

# f

## A package manager for (the)Forth(.net)

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### Abstract

Let us join Forthes and share great code with each other – in an orderly fashion.

### 1 Introduction

The Forth Net[1] has matured into a simple meta-repository system, which provides a mindbogglingly new idea to the Forth programmer: Build your projects upon existing code from others instead of reinventing the wheel all over again.

Starting with code snippets up to full blown libraries authors can upload their code (behold, some even ship documentation!) to The Forth Net. Each package contains a Forth-parseable description-file which was discussed in the last Forth200x-Meeting in Bath.

Packages can easily be searched and downloaded by using *f*, the Forth package manager. Typing `fget mrot 1.0.0` in Gforth will install mrot in version 1.0.0 directly onto your box.

### 2 A small Package

To proof how simple the creation of a package is, let us share a non standardized – yet very useful – word with the forth community:

Listing 1: mrot.4th

```
1 : -rot ( x1 x2 x3 — x3 x1 x2 ) rot rot ;
```

As stated before we shall also offer a minimalistic documentation which happens to be machine readable and easily parseable in Forth. The package.4th-file is an obligatory file which contains key-value definitions. `key-value <name> <value>` parses a (key-)name and uses the remaining line as value. Mandatory keys are:

**name** name of the package `[a-z]+[-a-z0-9]*`

**version** semantic version number consisting of 3 decimal numbers separated by '.' [2]

**license** name of the license you publish the package with, i.e. "GPL", "MIT", ...

Further information about this file (key-list, tags, dependencies, ...) can be found in the package guidelines [3].

Our example does not need any dependencies, but we add a short description, specify the main include-file and the license.

Listing 2: package.4th

```
1 forth-package
2   key-value name mrot
3   key-value version 1.0.0
4   key-value description save TOS in 3rd
5   key-value license public domain
6   key-value main mrot.4th
7 end-forth-package
```

### 3 f - a package manager

Us Forth programmers are not fond of leaving our beloved system. This is why *f* was coded into existence, a simple package manager which lets us explore and download packages without leaving the realms of our system. This is its API:

**fall** list all packages

**fsearch** <needle>

**finfo** <name> show a package's ReadMe

**fget** <name> <version> download a package

**finclude** <name> <version>

### 4 We need you!

Packetize your code now! By the date of this writing, we have 15 amazing packets ready to be used in your next project, and 321140 to go to become the biggest package repository in the world! ;)

### References

[1] The Forth Net. <http://theforth.net>.

[2] SemVer 2.0. <http://semver.org/>.

[3] Package guidelines. <http://theforth.net/guidelines>.