Guide to the **MemUse** Package

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1 History

This package was born out of a ≈ 10 line function I wrote to estimate the memory usage of (non-allocated) in-core, dense R objects of numeric (double precision) data. I need this in my life by a surprising amount, so it made sense to actually create this thing instead of constantly doing ad hoc multiplications of $nrows \times ncols \times 8$ then dividing by powers of 1024 (or 1000).

But then I got the great idea to make this application ∼enterprise ready∼ by adding a lot of unnecessary and convoluted OOP, and this stupid package was born. This is sort of a love letter to other needlessly complex programs, like the Enterprise Fizzbuzz[1].

2 License

Figure 1: The GNU GPL Explained

This package is licensed under the GNU General Public License, version ≥ 2 (see Figure 1). If you violate the terms of the GPL then Richard Stallman's beard will sue you in internet court.

3 Installation

The package consists entirely of R code, so everything should install fine no matter which platform you use. To install this from source on Windows, you will need to first install the Rtools package. The package

[1] If you are unfamiliar with the fizzbuzz, see my posts "Honing your R skills for Job Interviews" and "The Fizzbuzz that Fortran Deserves".

should install on Mac or Linux[2] without problem.

The easiest way to install **MemUse** is via the **devtools** package. With this, you can effectively install packages from github just as you would from the CRAN. To install **MemUse** using **devtools**, simply issue the command:

```
library(devtools)
install_github(repo="memuse", username="wrathematics")
```

from R. Alternatively, you could download the sourcecode from github, unzip this archive, and issue the command:

```
R CMD INSTALL memuse-master
```

from your shell.

4 Examples

The core of the **MemUse** package is

[2] I'd just like to interject for a moment. What you're referring to as Linux, is in fact, GNU/Linux, or as I've recently taken to calling it, GNU plus Linux. Linux is not an operating system unto itself, but rather another free component of a fully functioning GNU system made useful by the GNU corelibs, shell utilities and vital system components comprising a full OS as defined by POSIX.

Many computer users run a modified version of the GNU system every day, without realizing it. Through a peculiar turn of events, the version of GNU which is widely used today is often called Linux, and many of its users are not aware that it is basically the GNU system, developed by the GNU Project.

There really is a Linux, and these people are using it, but it is just a part of the system they use. Linux is the kernel: the program in the system that allocates the machine's resources to the other programs that you run. The kernel is an essential part of an operating system, but useless by itself; it can only function in the context of a complete operating system. Linux is normally used in combination with the GNU operating system: the whole system is basically GNU with Linux added, or GNU/Linux. All the so-called Linux distributions are really distributions of GNU/Linux.