

Practical 2

Jumping Rivers

First we must load the **tidyverse**

```
library("tidyverse")
```

Question 1 - Cocktails!

We've put together a small list containing the ingredients of some classic cocktails

```
data(cocktails, package = "jrTidyverse2")
```

- How many cocktails are in the list?
- Create a tibble called **drinks**, where one column contains the name of the cocktail, and the other column contains the vector of ingredients
- Create a new column that contains the number of ingredients in each column using **mutate()** and **purrr**
- We're off out! Tonight we're particularly thirsty for a cocktail with rum in it. Filter **drinks** such that it only has cocktails containing rum

Question 2 - Beer !

So, we're at the pub with 8 mates and it's your round. In total you've been tasked with ordering 4 ales, 3 ipas, 1 stout plus an ale for yourself! We can load a data set of all of the ale, ipa and stouts that the pub sells from the course package

```
(data(beer_tidy, package = "jrTidyverse2"))
```

We're going to randomly select each persons drink using **purrr**. If people had asked for an even number of ales, ipas and stouts we could have done this without **purrr** like so

```
beer_tidy %>%  
  group_by(Type) %>%  
  sample_n(3)
```

- Nest the data according to the drink **Type** and save it as **pub**.
- Create a column called **n** that contains the total number of each drink **Type** you need to order
- Create a new column called **order** that contains the randomly sampled drinks you are going to order. You should be using **map2()** to parallel map over the columns **data** and **n**. You should also be using **sample_n()** to perform the sampling.
- To see the drinks, select only the **Type** and **order** column, then **unnest()**

Question 3 - Happiness

You may remember the happiness data we used for practical 1 was recorded over 3 years; 2015, 2016 and 2017. For this question I've turned the happiness list in 3 tibbles, with each one representing the year. Running the following code will copy each file into your current working directory as a **.csv** file

```
library("jrTidyverse2")
get_happiness()
## Files have been copied successfully!
## Check your current working directory.
```

- a) Using a combination of **purrr** and the **unnest()** function from **tidyr**, read in and combine the 3 data sets. Don't delete the column containing the file name!
- b) The data within the csv files doesn't contain the year. Fortunately the file name does! Use the column containing the filename to create a column called **Year**. Have a look at the **str_remove()** or **parse_number()** functions from **stringr** and **readr** respectively
- c) Pick 3 countries and plot their happiness rank over time.
- d) Every country in the data set has requested that they have their data sent to them individually. Make use of **purrr**'s parallel mapping functions and **nest()** to write the data to **.csv** files