Tin: A Tcl Package Manager

Version 0.3

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https://github.com/ambaker1/Tin

April 9, 2023

Installing Packages

The command *tin install* installs packages directly from GitHub.

```
tin install $name <<-exact> $version> <$reqs ...>
```

$name	Package name.
-exact	Option to install exact version.
$version	Package version.
$reqs ...	Package version requirements, mutually exclusive with -exact option.

Example 1: Upgrading Tin

Code:

```
package require tin
tin install tin
```

The available packages in the Tin database can be queried with the command *tin packages*, and the versions for each package in ascending order can be queried with the command *tin versions*. If version requirements are specified in *tin versions*, it will filter using the rules of *package vsatisfies*.

```
tin packages <$pattern>
```

$pattern	Optional "glob" pattern, default "*", or all packages.

```
tin versions $name <<-exact> $version> <$reqs ...>
```

$name	Package name.
-exact	Option to install exact version.
$version	Package version.
$reqs ...	Package version requirements, mutually exclusive with -exact option.

Modifying the Tin Package Database

The "tinlist.tcl" file in the Tin installation initializes the Tin database, which can be modified within your local instance of Tcl with the commands *tin add* and *tin remove*.

```
tin add $name $version $repo $tag $installer
```

$name	Package name.
$version	Package version.
$repo	Github repository URL.
$tag	Github release tag for version.
$installer	Installer file path in repo.

```
tin remove $name $version ...
```

$name	Package name.
$version ...	Package version(s) to remove.

Example 2: Adding a package to the Tin database

Code:

```
package require tin
tin add foo 1.0 https://github.com/username/foo v1.0 install_foo.tcl
```

Loading and Importing Packages

Tin also provides advanced tools for loading and importing packages. The command *tin require* is similar to the Tcl command *package require*, but with the added feature that if the package is missing, it will try to install it with *tin install*. The command *tin import* additionally handles most use-cases of *namespace import*. Both *tin require* and *tin import* return the version number of the package imported.

```
tin require $name <<-exact> $version> <$reqs ...>
```

$name	Package name.
-exact	Option to install exact version.
$version	Package version.
$reqs ...	Package version requirements, mutually exclusive with -exact option.

```
tin import <-force> <$patterns from> $name <<-exact> $version> <$reqs ...> <as $ns>
```

-force	Option to overwrite existing commands.
$patterns	Commands to import, or "glob" patterns, default "*", or all commands.
$name	Package name.
-exact	Option to install exact version.
$version	Package version.
$reqs ...	Package version requirements, mutually exclusive with -exact option.
$ns	Namespace to import into. Default global namespace, or "::".

Example 3: Importing all commands package "foo"

Code:

```
package require tin
tin import foo 1.0
```

Writing Installation Files

Tin also provides utilities to simplify writing installation files. The command *tin mkdir* creates a library directory to install a package in, relative to the base library directory (*tin library*). The command *tin depend* checks if a package is installed without loading the package. If a package is not installed, it will try to install it with *tin install*.

```
tin mkdir <-force> $path
```

`-force`	Option to create fresh library directory (deletes existing folder).
`$path`	Relative path to *tin library*.

```
tin library <$path>
```

`$path`	Base library directory. Default returns the current base library directory.

```
tin depend $name <<-exact> $version> <$reqs ...>
```

`$name`	Package name.
`-exact`	Option to install exact version.
`$version`	Package version.
`$reqs ...`	Package version requirements, mutually exclusive with -exact option.

See the example installation file for a package “foo” that requires the package “bar 1.2”:

Example 4: Example installation file “install_foo.tcl”

Code:

```
package require tin
tin depend bar 1.2
set dir [tin mkdir -force foo]
file copy README.md $dir
file copy LICENSE $dir
file copy lib/bar.tcl $dir
file copy lib/pkgIndex.pdf $dir
```