

CS 35L Final Review

Tuesday, June 6, 2017

1:59 PM

- Tips
 - Only focus on the slides and the assignments
 - Print some supplement materials, especially cheat sheets
- Week 1 Basic Concepts
 - History of OS
 - Components of Linux
 - Kernel: know the 4 main function
 - Core of operating systems
 - Allocates
 - Know the functions, usage, options of command line utilities'
- How do I find where files are on systems
 - find
- When is a file a file and when is it a process
 - ps
- Absolute vs Relative Path
 - Absolute: start at root and relative is whatever point you define
- Sample W: CHMOD hello
- `^(? [2-9][0-9]{2}\)? (| - | \.) [0-9]{3} (| - | \.) [0-9]{4}`
 - `^` : occurs at beginning of line
 - `{2}` : there has to be 2 instances of `[0-9]`
 - `(| - | \.)` : Delimiter can be none, -, .
- Build Process
 - Configure
 - Check if environment is compatible or not
 - Make
 - Make install

Git

Head: pointer specifies which branch you are working on

Git init: initialize empty repository and creates .git

Git clone: initialize repo but is filled with existing git

Git status git diff answer to Week 9 Q1

on status, get an answer to week 3 Q1

PART 2

Diff thread share a heap and different stack

Malloc: initialize

Realloc: deallocate old memory and reallocate new data,

Calloc: initialized to memory: i.e int* to 0

Free: frees the memory

Malloc() and free

```
Int** arr = malloc(sizeof(int*) *100);
```

Iterate through array of pointers and allocate 200 times size of int for element of array pointers

To free: for loop - free inner parts then int**

Don't have access to array element if you get rid of array

Can get segmentation fault: dereference a null pointer, use memory that doesn't exist, go out of array index

Week 4 sample Q:

A,B,C

Week 5 sample Q

Fopen is library (buffered io), open is system

Trap is only used in the beginning

Library function make less system calls compared to system calls alone

Time

Real: actual time on wall

User: CPU time spent in user mode

Sys: CPU spent in kernel mode

Sys+user should = Real

Digital signature: check integrity

Encryption: only targeted person can read it

	sed 's/[^0-9]*//g'	delete non numbers
	sed -i 's/ //g'	delete leading blank space
	sed 's/[[[:blank:]]*\$//'	delete trailing whitespace
•	sed -r 's/\s+//g'	remove all white space
	tr -d '\n'	remove new lines
	sed '/^\$/d'	Remove empty lines
	sed 's/[^0-9]*//g'	remove non numbers