DASH>_

CSC 470 – Assignment 1

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Overview

Dash is a command-line application that provides the user with a bash-like interface for retrieving system and process info. The program accepts commands one per line with space-delimited arguments. Dash handles user and computer errors as gracefully as possible, providing helpful error messages that inform the user about what caused the error.

Usage

Dash takes no arguments when starting up initially. To run Dash from the command line, simply type:

```
> dash
```

Once Dash is running, the prompt “Dash> “ will be displayed. Here, the user is allowed to enter the following valid commands:

- **`exit`**
  Exits Dash and returns control to the Bash command line interface. This command takes no arguments.
- **`help`**
  Displays basic command usage to the user, including syntax and information as to what the command does. This command takes no arguments.
- **`systat`**
  Displays the following system information to the user: OS version information, system uptime, memory usage information, and cpu information. This command takes no arguments.
- **`cmdnm <pid>`**
  Displays the command name for the process with the supplied PID. If no process with the given PID exists, then an appropriate message is displayed.
- **`pid <command>`**
  Displays the PIDs of all processes whose name matches the supplied command argument. Uses simple substring matching, so supplying a command with a single letter will yield multiple results.

Compilation

This program comes supplied with a make file for your convenience. It is intended to be compiled under a Linux system and is untested on other operating systems other than Fedora. The following command will compile the program using the Make utility:

```
> make dash
```

The following command will compile the program using g++ without using make:

```
> g++ -g -Wall -std=c++11 -o dash dash.cpp
```

Libraries

This program is dependent on three non-standard c++ files that are standard on Unix systems: sys/types.h, dirent.h, and errno.h. These header files are used to traverse the files and folders in the /proc directory.

Files

The following source files are included in this project:

- dash.cpp

The following compilation files are included in this project:

- makefile

The following documentation files are included in this project:

- prog1.pdf