

Advanced R programming: practical 3

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S4 objects

1. Following the Cohort example in the notes, suppose we want to make a generic for the mean function.
 - Using the `isGeneric` function, determine if the mean function is an S4 generic. If not, use `setGeneric` to create an S4 generic.
 - Using `setMethod`, create a mean method for the Cohort class.¹
2. Repeat the above steps for the `sd` function.
3. Create a summary method for the cohort class
 - Use `isGeneric` to determine if an S4 generic exists.
 - Use `setGeneric` to set the generic method (if necessary).
 - Create an S4 summary method.
4. 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.
5. Create a `[]` method for the cohort class. This method should return a cohort object, but with the relevant rows sub setted.
6. Create a `<-` method for the cohort class. This method should allow us to replace values in the `details` data frame.

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

¹ Be careful to match the arguments.

Solutions

Solutions are contained within the course package

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