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

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

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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

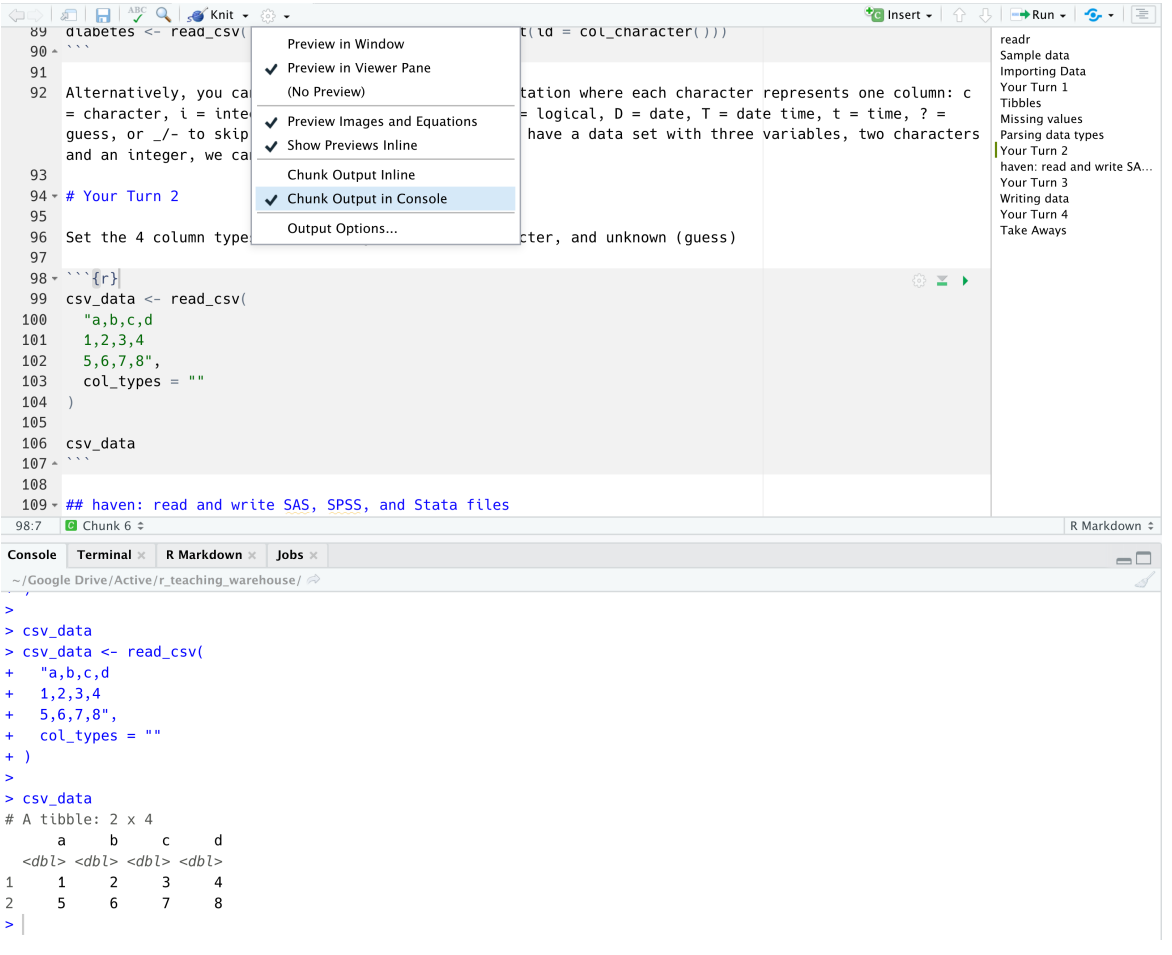
```{r}
csv_data <- read_csv(
  "a,b,c,d
  1,2,3,4
  5,6,7,8",
  col_types = ""
)

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
http://bit.ly/master_r_epi