

Specifying Precision

A *precision specifier* can be applied to the `%f`, `%e`, `%g`, and `%s` format specifiers. It follows the minimum field-width specifier (if there is one) and consists of a period followed by an integer. Its exact meaning depends upon the type of data to which it is applied.

When you apply the precision specifier to floating-point data using the `%f` or `%e` specifiers, it determines the number of decimal places displayed. For example, `%10.4f` displays a number at least ten characters wide with four decimal places. When using `%g`, the precision determines the number of significant digits. The default precision is 6.

Applied to strings, the precision specifier specifies the maximum field length. For example, `%5.7s` displays a string of at least five and not exceeding seven characters long. If the string is longer than the maximum field width, the end characters will be truncated.

The following program illustrates the precision specifier:

```
// Demonstrate the precision modifier.
import java.util.*;

class PrecisionDemo {
    public static void main(String args[]) {
        Formatter fmt = new Formatter();

        // Format 4 decimal places.
        fmt.format("%.4f", 123.1234567);
        System.out.println(fmt);
        fmt.close();

        // Format to 2 decimal places in a 16 character field
        fmt = new Formatter();
        fmt.format("%16.2e", 123.1234567);
        System.out.println(fmt);
        fmt.close();

        // Display at most 15 characters in a string.
        fmt = new Formatter();
        fmt.format("%.15s", "Formatting with Java is now easy.");
        System.out.println(fmt);
        fmt.close();
    }
}
```

It produces the following output:

```
123.1235
      1.23e+02
Formatting with
```

Using the Format Flags

Formatter recognizes a set of format *flags* that lets you control various aspects of a conversion. All format flags are single characters, and a format flag follows the `%` in a format specification. The flags are shown here:



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