Introduction to the Tidyverse

Import, wrangle, model, and communicate data

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dplyr
ggplot2
tibble
readr
tidyr
purrr

Working with data in R

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the tidyverse is a collection of friendly and consistent tools for data analysis and visualization.

They live as, R packages, each of which does one thing well.

library(tidyverse) will load the core packages:

ggplot2, for data visualisation.

dplyr, for data manipulation.

tidyr, for data tidying.

readr, for data import.

purrr, for functional programming.

tibble, for tibbles, a modern re-imagining of data frames.

stringr, for strings.

forcats, for factors.

This course is hands on!

Each section has an exercises file: exercises.Rmd

exercises.Rmd

````
---
title: "Import Data"
output: html_document
---

```{r setup}
library(tidyverse)
library(haven)
```

In this section, we will learn about importing and exporting files from common file formats, including
CSV and formats from other statistical software using the readr and haven packages.

## readr

readr supplies several related functions, each designed to read in a specific flat file format.

Function       | Reads
-------------- | -------------------------
`read_csv()`   | Comma separated values
`read_csv2()`  | Semi-colon separate values
`read_delim()` | General delimited files
`read_fwf()`   | Fixed width files
`read_log()`   | Apache log files
````

readr

code chunks

````
```{r}
csv_data <- read_csv(
  "a,b,c,d
  1,2,3,4
  5,6,7,8",
  col_types = ""
)

csv_data
```
````

running code chunks

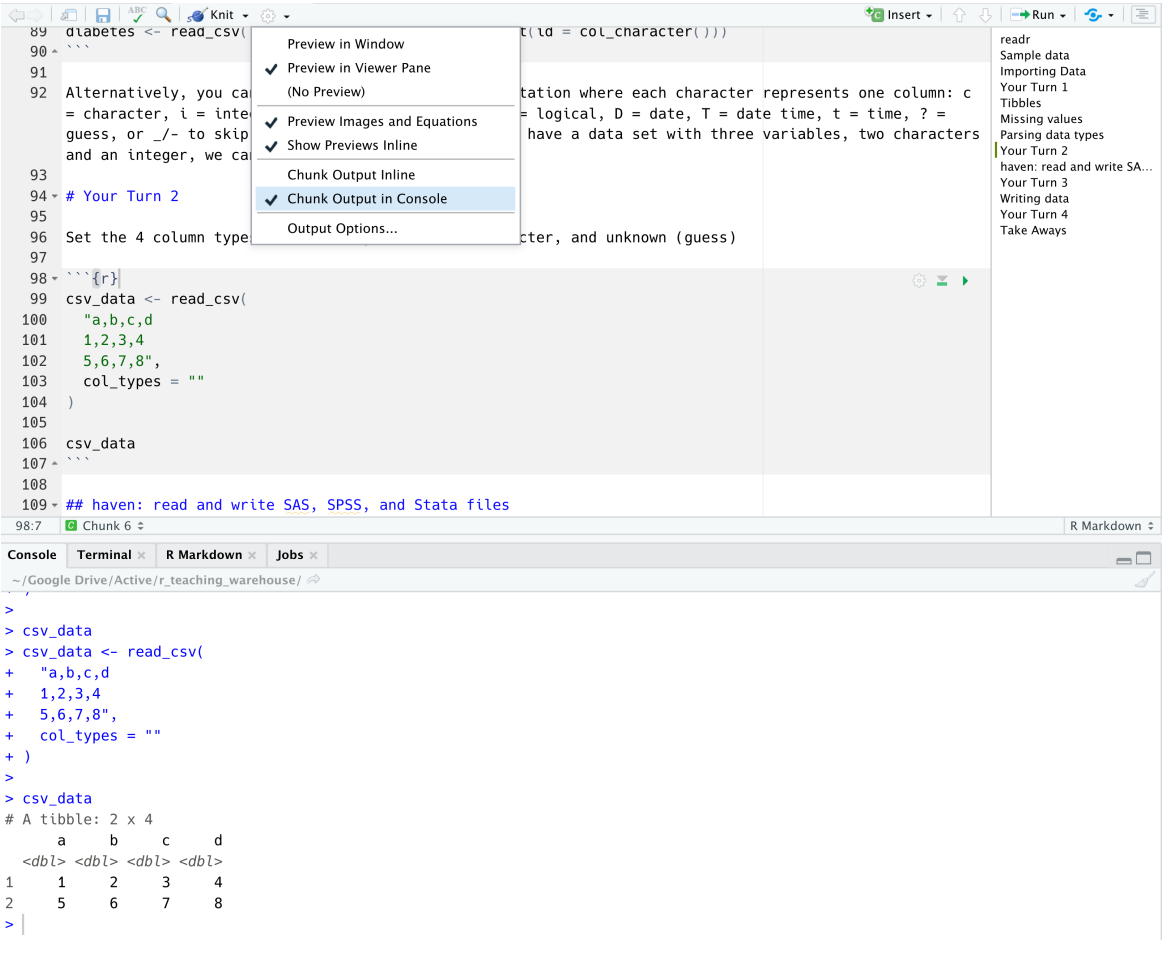
```r
csv_data <- read_csv(
  "a,b,c,d
  1,2,3,4
  5,6,7,8",
  col_types = ""
)

csv_data
```

a <dbl>	b <dbl>	c <dbl>	d <dbl>
1	2	3	4
5	6	7	8

2 rows

outputting to the console




```
> csv_data
> csv_data <- read_csv(
+   "a,b,c,d
+   1,2,3,4
+   5,6,7,8",
+   col_types = ""
+ )
>
> csv_data
# A tibble: 2 x 4
      a     b     c     d
  <dbl> <dbl> <dbl> <dbl>
1     1     2     3     4
2     5     6     7     8
>
```

Project contents

```
├── 01-dplyr_5verbs
|   ├── cheatsheet_dplyr_5verbs.pdf
|   ├── diabetes.csv
|   ├── exercises.Rmd
|   ├── slides.pdf
```

Let's head to
https://rstudio.cloud/