**DELIMETER,SEPERATOR AND TERMINATOR**

A **delimiter** is one or two markers that show the start and end of something. They're needed because we don't know how long that 'something' will be. We can have either: 1. a **single delimiter**, or 2. a pair of **pair-delimiters**

* [a, b, c, d, e] each comma (,) is a *single delimiter*. The left and right brackets, ([, ]) are *pair-delimiters*.
* "hello", the two quote symbols (") are *pair-delimiters*

A **seperator** is a synonym of a "delimiter", but from my experience it usually refers to *field delimiters*. A field delimiter acts as a divider between one field and the one following it, which is why is can be though of as "separating" them.

* <file1>␜<file2>␜<file3>, the file separator character (␜), despite explicitly the name having "separator", is both a *delimiter* and a *separator*

A **terminator** marks the end of a group of things, again needed because we don't know how long it is.

* abdefa\0, here the null character \0 is a *terminator* that tells us the string has ended.
* foo\n, here the newline character \n is a *terminator* that tells us the line has ended.

The terms, delimiter, separator originate from the classical idea of storage, conceptually, being comprised of **files, records, and fields**, (a file has many records, a record has many fields). In this context, a single delimiter and pair-delimiters might be called **record delimiters** and **field delimiters**. Because of the historical significance of files-records-field taxonomy, this terms have a more widespread usage (see Wikipedia page for [Delimiter](https://en.wikipedia.org/wiki/Delimiter)).

* Below are two files, each with three records with each record having four fields:
* martin,rodgers,33,28000\n
* timothy,byrd,22,25000\n
* marion,summers,35,37000\n
* ===
* lucille,rowe,28,33000\n
* whitney,turner,24,19000\n
* fernando,simpson,35,40900\n

Here, , and \n as we know are single delimiters, but they might also be called a *record delimiters* and *field delimiters* respectively.