Bash - Part 1

BASH – IMPORTANT POINTS

The command line is a text interface for the computer's operating system. To access the command line, we use the terminal.

A filesystem organizes a computer's files and directories into a tree structure. It starts with the root directory. Each parent directory can contain more child directories and files.

From the command line, you can navigate through files and folders on your computer:

pwd outputs the name of the current working directory.

ls lists all files and directories in the working directory.

cd switches you into the directory you specify.

mkdir creates a new directory in the working directory.

touch creates a new file inside the working directory.

MANIPULATION

Options modify the behavior of commands:

ls -a lists all contents of a directory, including hidden files and directories

ls -l lists all contents in long format

ls -t orders files and directories by the time they were last modified

Multiple options can be used together, like **ls -alt**

From the command line, you can also copy, move, and remove files and directories:

cp copies files

mv moves and renames files

rm removes files

rm -r removes directories

Wildcards are useful for selecting groups of files and directories

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REDIRECTION

Redirection reroutes standard input, standard output, and standard error.

The common redirection commands are:

> redirects standard output of a command to a file, overwriting previous content.

>> redirects standard output of a command to a file, appending new content to old content.

< redirects standard input to a command.

| redirects standard output of a command to another command.

A number of other commands are powerful when combined with redirection commands:

sort: sorts lines of text alphabetically.

uniq: filters duplicate, adjacent lines of text.

grep: searches for a text pattern and outputs it.

sed : searches for a text pattern, modifies it, and outputs it.

ENVIRONMENT

Generalizations

The environment refers to the preferences and settings of the current user.

The nano editor is a command line text editor used to configure the environment.

~/.bash_profile is where environment settings are stored. You can edit this file with nano.

environment variables are variables that can be used across commands and programs and hold information about the environment.

export VARIABLE="Value" sets and exports an environment variable.

USER is the name of the current user.

PS1 is the command prompt.

HOME is the home directory. It is usually not customized.

PATH returns a colon separated list of file paths. It is customized in advanced cases.

env returns a list of environment variables.