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Pagination

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For other uses, see [Pagination \(disambiguation\)](#).



It has been suggested that [Page numbering](#) be merged into this article. ([Discuss](#)) *Proposed since October 2015.*

Pagination is the process of dividing a document into discrete [pages](#), either electronic pages or printed pages.

Today printed pages are usually produced by outputting an electronic file to a printing device, such as a [desktop printer](#) or a modern [printing press](#). These electronic files may for example be [Microsoft Word](#), [PDF](#) or [QXD](#) files. They will usually already incorporate the instructions for pagination, among other formatting instructions. Pagination encompasses rules and algorithms for deciding where [page breaks](#) will fall, which depend partly on cultural considerations about which content belongs on the same page: for example one may try to avoid [widows and orphans](#). Some systems are more sophisticated than others in this respect. Before the rise of information technology (IT), pagination was a manual process: all pagination was decided by a human. Today, most pagination is performed by machines, although humans often override particular decisions (e.g. by inserting a hard [page break](#)).

In reference to books produced without a computer, pagination can mean the consecutive [page numbering](#) to indicate the proper order of the pages, which was rarely found in documents pre-dating 1500, and only became common practice c. 1550, when it replaced foliation, which numbered only the front sides of [folios](#).

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Pagination in word processing, desktop publishing, and digital typesetting [[edit](#)]

[Word processing](#), [desktop publishing](#), and [digital typesetting](#) are technologies built on the idea of print as the intended final output medium, although nowadays it is understood that plenty of the content produced through these pathways will be viewed onscreen by most users rather than being printed on paper.

All of these software tools are capable of flowing the content through algorithms to decide the pagination. For example, they all include automated [word wrapping](#) (to *obviate* hard-coded *[newline](#)* delimiters), *machine-readable* paragraphing (to make paragraph-ending decisions), and automated pagination (to make page-breaking decisions). All of those automated capabilities can be manually overridden by the human user, via [soft hyphens](#) (that is, inserting a hyphen which will only be used if the word is split over two lines, and thus not shown if not), manual line breaks (which force a new line within the same paragraph), [hard returns](#) (which force both a new line and a new paragraph), and manual [page breaks](#).

Pagination in web content [[edit](#)]

On the Internet, pagination is used for such things as displaying a limited number of results on [search engine results pages](#), or showing a limited number of posts when viewing a [forum thread](#). Pagination is used in some form in almost every [web application](#) to divide returned data and display it on multiple pages. Pagination also includes the logic of preparing and displaying the [links](#) to the various pages.

Pagination can be handled *client-side* or *server-side*. Server-side pagination is more common. Client-side pagination can be used when there are very few records to be accessed, in which case all records can be returned, and the client can use [JavaScript](#) to view the separate pages. By using [AJAX](#), hybrid server/client-side pagination can be used, in which Javascript is used to request the subsequent page which is loaded and inserted into the [Document Object Model](#) via [AJAX](#).^[1]

Server-side pagination is appropriate for large data sets providing faster initial page load, [accessibility](#) for those not running Javascript, and complex view business logic.

Correctly implementing pagination can be difficult.^[2] There are many different usability questions such as should "previous" and "next" links be included, how many links to pages should be displayed, and should there be a link to the first and last pages.^[3] Also ability to define the number of records displayed in a single page is useful.^[4]

Presentation vs. content [[edit](#)]

Main article: [Separation of presentation and content](#)

Today, all content, no matter which output medium is planned, predicted, or not predicted, can be produced with technologies that allow downstream transformations into any presentation desired, although such best-practice preparation is still far from universal. This usually involves a [markup language](#) (such as [XML](#), [HTML](#), or [SGML](#)) that tags the content semantically and machine-readably, which allows downstream technologies (such as [XSLT](#), [XSL](#), or [CSS](#)) to output them into whatever presentation is desired. This concept is known as the *[separation of presentation and content](#)*. This paradigm is now the conventional one in most commercial publishing, except to the extent that *legacy* and *backward compatibility* issues and budget constraints interfere, and to the extent that many of the people involved don't understand the topic enough to help build compliance. But it is no longer possible to make a hierarchical distinction between pagination in the print medium and pagination in the electronic medium, because print is merely an instance of presentation of the same underlying content.

See also [[edit](#)]

- [For position only](#)
- [Page numbering](#)

References [[edit](#)]

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Categories: [Printing terminology](#) | [Page layout](#)

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