

## IEEE Standards Interpretations for IEEE Std 1003.2™-1992 IEEE Standard for Information Technology--Portable Operating System Interfaces (POSIX®)-- Part 2: Shell and Utilities

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### Interpretation Request #86

**Topic:** backreferences **Relevant Clauses:** 2.8.3.3

In the description of backreferences in POSIX.2 subclause 2.8.3.3, the standard states (in part): The backreference expression `\n` shall match the same (possibly empty) string of characters as was matched by a subexpression enclosed between `(` and `)` preceding the `n`. The character `n` shall be a digit from 1 through 9, specifying the `n`'th subexpression... My question revolves around the use of the word "shall" in the last sentence. Is this a restriction on applications, or on implementations? In the former case, an expression with a backreference such as `\0` would be nonportable, having unspecified behavior. In the latter case, it would have to be treated as invalid by any conforming implementation.

### Interpretation Response

"The character `n` shall be a digit from 1 through 9, ..." is a requirement for a standard conforming application. The standard does not require that an implementation return an error if another value such as 0 is used. The standard clearly states behavior for backreference expressions and conforming implementations must conform to this.

### Rationale for Interpretation

None.