



SNS COLLEGE OF ENGINEERING

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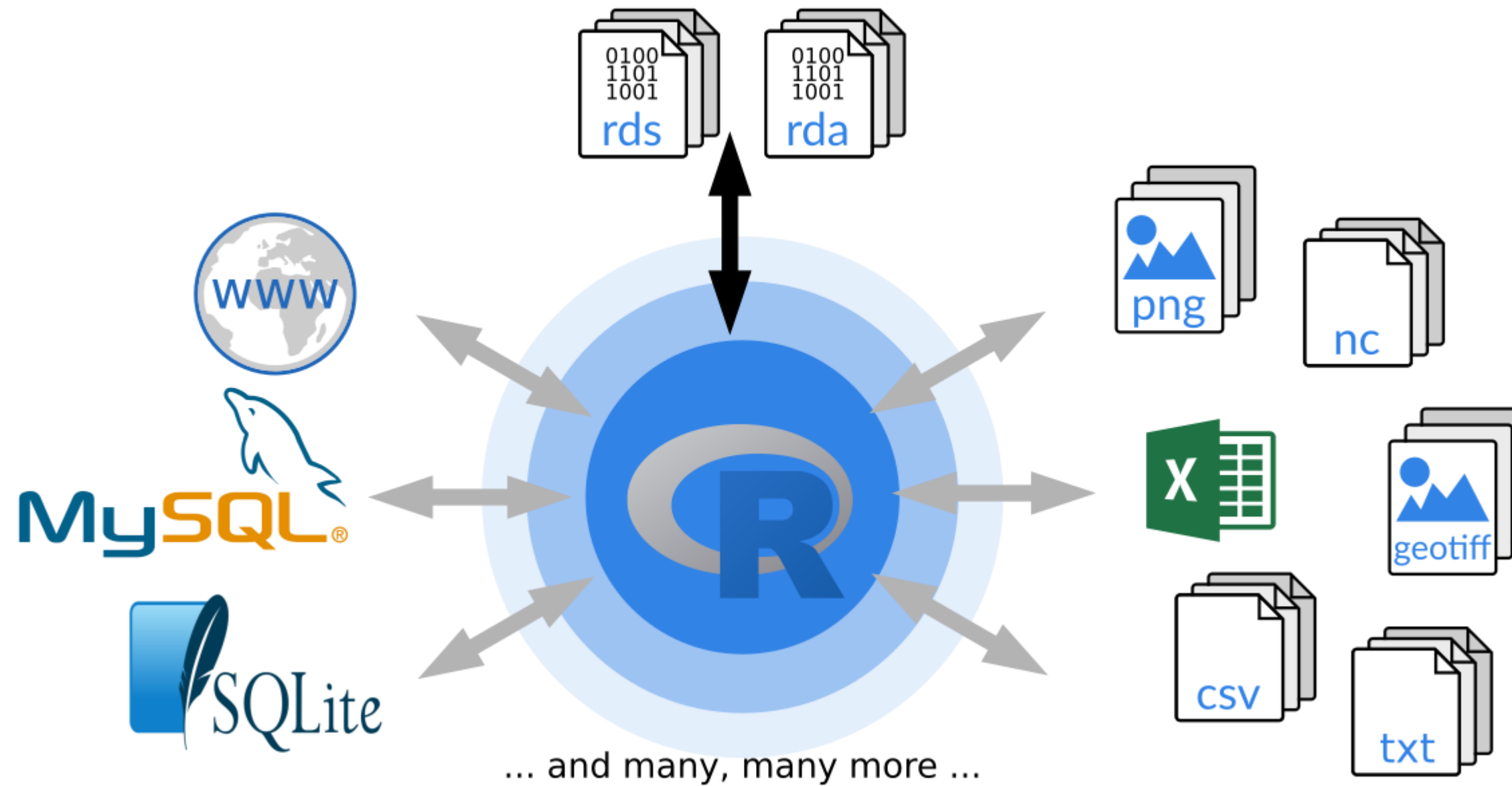


DEPARTMENT OF COMPUTER SCIENCE AND TECHNOLOGY

COURSE NAME :19CS407 DATA ANALYTICS WITH R
II YEAR /IV SEMESTER

Unit 5- DATA VISUALIZATION USING R

Topic : JSON files





R - JSON Files

- ✓ JSON file stores data as text in human-readable format. Json stands for JavaScript Object Notation.
- ✓ R can read JSON files using the rjson package.



Install rjson Package



In the R console, you can issue the following command to install the rjson package.

```
install.packages("rjson")
```



Input Data



Create a JSON file by copying the below data into a text editor like notepad. Save the file with a .json extension and choosing the file type as all files(*.*).

```
{  
  "ID":["1","2","3","4","5","6","7","8" ],  
  "Name":["Rick","Dan","Michelle","Ryan","Gary","Nina","Simon","Guru" ],  
  "Salary":["623.3","515.2","611","729","843.25","578","632.8","722.5" ],  
  
  "StartDate":[  
    "1/1/2012","9/23/2013","11/15/2014","5/11/2014","3/27/2015","5/21/2013",  
    "7/30/2013","6/17/2014"],  
  "Dept":["IT","Operations","IT","HR","Finance","IT","Operations","Finance"]  
}
```



Read the JSON File



The JSON file is read by R using the function `fromJSON()`. It is stored as a list in R.

```
# Load the package required to read JSON files.
```

```
library("rjson")
```

```
# Give the input file name to the function.
```

```
result <- fromJSON(file = "input.json")
```

```
# Print the result.
```

```
print(result)
```



Read the JSON File



\$ID

```
[1] "1" "2" "3" "4" "5" "6" "7" "8"
```

\$Name

```
[1] "Rick" "Dan" "Michelle" "Ryan" "Gary" "Nina" "Simon" "Guru"
```

\$Salary

```
[1] "623.3" "515.2" "611" "729" "843.25" "578" "632.8" "722.5"
```

\$StartDate

```
[1] "1/1/2012" "9/23/2013" "11/15/2014" "5/11/2014" "3/27/2015" "5/21/2013"  
"7/30/2013" "6/17/2014"
```

\$Dept

```
[1] "IT" "Operations" "IT" "HR" "Finance" "IT"  
"Operations" "Finance"
```



Convert JSON to a Data Frame



We can convert the extracted data above to a R data frame for further analysis using the `as.data.frame()` function.

```
# Load the package required to read JSON files.
```

```
library("rjson")
```

```
# Give the input file name to the function.
```

```
result <- fromJSON(file = "input.json")
```

```
# Convert JSON file to a data frame.
```

```
json_data_frame <- as.data.frame(result)
```

```
print(json_data_frame).
```




Convert JSON to a Data Frame



	id,	name,	salary,	start_date,	dept
1	1	Rick	623.30	2012-01-01	IT
2	2	Dan	515.20	2013-09-23	Operations
3	3	Michelle	611.00	2014-11-15	IT
4	4	Ryan	729.00	2014-05-11	HR
5	NA	Gary	843.25	2015-03-27	Finance
6	6	Nina	578.00	2013-05-21	IT
7	7	Simon	632.80	2013-07-30	Operations
8	8	Guru	722.50	2014-06-17	Finance



Assessment 1





References



1. João Moreira, Andre Carvalho, Tomás Horvath – “A General Introduction to Data Analytics” – Wiley -2018
2. https://www.tutorialspoint.com/r/r_web_data.htm

Thank You