

## Padding and other flags

Unless otherwise specified, `date` normally pads numeric fields with zeros, so that, for example, numeric months are always output as two digits. Seconds since the epoch are not padded, though, since there is no natural width for them.

The following optional flags can appear after the ‘%’:

‘-’

(hyphen) Do not pad the field; useful if the output is intended for human consumption. This is a GNU extension.

‘\_’

(underscore) Pad with spaces; useful if you need a fixed number of characters in the output, but zeros are too distracting. This is a GNU extension.

‘0’

(zero) Pad with zeros even if the conversion specifier would normally pad with spaces.

‘+’

Pad with zeros, like ‘0’. In addition, precede any year number with ‘+’ if it exceeds 9999 or if its field width exceeds 4; similarly, precede any century number with ‘+’ if it exceeds 99 or if its field width exceeds 2. This supports ISO 8601 formats for dates far in the future; for example, the command `date --date=12019-02-25 +%+13F` outputs the string ‘+012019-02-25’.

‘^’

Use upper case characters if possible. This is a GNU extension.

‘#’

Use opposite case characters if possible. A field that is normally upper case becomes lower case, and vice versa. This is a GNU extension.

Here are some examples of padding:

```
date +%d/%m -d "Feb 1"
⇒ 01/02
date +%-%d/%-m -d "Feb 1"
⇒ 1/2
date +%_d/%_m -d "Feb 1"
⇒ 1/ 2
```

You can optionally specify the field width (after any flag, if present) as a decimal number. If the natural size of the output of the field has less than the specified number of characters, the result is written right adjusted and padded to the given size. For example, ‘%9B’ prints the right adjusted month name in a field of width 9.

An optional modifier can follow the optional flag and width specification. The modifiers are:

‘E’

Use the locale’s alternate representation for date and time. This modifier applies to the ‘%c’, ‘%C’, ‘%x’, ‘%X’, ‘%y’ and ‘%Y’

conversion specifiers. In a Japanese locale, for example, ‘%Ex’ might yield a date format based on the Japanese Emperors’ reigns.

## ‘O’

Use the locale’s alternate numeric symbols for numbers. This modifier applies only to numeric conversion specifiers.

If the format supports the modifier but no alternate representation is available, it is ignored.

POSIX specifies the behavior of flags and field widths only for ‘%C’, ‘%F’, ‘%G’, and ‘%Y’ (all without modifiers), and requires a flag to be present if and only if a field width is also present. Other combinations of flags, field widths and modifiers are GNU extensions.