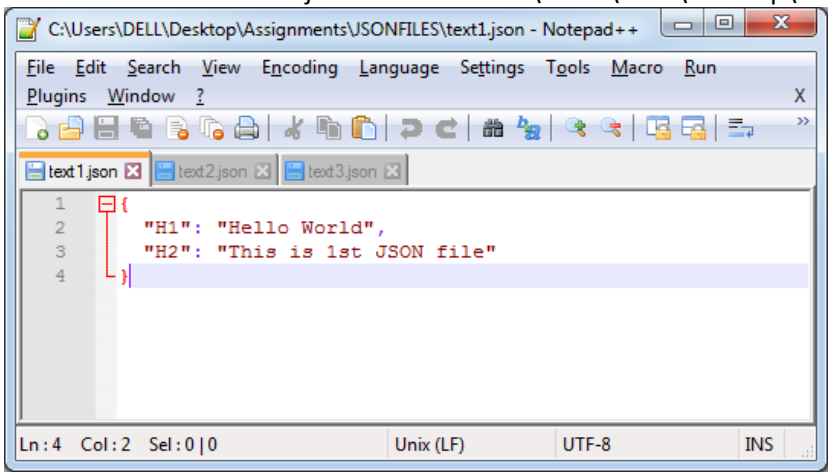
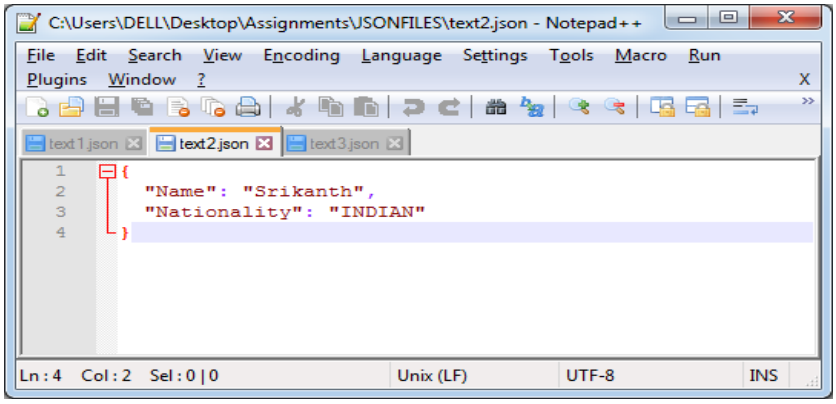
SESSION 2: Introduction to working with R

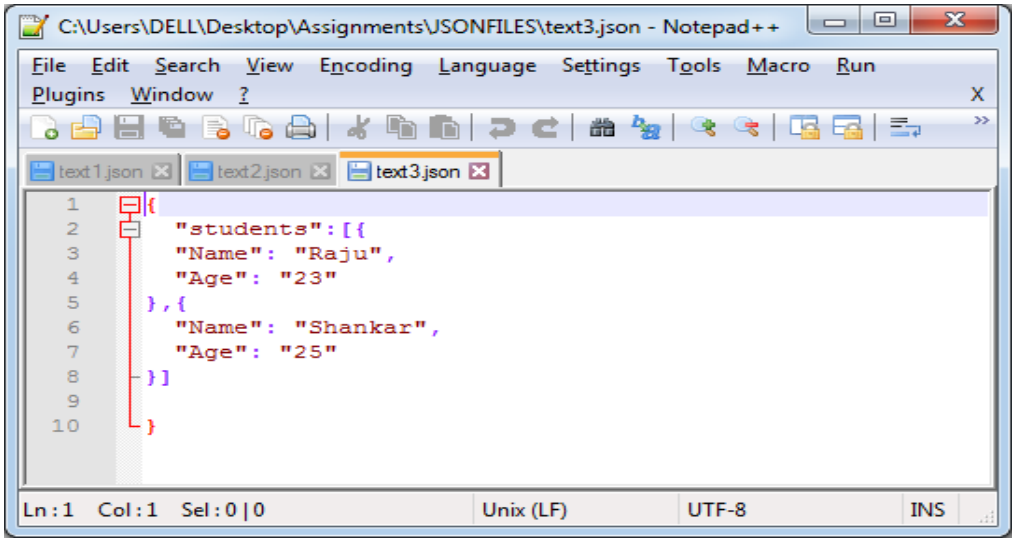
Assignment 2

1. Read multiple json files into a working directory for further converting into a dataset. I have files text1, text2, text3 in the directory json.

Answer: Created these 3 json files under "C:\Users\DELL\Desktop\Assignments\JSONFILES" folder



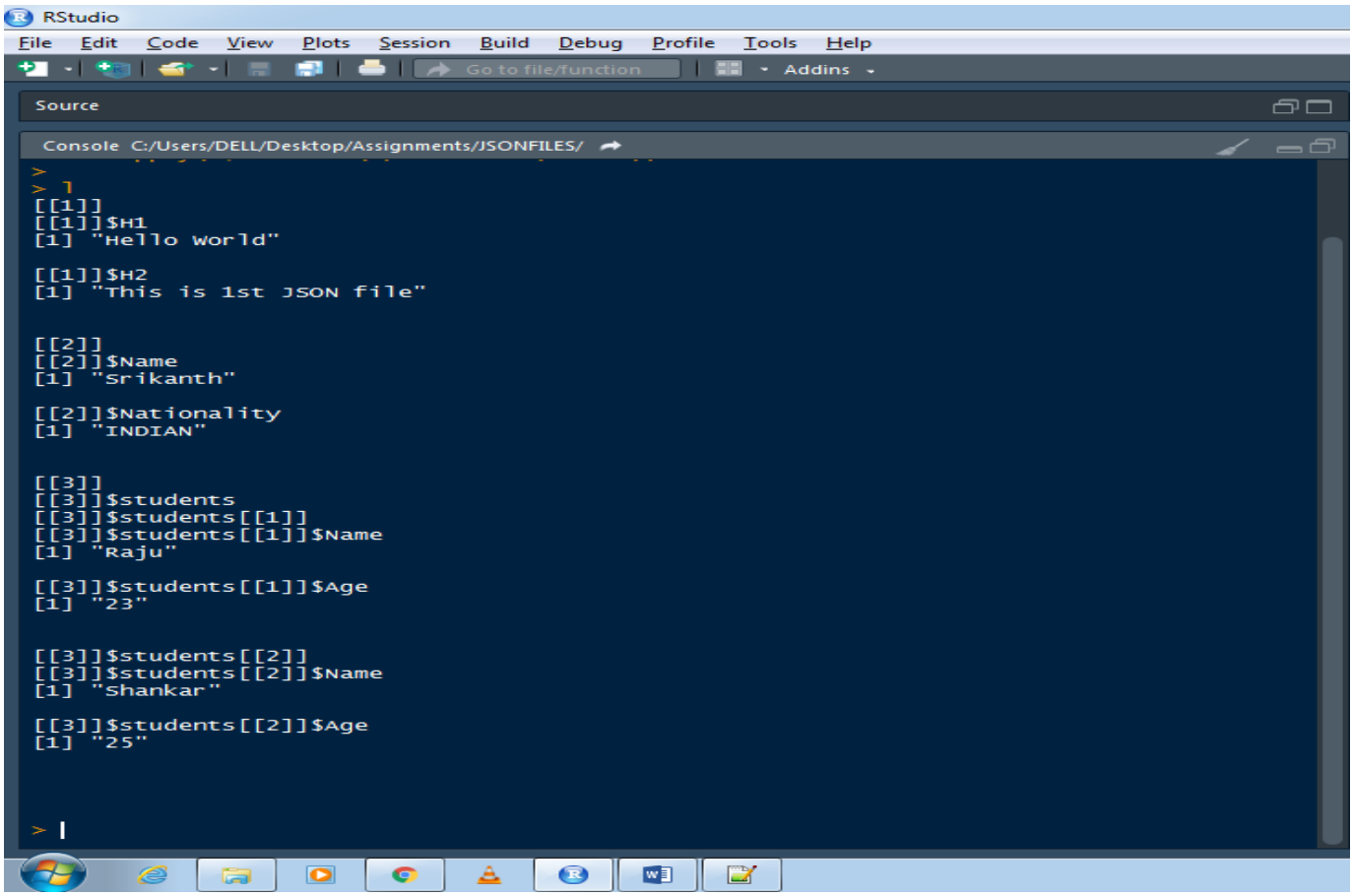




Installed the package rjson
Set the working directory to the folder path where all the Json files are present
setwd("C://Users//DELL//Desktop//Assignments//JSONFILES")
Stored all the json files name to vector x using list.files function passing "*.json" as the pattern
x <-list.files(pattern="*.json")
using lapply function we are storing the content of json file one by one in list **l**
l<-lapply(x,function(x) fromJSON(file=x))

install.packages("rjson")
library(rjson)

setwd("C://Users//DELL//Desktop//Assignments//JSONFILES")
x <-list.files(pattern="*.json")
l<-lapply(x,function(x) fromJSON(file=x))
l



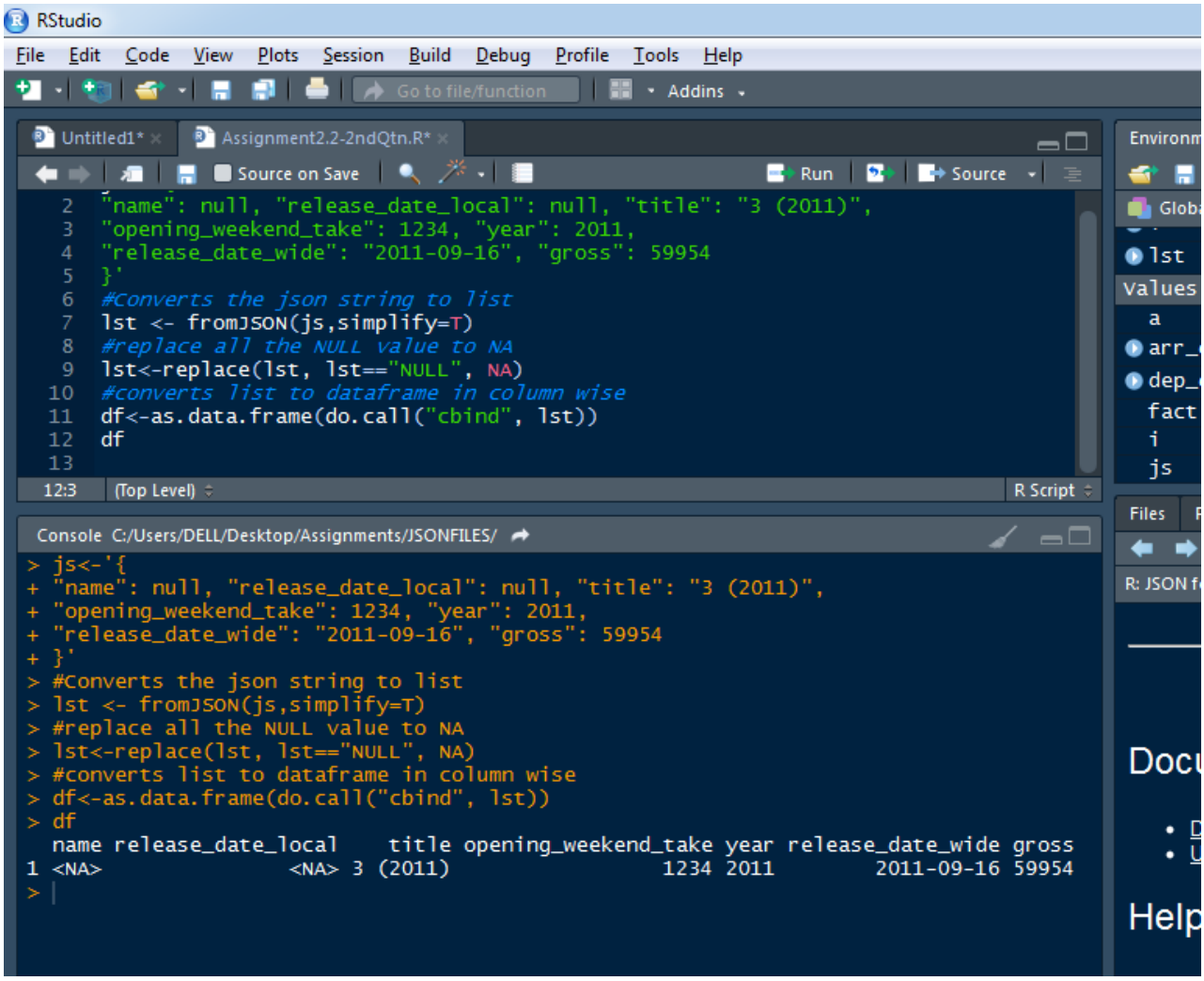
Converting the list to dataframe in below script
df<-as.data.frame(do.call("cbind", l))
df

```
> df<-as.data.frame(do.call("cbind", l))
> df
                       V1       V2                     V3
H1           Hello World Srikanth Raju, 23, Shankar, 25
H2 This is 1st JSON file   INDIAN Raju, 23, Shankar, 25
```

2. Parse the following JSON into a data frame
js<-'{
"name": null, "release_date_local": null, "title": "3 (2011)",
"opening_weekend_take": 1234, "year": 2011,
"release_date_wide": "2011-09-16", "gross": 59954
}'

Answer:

```
js<-'{
"name": null, "release_date_local": null, "title": "3 (2011)",
"opening_weekend_take": 1234, "year": 2011,
"release_date_wide": "2011-09-16", "gross": 59954
}'
#Converts the json string to list
lst <- fromJSON(js,simplify=T)
#replace all the NULL value to NA
lst<-replace(lst, lst=="NULL", NA)
#converts list to dataframe in column wise
df<-as.data.frame(do.call("cbind", lst))
df
```



3. Write a script for variable binning using R.
Answer: Bins are create on continuous and categorical variables
Let's create a vector **age** as below
age <- c(4,7,5,9,1,10,15,18,19,3,16,10,16,12,22,2,23,16,17)
Vector **age** contains of various elements of different age group.

To group them or to categorize them under certain range we use cut function
cut(age, c(1,5,10,15,25)

```
> cut(age,c(1,5,10,15,25))
 [1] (1,5]   (5,10]  (1,5]   (5,10]  <NA>    (5,10]  (10,15] (15,25] (15,25] (1,5]
[11] (15,25] (5,10]  (15,25] (10,15] (15,25] (1,5]   (15,25] (15,25] (15,25]
Levels: (1,5] (5,10] (10,15] (15,25]
```

Here we are grouping the vector contents into below bin or group or categories
[1,5]
[5,10]
[10,15]
[15,25]
So the above vector values fall under these bins using the **data.frame()** along with **cut()**

age <- c(4,7,5,9,1,10,15,18,19,3,16,10,16,12,22,2,23,16,17)
data.frame(age, bin=cut(age, c(1,5,10,15,25), include.lowest=TRUE))

```
> age <- c(4,7,5,9,1,10,15,18,19,3,16,10,16,12,22,2,23,16,17)
> data.frame(age, bin=cut(age, c(1,5,10,15,25), include.lowest=TRUE))
   age     bin
1    4   [1,5]
2    7  (5,10]
3    5   [1,5]
4    9  (5,10]
5    1   [1,5]
6   10  (5,10]
7   15 (10,15]
8   18 (15,25]
9   19 (15,25]
10   3   [1,5]
11  16 (15,25]
12  10  (5,10]
13  16 (15,25]
14  12 (10,15]
15  22 (15,25]
16   2   [1,5]
17  23 (15,25]
18  16 (15,25]
19  17 (15,25]

>
```

Here we can see each age is falling into respecting bin.