|  |  |
| --- | --- |
| A Command Line Interface (CLI) often preferred for remote administration tasks since it requires less L | 1. GNU project 2. hardware abstraction 3. services 4. system library 5. relative-to-home 6. relative 7. Sticky bit 8. taskkill 9. tasklist 10. -f 11. -ps 12. bandwidth 13. -9 14. pgrep 15. grep 16. Unix-like operating system 17. Piping 18. SUID 19. more 20. less 21. sleeping 22. development tools 23. waiting 24. kernel 25. working directory 26. task automation |
| Apple released MacOS, a P based on the “Darwin” kernel and incorporating some software from the GNU project. |
| The A develops its own version of most of the Unix tools and utilities but does not create a kernel, so it is usually used in conjunction with a commercial Unix system. |
| a CLI is well-suited to Z, and many tasks may require fewer steps to perform than when using a GUI. |
| Because of B, programs can access devices in a general way without having to be programmed to individually deal with each type of device that may be used. |
| The operating system, computer hardware, and V (compiler, linker, and so forth) work together to present the “programming model”. |
| Any pathname that does not start with a slash/backslash or a tilde character is a F pathname |
| H - terminates a process. By default, this command attempts to get tasks to terminate in a safe manner. |
| KILL with option M is a command used in Unix/Linux systems to forcefully terminate a process. |
| To find all processes associated with a given program, use the N command. |
| Q is a special case of redirection, where the output (stdout) of one command is connected to the input (stdin) of another command. |
| R - when applied to an executable program file, this permission changes the effective user ID from the user executing the file to the owner of the file for the duration of the process. |
| Like T, you can press ENTER to scroll by one line or SPACE to scroll by one screen. |
| The X is loaded by the computer’s firmware (built-in software) and sets up the computer’s hardware and resources before starting the services. |
| A process which is ineligible for execution because it is waiting for a resources is called a U process. |
| Most operating systems have the concept of a Y, which allows a directory to be temporarily designated as the current working location. |

SLG OPS102 Midterm Practice

**Matching** (8 Marks, 0.5 each)

**File Permission (10 marks)**

A computer screen shot of a program code

Description automatically generated

|  |  |  |
| --- | --- | --- |
| **Command** | **Will it succeed? (✓ or ✗)** | **If not, write a chmod command that will add the minimum permission needed for it to work (assuming you have permission to run any chmod command)** |
| cp code/private/secret.txt projects ([src]-r, [des]-w) | ✓ |  |
| ls data/report.txt ([dir]-x) | ✗ | chmod o+x data |
| gcc projects/project1.c -o projects/output ([.c]-r, [dir]-wx) | ✓ |  |
| mv code/shared.txt data/shared-data.txt ([src-dir]-w, [des]-w, [file]-r) | ✗ | chmod o+wx data |
| echo "Update" >> code/shared.txt ([dir]-x no need w, already existed, [file]-w) | ✓ |  |

**read** permission to compile .c file

**Short Questions (10 marks)**

1. Using chmod octal (absolute) method, provide read, write and execute permission for user, read only for groups, and write and execute for others for file week3.txt inside topic directory using relative pathname.

chmod 743 topic/week3.txt

1. Using ls command, display only the files that start with a, followed by a non-alphabet, non-digit character and ends with c.   
   ls a[!a-zA-Z0-9]c
2. Display only the third line in a file called words, changing all alphabets to uppercase.   
   head -3 words | tail -1 | tr ‘a-z’ ‘A-Z’
3. Issue a command for detailed listing of all files in the /bin directory, sending the output to a file called bins and discarding any error messages.

ls -l /bin | tee bin 2>/dev/null

or  
ls -l /bin > bins 2>/dev/null

1. Display to the screen only the fourth, fifth, and sixth lines from car.txt but only their Model, sorted in alphabetical order, redirect the output to a file called models.txt, append any errors to errors.log.

A screenshot of a computer

Description automatically generated

tail -n +4 car.txt | head -n 3 | cut -f1 | sort > models.txt 2>>errors.log

or

head -6 car.txt |tail -3 | cut -f1 | sort > models.txt 2>>errors.log

**Expected Output (9 marks)**

**Question 1:**

|  |
| --- |
| mkdir project  cd project  echo "This is file one" > file1  echo "This is file two" > file2  cat file1 file2 > merged  cat file1 file2 merged | sort | uniq |

**Output:**

**This is file one  
This is file two**

**Question 2:**

|  |
| --- |
| touch data1.txt data2.txt data3.csv  ls \*.txt  mv data1.txt archive/  ls -l \*.txt | wc -l *#* -l *is lower case L* |

**Output:**

**1**

**Question 3:**

|  |
| --- |
| echo "apple banana orange" > fruits  cat fruits | tr 'a' 'A' |

**Output:**

**Apple bAnAnA orAnge**