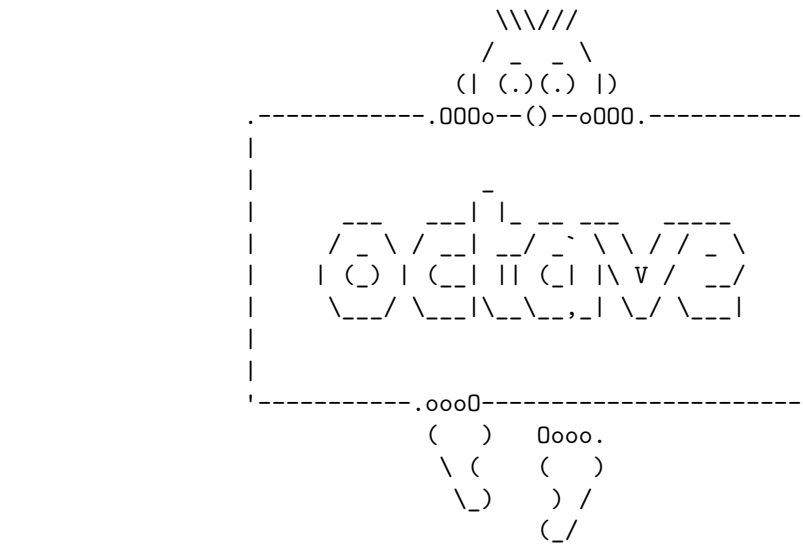


```
Codeblock class: octave

    sudo apt-get install octave
    https://www.gnu.org/software/octave

    runs:
    > octage --no-gui -q {im_opt} <fname>.octave <fname>.{im_fmt}

    class->cmd
      octave -> octave

Metadata options
    imagine.im_out: img,fcb
    imagine.im_log: 4
```

Notes

- `;` makes statements silent
- `figure(1, "visibility", "off")` prevents pop-up window
- `print(1, argv(){1});` prints to intended output filename
- octave will infer image type from output filename extension
- `imagine` calls `octave --no-gui -q <im_opt> <inpfile> <outfile>`, where
- *Octave seems to suffer from a bug in localhost's libosmesa6*

Octave

Sinus plot

?? missing pd-images/638cab9315b5d8d7561cc03804902d58d9a9c011.png

```octave
outname = argv(){1}
figure(1, 'visible', 'off');

x = 0:0.01:2*pi;
a = sin(x);
b = cos(2*x);
c = sin(4*x);
d = 2*sin(3*x);
plot(x,a,x,b,x,c,x,d, "linewidth", 2);
set(gca, "xlim", [0,2*pi], "fontsize", 15);
title("sinusoids");

print(1, outname, '-dpng');
```

?? missing pd-images/0d013dc425b30154e174ccb12fef9eebeec9658d.png

```octave
outname = argv(){1}
figure(1, "visible", "off");

x=linspace(-2,2,50);
y=linspace(-2,2,50);
[xx,yy]=meshgrid(x,y);
meshc(xx,yy,4-(xx.^2+yy.^2))

print(1, outname, '-dpng');
```

Peaks surface

?? missing pd-images/8ca9ae545afe53e6d8fbe3378fb884fabeb4a74a.png

```octave
figure('visible', 'off');

surf(peaks);
title("peaks");
```

```
print(1, argv(){1});
```

Peaks contour

?? missing pd-images/ea89b7cde333c1e935b81e30ccbfc8a6edae6f6f.png

```octave
figure(1, 'visible', 'off');

contourf(peaks);
title("peaks");

print(1, argv(){1});
```

3-D wave

?? missing pd-images/2e35cf07da2464114a8db894bdc4bbb8cd7dc6a5.png

```octave
outname = argv(){1}
figure(1, 'visible', 'off');

x = 0:0.1:2*pi;
y = 0:0.1:2*pi;
z = sin(x)' * sin(y);
mesh(x, y, z);
xlabel("x-axis");
ylabel("y-axis");
zlabel("z-axis");
title("3-D waves");

print(1, outname, '-dpng');
```

Documentation

octave -h

```
GNU Octave, version 4.2.2
Copyright (C) 2018 John W. Eaton and others.
This is free software; see the source code for copying conditions.
There is ABSOLUTELY NO WARRANTY; not even for MERCHANTABILITY or
FITNESS FOR A PARTICULAR PURPOSE.

Octave was configured for "x86_64-pc-linux-gnu".

Usage: octave [options] [FILE]

Options:

  --built-in-docstrings-file FILE Use docs for built-ins from FILE.
  --debug, -d             Enter parser debugging mode.
  --debug-jit             Enable JIT compiler debugging/tracing.
  --doc-cache-file FILE   Use doc cache file FILE.
  --echo-commands, -x     Echo commands as they are executed.
  --eval CODE             Evaluate CODE.  Exit when done unless --persist.
  --exec-path PATH        Set path for executing subprograms.
  --force-gui             Force graphical user interface to start.
  --help, -h,             Print short help message and exit.
  --image-path PATH       Add PATH to head of image search path.
  --info-file FILE        Use top-level info file FILE.
  --info-program PROGRAM  Use PROGRAM for reading info files.
  --interactive, -i       Force interactive behavior.
  --jit-compiler          Enable the JIT compiler.
  --line-editing          Force readline use for command-line editing.
  --no-gui                Disable the graphical user interface.
  --no-history, -H        Don't save commands to the history list
  --no-init-file          Don't read the ~/.octaverc or .octaverc files.
  --no-init-path          Don't initialize function search path.
  --no-line-editing       Don't use readline for command-line editing.
  --no-site-file          Don't read the site-wide octaverc file.
  --no-window-system, -W  Disable window system, including graphics.
  --norc, -f              Don't read any initialization files.
  --path PATH, -p PATH    Add PATH to head of function search path.
  --persist               Go interactive after --eval or reading from FILE.
  --silent, --quiet, -q   Don't print message at startup.
  --texi-macros-file FILE Use Texinfo macros in FILE for makeinfo command.
  --traditional           Set variables for closer MATLAB compatibility.
  --verbose, -V           Enable verbose output in some cases.
```

```
  --version, -v           Print version number and exit.

  FILE                    Execute commands from FILE.  Exit when done
                          unless --persist is also specified.

Additional information about Octave is available at http://www.octave.org.

Please contribute if you find this software useful.
For more information, visit http://www.octave.org/get-involved.html

Read http://www.octave.org/bugs.html to learn how to submit bug reports.
```

man page

```
OCTAVE(1)                General Commands Manual                OCTAVE(1)

NAME
       octave  - A high-level interactive language for numerical computa-
       tions.

SYNOPSIS
       octave [options]... [file]

DESCRIPTION
       Octave is a high-level language, primarily intended for  numerical
       computations.  It provides a convenient command line interface for
       solving linear and nonlinear problems numerically.

OPTIONS
       The complete set of command-line options for octave  is  available
       by running the following command from the shell.

           octave --help

DOCUMENTATION
       The primary documentation for Octave is written using Texinfo, the
       GNU documentation system, which allows the same source files to be
       used to produce online and printed versions of the manual.

       You  can read the online copy of the Octave documentation by issu-
       ing the following command from within octave.

           octave:1> doc

       The Info files may also be read with a stand-alone program such as
```

info or xinfo. HTML, Postscript, or PDF versions of the documentation are installed on many systems as well.

BUGS

The Octave project maintains a bug tracker at http://bugs.octave.org. Before submitting a new item please read the instructions at http://www.octave.org/bugs.html on how to submit a useful report.

FILES

Upon startup Octave looks for four initialization files. Each file may contain any number of valid Octave commands.

octave-home/share/octave/site/m/startup/octaverc
: Site-wide initialization file which changes options for all users. octave-home is the directory where Octave was installed such as /usr/local.

octave-home/share/octave/version/m/startup/octaverc
: Site-wide initialization file for Octave version version.

~/.octaverc
: User's personal initialization file.

.octaverc
: Project-specific initialization file located in the current directory.

AUTHOR

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