

# INF 1050

## UKEOPPGAVER 14: TESTING (BLACK-BOX TESTING) LØSNINGSFORSLAG

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### Command `find` has *pattern* as a parameter.

- The specification mentions four characteristics of the *pattern* parameter:
  - o the length of the pattern;
  - o whether the pattern is enclosed in quotes;
  - o whether the pattern contains embedded blanks;
  - o whether the pattern contains embedded quotes.

Additional characteristics of the *pattern* parameter:

- o whether a quoted search pattern always has to include a blank character;
- o whether several successive quotes can be included in a pattern;
- o the possibly ambiguous meaning of a leading quote in the pattern: is it used to quote the entire pattern, or is it used to insert a literal quote character?

### *File* can be considered as a parameter or an environment object

As a parameter, *file* has the following characteristics:

- o Whether or not it names an existing file

As an environment object, the following of file are:

- o Number of occurrences of the pattern in the file;
- o Number of occurrences of the pattern in a line that contains it (in the test specification, we call such a line a target line);
- o Maximum line length in the file.

Other possible characteristics:

- o The type of the file (text, binary, ...)
- o Whether the pattern extends across more than one line

### Parameters: Categories and choices

#### •PatternSize:

- Empty
- Single character
- Many characters
- Longer than any line in the file

#### •Quoting:

- Pattern is quoted

- Pattern is not quoted
- Pattern is improperly quoted
  
- Embeddedblanks:
  - No embedded blank
  - One embedded blank
  - Several embedded blanks
  
- Embeddedquotes:
  - No embedded quotes
  - One embedded quote
  - Several embedded quotes
  
- Filename:
  - Good file name
  - No file with this name
  - Omitted

#### **Environment: Categories and choices**

- NumberOfOccurrencesOfPatternInFile:
  - None
  - Exactly one
  - More than one
  
- PatternOccurrencesOnTargetLine: (assumes line contains the pattern)
  - One
  - More than one

●Parameters:

—Pattern size:

empty	[property Empty]
single character	[property NonEmpty]
many character	[property NonEmpty]
longer than any line in the file	[Error]

—Quoting:

pattern is quoted	[property Quoted]
pattern is not quoted	[if NonEmpty]
pattern is improperly quoted	[Error]

—Embeddedblanks:

no embedded blank	[if NonEmpty]
one embedded blank	[if NonEmpty and Quoted]
several embedded blanks	[if NonEmpty and Quoted]

—Embeddedquotes:

no embedded quotes	[if NonEmpty]
one embedded quote	[if NonEmpty]
several embedded quotes	[if NonEmpty] [Single]

—File name:

good file name	
no file with this name	[Error]
omitted	[Error]

●Environment:

—NumberOfOccurrencesOfPatternInFile:

none	[if NonEmpty] [Single]
exactly one	[if NonEmpty] [property Match]
more than one	[if NonEmpty] [property Match]

—PatternoccurrencesOntargetline: (assumes line contains the pattern)

one	[if Match]
more than one	[if Match] [Single]

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