Assumptions

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1. Applications assumptions

There are some assumptions we made in our implementation, we demonstrate them here with a few examples. Some applications are not included here since they have clear functional descriptions.

THE BASIC FUNCTIONALITIES:

1.1. RM

Assumptions:

- Assume the flags do not have scope, which means rm folder1 -r folder2 is the same as rm -r folder1 folder2. This is different with linux.

1.2. ECHO

Assumptions:

- It will print corresponding messages with a new line character in the end.
- In case of command substitution, it will replace newline to whitespace. For example, echo "`echo hello`world" will output hello world. The additional whitespace is changed from the new line.

Command format

echo [message]

Example

echo "hello world" ⇒ hello world

1.3. PASTE

Assumptions

- The application can only take one stdin
- if no file is specified or only "-" appears in the file list, echo back the stdin
- if there are one or more files in the file list and without "-", merge the files
- if both files and "-" appear in the file list, the stdin is merged with the merging result of the files, with stdin at the first column

Command format

paste [FILE] ...

FILE – the name of the file or files. If not specified, use stdin.

Examples:

```
# Merge stdin and two files A.txt and B.txt
$ paste A.txt - B.txt
```

A.txt	stdin	B.txt	output
1	A	1	A 1 1
2	B	3	B 2 3
3	C	5	C 3 5
4	D	7	D 4 7

1.4. SED

1.5. EXIT

Assumptions

- The EXIT application would call `System.exit(0)` immediately instead of break loop in `main()`.

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1.6. DIFF

1.7. GREP

1.8. WC

Assumptions

- Currently we do not care about the order of the flags.

1.9. CD

1.10. CP

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1.11. CUT

Assumptions

- the application can take a list of two numbers separated by comma, a range of numbers or a single number.
- If the number is out of range of the line’s length, an exception will be thrown.
- two numbers separated by comma may have the first number greater than the second number, the cut result would be in the same order of the two number
- If the input range has the start number greater than the end number, an exception will be thrown.

Command format

Example

```
# Throw Out Of Range exception
$ echo "baz" | cut -b 8
# Display 'sT'. Suppose the file contains one line: "Today is Tuesday."
$ cut -c 8,1 test.txt
# Throw Invalid Range exception
$ cut -c 8-1 test.txt
```

1.12. LS

1.13. SORT

1.14. FIND

1.15. MV

Assumptions :

- When target is a exist file/folder:
  - mv file1 file2,
    - without -n flag: exception

        - given -n flag: replace
    - mv file1 folder1
        - move file1 into folder1
    - mv folder1 folder2,
        - without -n flag: move folder1 into folder2
        - given -n flag: replace folder2 with folder1

Command format:

```
mv [-n] SOURCE TARGET
mv [-n] [SOURCE] ... DIRECTORY
```

Example

```
mv file1.txt folder1
```