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Section 4: Execution Environment Utilities

The Execution Environment Utilities are the utilities that shall be implemented in all conforming POSIX.2 systems.

4.1 awk — Pattern scanning and processing language

4.1.1 Synopsis

`awk` [`-F` *ERE*] [`-v` *assignment*] ... *program* [*argument* ...]

`awk` [`-F` *ERE*] `-f` *progfile* ... [`-v` *assignment*] ... [*argument* ...]

4.1.2 Description

The `awk` utility shall execute programs written in the *awk* programming language, which is specialized for textual data manipulation. An `awk` program is a sequence of patterns and corresponding actions. When input is read that matches a pattern, the action associated with that pattern shall be carried out.

Input shall be interpreted as a sequence of records. By default, a record is a line, but this can be changed by using the `RS` built-in variable. Each record of input shall be matched in turn against each pattern in the program. For each pattern matched, the associated action shall be executed.

The `awk` utility shall interpret each input record as a sequence of fields where, by default, a field is a string of non-`<blank>` characters. This default white space field delimiter can be changed by using the `FS` built-in variable or the `-F` *ERE*. The `awk` utility shall denote the first field in a record `$1`, the second `$2`, and so forth. The symbol `$0` shall refer to the entire record; setting any other field shall cause the reevaluation of `$0`. Assigning to `$0` shall reset the values of all other fields and the `NF` built-in variable.

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