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R-Powered Excel

Month/Year



From Excel tables to R data frames

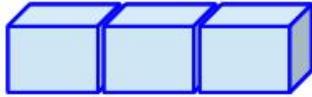
Demo: excel-tables.xlsx



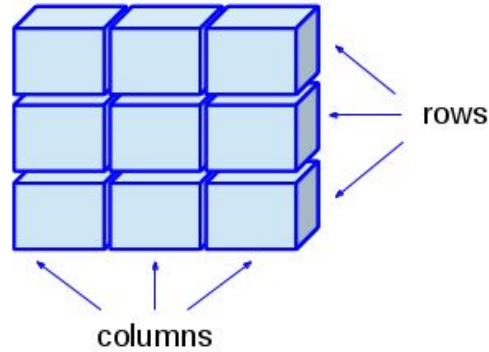
Demo: data-frames-in-r.r



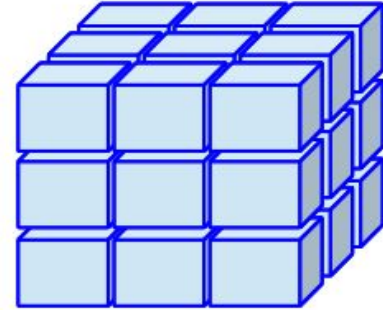
Vector



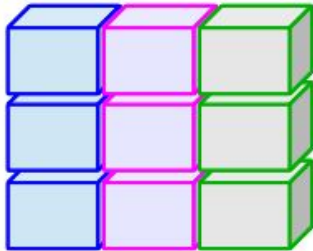
Matrix



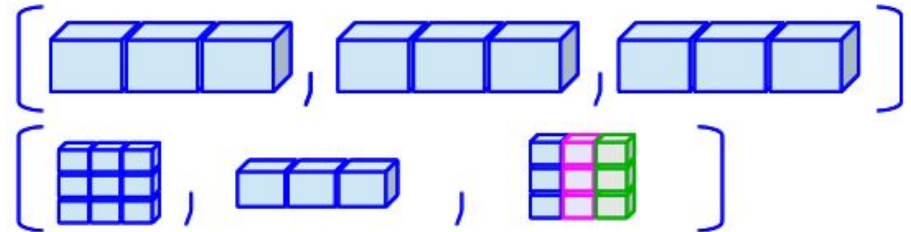
Array



Data Frame
(Table)



Lists



Using the `mtcars` data frame from base R:

1. How many rows and columns are there?
2. Assign the first dozen rows to `mtcars_head`.
3. Using the `log()` function, create a column `hp_log` which is a log-transformation of the column `hp`.
4. Rename the column `mpg` as `miles_per_gallon`

Drill: Working with data frames



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Solutions:

`data-frames-in-r.drills`

Drill: Working with data frames



Intro to interfacing R and Excel



LOTS of R-Excel interfaces...



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- `gdata`
- `readxl`
- `openxlsx`
- `writexls`
- `XlConnect`
- `xlsx`
- `excel.link`
- `etc...`



... many with outside requirements

- `gdata` (perl)
- `readxl`
- `openxlsx`
- `writexls` (perl)
- `XlConnect` (rJava)
- `xlsx` (rJava)
- `excel.link`
- `etc...`



For quick reads into R: readxl



For full-service “R-powered Excel:” openxlsx

openxlsx

R package for .xlsx file reading and writing.



R



302



81

<https://github.com/awalker89/openxlsx>



Demo: demo-reading-writing-to-from-r.r



Using the datasets from
nycflights13:

1. Export airlines, airports and planes as worksheets of the same workbook, formatted as tables.
2. Read the planes worksheet back into R using `openxlsx`.
3. Read the airports worksheet back into R using `readxl`.

Drill: Interfacing R and Excel



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Solutions:

`drills-reading-writing-to-from-r.r`

Drill: Interfacing R and Excel



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Questions?

