# *Practical 3*

## *Jumping Rivers*

### *Practical 3*

### *S4 objects* [1]

[1] I've intentionally mirrored the functions from previous practical to highlight the differences.

1. Following the `Cohort` example in the notes, suppose we want to make a generic for the `mean` function.
2. Using the `isGeneric` function, determine if the `mean` function is an S4 generic. If not, use `setGeneric` to create an S4 generic.
3. Using `setMethod`, create a `mean` method for the `Cohort` class.[2]
4. Repeat the above steps for the `sd` function.
5. Create a `summary` method for the `cohort` class
6. Use `isGeneric` to determine if an S4 generic exists.
7. Use `setGeneric` to set the generic method (if necessary).
8. Create an S4 summary method.
9. Create a `hist` method for the `cohort` class. When the `hist` function is called on a `cohort`, it should produce a single plot showing two histograms - one for height and another for weight.
10. Create a `[` method for the `cohort` class. This method should return a `cohort` object, but with the relevant rows sub setted.
11. Create a `<-` method for the `cohort` class. This method should allow us to replace values in the `details` data frame.

[2] Be careful to match the arguments.

### *Solutions*

Solutions are contained within the course package

```
library("jrOOP")
vignette("solutions3", package = "jrOOP")
```