Quiz Answers
CS-330 Unix and Network Programming

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March 1, 2024
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Contents

Quiz 6: Awk

- Which function in awk is used to divide a string into pieces separated by the field seperator and store the pieces in an array ?

    – split

- What is the meaning of the $0 variable in awk ?

    – it holds the entire record

- awk reads input lines automatically

    – true

- Variables in awk are initialized how ?

    – to 0 or ”” depending on context when first used

- Every awk program must use the BEGIN and END patterns.

    – false

- Which command line option allows to specifiy an awk program in a file ?

    – **-f**

- awk allows strings as array index.

    – true

- awk can use which character as field seperator ?

    – any character

- In awk, strings printed with the ”%20s” printf directive will always be left justified.

    – false

- What is the string concatenation operator in awk ?

    – the space character

Quiz 7: Sed

- In sed, the "i" command adds lines before the address

  – True

- In sed, when using a range address, the lines specified need not be consecutive.

  – False

- In sed, the dollar sign ($) can be used as a single line address. What is its meaning?

  – the last line of input

- If the exclamation mark "!" is used after an sed address, then it will only search for obsolete lines.

  – False

- Which character is used to delimit the search and replacement components of the sed "s" command?

  – any, as long as all 3 are the same

- If sed is invoked as "sed -n" then it sorts its input numerically.

  – False

- The sed editor can be called from a shell script

  – True

- Which of the following utilities can be used to systematically process files?

  – all of the above

- Which of the following is NOT a valid address type for sed?

  – sublet address

- If no address is specified for the sed command then the command is applied to every input line.

  – true

Quiz 9: Systems Programming

- The C library function perror translate an error code into an understandable error message.

    - True

- In C++, C strings are handled the same way as instances of the standard string class.

    - False

- C++ can call functions from the standard C library.

    - true

- In C++ what is the correct include to use the strlen or strcpy library functions ?

    - include <cstring>

- The C regular expression library uses 2 functions: regcomp and regexec. Which statement is true about these functions?

    - regexec runs the search that was prepared by regcomp

- For the strcpy C library function, the size of the destination array must be long enough to contain the source string including the terminating null character.

    - true

- A C++ program cannot access environment variables.

    - false

- C library function exit terminates a process and allows to set the return status. A status of 0 indicates failure.

    - false

- The C structure dirent does not contain the file name.

    - false

- Which C library functions enable directory I/O ?

    - opendir, readdir

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Quiz 10

- A system call is linked to an executable and becomes logically part of the executable.

    - False

- C++ uses which of the following to identify a file in low-level IO using system calls ?

    - File descriptor number

- The read and write system calls use C++ strings to handle its data.

    - False

- open, close, create, read and write are system calls to achieve low-level I/O.

    - False

- Which of the following is not a valid flag to for the open system call ?

    - O_READ

- Which of to following is a system call that can be used to create a file ?

    - Open

- A system call uses a special C++ syntax for invocation.

    - False

- Which system call is used to remove a file ?

    - unlink

- The dup system call is used to claim standard I/O from inside a program.

    - True

- System calls typically set the errno variable and return -1 if they encounter and error.

    - True

Quiz 11

1. Match the following exec functions to their description:

   - execl, execlp – specify arguments as list. **Answer: Option 1**
   - execv, execvp – specify arguments as array of strings. **Answer: Option 2**
   - execlp, execvp – look for new executable via PATH. **Answer: Option 0**

2. Unix processes can communicate via Unix pipes.

   - True

3. Which of the following is not a potential return value from the fork system call?

   - 1, to indicate that 1 child process was created. **Answer: This is not a potential return value**

4. The pipe system call creates a bidirectional data channel.

   - False

5. A process is a program in execution.

   - True

6. Which system call creates a new process?

   - fork

7. How long does the wait system call wait?

   - until a child process terminates

8. System calls pipe, dup, and fork are used together to implement the ”|” pipe character used by the command interpreter on the command line.

   - True

9. The fork system call duplicates the current process. The 2 processes (old and newly created) are exactly the same.

   - False

10. A Unix pipe is represented in C++ as an array of _____ file descriptors.

    - 2