

NAME

mktemp — create temporary file or directory

SYNOPSIS

```
mktemp [-dqu] [-p directory] [-s suffix]
mktemp [-dqu] [-t|-p directory] [-s suffix] template
```

DESCRIPTION

Creates a file `u=rw-umask` (directory `u=rwx-umask` if **-d**), replacing a run of ‘X’ characters in the *template*, and writes its path to the standard output stream. If no *template*, defaults to “tmp.XXXXXXXXXX” and **-t**. The final path is “[*directory*[/]]*template*[*suffix*]”.

The *template* must contain at least three consecutive ‘X’es after its final slash (if any). These are replaced with random alphanumeric characters until a path that doesn’t already exist is generated; this behaviour, coupled with the mode, makes **mktemp** suitable for safely generating unique temporary files (unless **-u**).

At most $\min((\text{alphabet-length} = 62)^{\text{x-count}}, 2^{64} - 1)$ filenames will be tried. This limit is unlikely to be hit, or hittable, with any more than three ‘X’es.

OPTIONS

-d, --directory	Create a directory instead of a regular file.
-q, --quiet	Suppress error output. The EXIT STATUS is unaffected.
-u, --dry-run	Don’t create anything, just output a matching path that doesn’t exist. Do <i>not</i> use this — there’s no guarantee the file can be created in the first place, and the file may be used or subverted by a third party before the mktemp output is used.
-t, --tmpdir	If the TMPDIR environment variable is set, equivalent to -p TMPDIR , otherwise to -p /tmp.
-p, --tmpdir=directory	Prepend <i>directory</i> [/] to the <i>template</i> .
-s, --suffix=suffix	Append <i>suffix</i> to the <i>template</i> <i>after</i> parsing it: no amount of ‘X’es will interfere with the <i>template</i> pattern.

ENVIRONMENT

TMPDIR Used if **-p**, **-t**, or no *template*.

EXIT STATUS

1 if **-u** and `faccessat(2)` failed for a reason other than `ENOENT`, otherwise if `open(2)/mkdir(2)` failed for a reason other than `EEXIST`. In case of a write error, created files are removed.

EXAMPLES

```
$ mktemp
/tmp/tmp.K2EHQCo6LG
$ mktemp -p .cache
.cache/tmp.Vp2q7gVUX5

$ mktemp inXXX.jpeg
inpBH.jpeg
$ TMPDIR=~/ .cache mktemp -t inXXX.jpeg
/home/cicada/.cache/inq8e.jpeg
```

Or, as part of a script:

```
#!/bin/sh
tmpfile="$(mktemp)" || exit
echo "Program output." > "$tmpfile"
```

```
#!/bin/sh
exec > "$(mktemp /var/tmp/cleanup-XXXXXXXXX.log)" || exit
```

SEE ALSO

mkdir(2), open(2), mkstemp(3)

STANDARDS

Compatible with the GNU system; short **-s** and allowing **-s** when *template* doesn't end with an **'X'** are extensions.

OpenBSD supports **-dqu****tp** with TMPDIR overriding **-p**, its *template* must end with the **'X'**es, and the minimum amount thereof is **6**. NetBSD allows any amount of **'X'**es, **-p** overrides TMPDIR, supports any amount of *templates*, and its **-t prefix** injects a "*prefix.XXXXXXXXX*" *template*. FreeBSD is as NetBSD but drops **-p**. All three of those implementations first create the file with **-u**, then remove it. An OpenBSD-compatible **mktemp** also exists in the illumos gate.

The only strictly-IEEE Std 1003.1-2008 ("POSIX.1")-compliant way to emulate **mktemp** is to use

```
echo 'mkstemp(/tmp/prefixXXXXXX)' | m4
```

HISTORY

Originates from OpenBSD 2.1 as **mktemp(1)**:

mktemp - make temporary file name (unique)

Supporting **-dqu**, defaulting to a *tmp.XXXXXXXXXX template*.

A compatible implementation appeared in FreeBSD 3.0, adding **-t prefix**, which constructs a *template* in the form "*\${TMPDIR:-/tmp}[/]prefix.XXXXXXXXX*" and allows any amount of *templates* afterward, with a default **mktemp prefix**. This was imported into NetBSD 1.5.

OpenBSD 3.0 adds **-tp**, as present-day.

NetBSD 6.1 adds **-p tmpdir**, with the highest priority.