

# tree::tree object cannot be accessed in editor, only in console

## Setting up an example

Let's create some small data for a `tree::tree` approach:

```
rm(list=ls(all=TRUE))
library(tree); set.seed(1)
summary(x <- data.frame(
  Y=factor(rep(letters[1:2], each=250)),
  X1=c(runif(250, 1, 5), runif(250, 3, 7)),
  X2=c(runif(250, 5, 9), runif(250, 1, 5))))
```

```
## Y           X1           X2
## a:250  Min.    :1.052  Min.    :1.005
## b:250  1st Qu.:2.989  1st Qu.:2.880
##        Median :3.902  Median :5.009
##        Mean   :3.983  Mean   :5.015
##        3rd Qu.:4.884  3rd Qu.:7.131
##        Max.   :6.984  Max.   :8.984
```

Running a tree on this is unproblematic:

```
summary(cart.1 <- tree(Y ~ X1+X2, data=x))
```

```
##
## Classification tree:
## tree(formula = Y ~ X1 + X2, data = x)
## Variables actually used in tree construction:
## [1] "X2"
## Number of terminal nodes:  2
## Residual mean deviance:  0 = 0 / 498
## Misclassification error rate: 0 = 0 / 500
```

## Now the problem

If

- I knit the document into an HTML file (like attached), the output is shown;
- I use each of these lines in the console, I will see the output there; **BUT**
- I run the following chunk from the editor with CTRL-SHIFT-ENTER or the play button, no output is provided;

```
cart.1$frame
```

```
##      var   n      dev yval splits.cutleft splits.cutright yprob.a yprob.b
## 1     X2 500 693.1472  a      <5.00939      >5.00939      0.5    0.5
## 2 <leaf> 250  0.0000  b                          0.0    1.0
## 3 <leaf> 250  0.0000  a                          1.0    0.0
```

```
cart.1[["frame"]]
```

```
##      var   n      dev yval splits.cutleft splits.cutright yprob.a yprob.b
## 1     X2 500 693.1472  a      <5.00939      >5.00939      0.5    0.5
## 2 <leaf> 250  0.0000  b                          0.0    1.0
## 3 <leaf> 250  0.0000  a                          1.0    0.0
```

```
cart.1[[1]]
```

```
##      var   n      dev yval splits.cutleft splits.cutright yprob.a yprob.b
## 1     X2 500 693.1472  a      <5.00939      >5.00939      0.5    0.5
## 2 <leaf> 250  0.0000  b                          0.0    1.0
## 3 <leaf> 250  0.0000  a                          1.0    0.0
```

One time, I saw the following error message in the editor pane:

```
Registered S3 method overwritten by 'cli':
method      from
print.tree  tree
```

But I wasn't able to reliably reproduce that one.

However, each of those lines will produce output when I copy and paste it into the console – why??

```
xfun::session_info()
```

```
## R version 4.1.2 (2021-11-01)
## Platform: x86_64-pc-linux-gnu (64-bit)
## Running under: Pop!_OS 21.10
##
## Locale:
##   LC_CTYPE=en_US.UTF-8      LC_NUMERIC=C
##   LC_TIME=en_US.UTF-8      LC_COLLATE=en_US.UTF-8
##   LC_MONETARY=en_US.UTF-8  LC_MESSAGES=en_US.UTF-8
##   LC_PAPER=en_US.UTF-8     LC_NAME=C
##   LC_ADDRESS=C             LC_TELEPHONE=C
##   LC_MEASUREMENT=en_US.UTF-8 LC_IDENTIFICATION=C
##
## Package version:
##   base64enc_0.1.3  bslib_0.3.1    digest_0.6.29  evaluate_0.14
##   fastmap_1.1.0   fs_1.5.2       glue_1.6.0     graphics_4.1.2
##   grDevices_4.1.2 highr_0.9       htmltools_0.5.2 jquerylib_0.1.4
##   jsonlite_1.7.2  knitr_1.37     magrittr_2.0.1 methods_4.1.2
##   R6_2.5.1        rappdirs_0.3.3 rlang_0.4.12  rmarkdown_2.11
##   sass_0.4.0      stats_4.1.2    stringi_1.7.6  stringr_1.4.0
##   tinytex_0.36    tools_4.1.2    tree_1.0-41    utils_4.1.2
##   xfun_0.29       yaml_2.2.1
```