CMSC 4113/5313
Human-Computer Interaction
Assignment 7

Using JavaScript and Node.js, develop a command-line application for a simple command-line shell. A command-line shell (e.g. the Windows Command Prompt, Linux/Mac Bash) runs by accepting user [textual] input, interpret the command to run, and then loops back to accept more input. Typically, shells have a context/environment which keeps track of the current state of the user's past interactions. This is useful for keeping track of, for example, the current "working" directory for file-based commands and the history of recently executed commands for reference by user (i.e. by pressing the up key).

0.1 Project Restrictions

Your application must:

1. Be written as a JavaScript/Node.js application and be comprised of only JavaScript

2. Have a "prompt" which is printed before allowing the user to specify a command to run. The prompt should be user-configurable as a set of characters with the possibility of including the hostname of the computer and the "current working directory".

3. Support commands for simple file-based interaction, including: cd (change the current working directory), ls or dir (listing the children of the current working directory or a user-supplied directory), cat (printing the contents of a file given by name/path), rm (remove a file by name/path), and stat (printing common statistics of a user-supplied file by name/path such as file name, size, and last-modified date/time).

4. Support command(s) for downloading a resource from the Internet given a user-supplied URL and saving the contents to a file given by a user-supplied name/path.

5. Be "exit-able" by a the user running a command "exit" or "quit".

0.2 Due Date

You must complete the assignment by Monday, February 20 at 11:59 PM and submit the source code (*.js file(s)) on Blackboard. Should Blackboard be down or unresponsive, you may e-mail your assignment solution to nicolas.grounds@oc.edu