

Test #1  
COMP 206  
February 1, 2019  
30 Minute Test

## Theory Section

### Multiple choice questions

1. Which of the following does NOT agree with the definition of a system?
  - a. A set of artifacts where each one carries out a unique function
  - b. Each artifact's responsibility is to interact with the OS or machine
  - c. System artifacts interconnect by sending data, receiving data, and executing functions
  - d. The runtime environment determines how artifacts can interact
2. Which statement is NOT true about High-level, Systems and Low-level programming?
  - a. High-level programming languages are known for their fast execution speeds
  - b. High-level programming languages mainly interact with the user and the OS
  - c. Systems programming is a language that can behave like a high-level language and a low-level language
  - d. Systems programming is used to build operating systems and drivers
3. Which single answer lists the correct reasons why command line knowledge is important?
  - a. Easy to use interface, does not need powerful computers, used in mobile development
  - b. Allows for remote development, used in the OS industry, helps with diagnosing computer issues, hardware interfacing, systems without a GUI
  - c. Used to install system software, provides functions you cannot do with the GUI, provides a global view of your directory structure
  - d. All of the above
4. What is the client-server architecture? (select one)
  - a. The interconnection of many PCs in a network that keeps all data private. Sharing only happens through message passing between clients.
  - b. It is the architecture used to form the interconnections in the Internet
  - c. A client PC can query a server. The server will process the query and return a response to the client.
  - d. None of the above is correct
5. What is the Unix OS made out of? (select one)
  - a. Client, Server, Network, Shared data
  - b. Humans, Applications, Controllers, Peripherals
  - c. The Kernel, File System, Shell, Utilities
  - d. UI, API, Common Interface, Managers, Drivers
6. Which one is true about the shell?
  - a. It is a UI or GUI that interprets commands, calls the OS to execute the command, displays results in a human readable form
  - b. It is a UI or GUI that interprets commands, executes the command, displays results in a human readable form
  - c. It is a UI that interprets commands, calls the OS to execute the command, displays results in a human readable form
  - d. It is a UI that interprets commands, executes the command, displays results in a human readable form

# Command Line Section

## Multiple Choice

1. Which of the following will change the directory to the parent directory:
  - a. `cd ..`
  - b. `cd ~`
  - c. `cd .`
  - d. `cd /`
2. What will `$*` hold if you run a script with the following arguments: `myscript.sh James 25 Canada`
  - a. [myscript.sh](#)
  - b. James
  - c. Canada
  - d. James 25 Canada
3. You have the following files in your home directory: `log.txt`, `log.txs`, `log.sxt`, `log.txo` and `readme.txt`. Which of the following `ls` commands will only list `log.txs` and `log.txt`?
  - a. `ls log.*`
  - b. `ls log.?x?`
  - c. `ls log.tx?`
  - d. `ls log.tx[st]`
4. Which pattern in the file `log.txt` will the following `grep` command matches: `grep '.*f...$' log.txt`
  - a. All lines that start with the letter `f`
  - b. All lines having the letter `f` as a third letter from the beginning of the line
  - c. All lines having the letter `f` as a third letter from the end of the line
  - d. All lines having the letter `f` as a fourth letter from the end of the line
5. Which `tar` command will extract a compressed archive file?
  - a. `tar -zxvf log.tgz ~/log`
  - b. `tar -xvf log.tgz ~/log`
  - c. `tar -zcvf log.tgz ~/log`
  - d. `tar -cvf log.tgz ~/log`
6. Which command will rename a file from `oldName` to `newName`?
  - a. `mv oldName newname`
  - b. `cp oldName newname`
  - c. `mv newName oldName`
  - d. `rm oldName newname`

## Bash Section

### Programming Question

Write a Bash script that creates a backup directory in the current directory, if it does not already exist. It then copies the files using the path supplied at the command line into the backup directory. Assuming the script's name is backup, then: `./backup /bin/*.out` would copy all the files from `/bin` with file extension `.out` into the backup directory. It will then TAR those files into a file named `backup.tar`, unzipped. If the TAR file is empty it displays the error message "Error in TAR file".