

An Example of Using The Category-Partition Method

Test a command-line program that supports “find” operation as follows:

Command:

find

Syntax:

find <pattern> <file>

Function:

The find command is used to locate one or more instances of a given pattern in a text file. All lines in the file that contain the pattern are written to standard output. A line containing the pattern is written only once, regardless of the no. of times the pattern occurs in it.

The pattern is any sequence of characters whose length does not exceed the maximum length of a line in the file. To include a blank in the pattern, the entire pattern must be enclosed in quotes (“”). To include a quotation mark in the pattern, two quotes (“ ”) must be used.

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Examples:

find john myfile

displays lines in the file myfile which contain *john*.

find "john smith" myfile

display lines in the file myfile which contains *john smith*.

find "john" " smith" myfile

display lines in the file which contains *john" smith*.

When file is considered as a parameter, we need to consider the following:

- *no. of occurrences of the pattern in the file.*
- *no. of occurrences of the pattern in a line that contains it.*
- *maximum line length in the file*

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Identified Category-Partitions by focusing on input parameters and related partitions::

Category partitions for this example:

Parameter “Pattern” related partitions:

- Pattern size:
 - empty
 - single character
 - many character
 - longer than any line in the file
- Quoting:
 - Pattern is quoted
 - Pattern is not quoted
 - pattern is improperly quoted

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Parameter “Pattern” related partitions:

- Embedded blanks:

 - no embedded blank

 - One embedded blank

 - Several embedded blanks

- Embedded quotes:

 - no embedded quotes

 - One embedded quote

 - Several embedded quote

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Parameter “File” related partitions

- File name:

 - Good file name

 - No file with this name

 - Omitted

- File access environment

 - File not accessible

 - File can't read

 - File can't open

- No. of occurrences of pattern in the file.

 - None

 - Exactly one

 - More than one

- Pattern occurrences on target line in the file:

 - one

 - more than one

 - None

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Command line related partitions:

:

Command line:

Incorrect “command”

Correct “command” with correct parameters

Missing input parameters

Extra input parameters