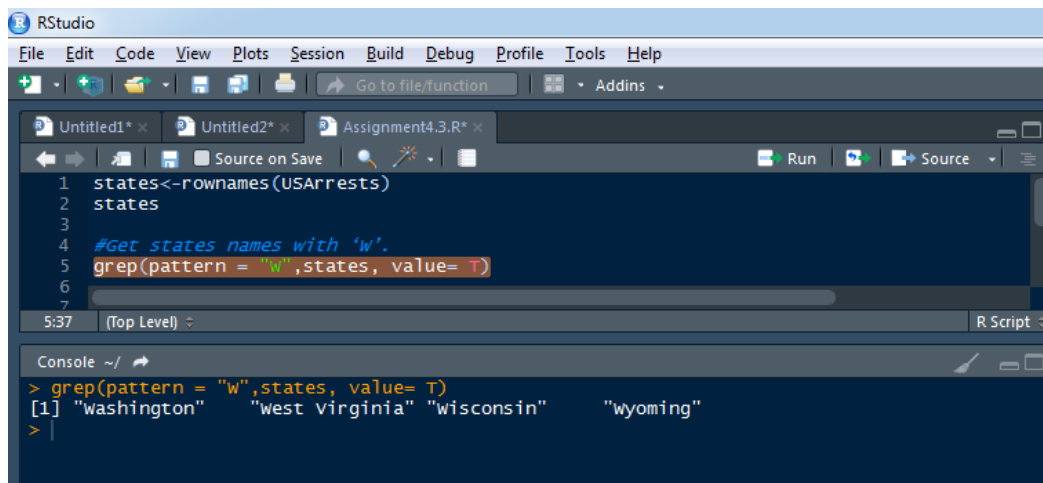
```
> states<-rownames(USArrests)
> states
[1] "Alabama" "Alaska" "Arizona" "Arkansas"
[5] "California" "Colorado" "Connecticut" "Delaware"
[9] "Florida" "Georgia" "Hawaii" "Idaho"
[13] "Illinois" "Indiana" "Iowa" "Kansas"
[17] "Kentucky" "Louisiana" "Maine" "Maryland"
[21] "Massachusetts" "Michigan" "Minnesota" "Mississippi"
[25] "Missouri" "Montana" "Nebraska" "Nevada"
[29] "New Hampshire" "New Jersey" "New Mexico" "New York"
[33] "North Carolina" "North Dakota" "Ohio" "Oklahoma"
[37] "Oregon" "Pennsylvania" "Rhode Island" "South Carolina"
[41] "South Dakota" "Tennessee" "Texas" "Utah"
[45] "Vermont" "Virginia" "Washington" "West Virginia"
[49] "Wisconsin" "Wyoming"
> #Get states names with 'w'.
> grep(pattern = "w",states, value= T)
[1] "Delaware" "Hawaii" "Iowa" "New Hampshire" "New Jersey"
[6] "New Mexico" "New York"
>
```

- Get states names with 'W'.

Answer:

```
grep(pattern = "W",states, value= T)
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Output:



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```
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2 states
3
4 #Get states names with 'w'.
5 grep(pattern = "W",states, value= T)
6
```

The console output shows the result of the `grep` function:

```
> grep(pattern = "W",states, value= T)
[1] "Washington" "West Virginia" "Wisconsin" "Wyoming"
>
```

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

Answer:

```
l<-nchar(states)
```

```
hist(l,main="Histogram", xlab="No. of Characters in States", ylab="No. of States",  
xlim=c(0,15),breaks=10)
```

Output:

