CSE 3320 Note 8/28/19

REVIEW FOR QUIZ (RECHECK):

- "readdir()" returns stinrg
    - Call "d": use switching case (pointer to string)
- When a program call "ctime()", time returned (string)
- When a program calls "time()", returns int(not system call)
    - Those are system calls, redirectory system call->function call
- "system()" function do not call a system,

---------------------------(See more Below-check)---

3a. readdir() returns pointer to a data structure(string), call "d" with a pointer to string (directory). If directory does not exist, returns an error.
3b. ctime returns string (character for date and time)
- Time() returns a big integer
System call does not call for system.

Several PCB are expected to have when computer running, for running sev processes

PCB is not device controller (HW), it is only chunk of memory

CBP
- Files
- User
- Memory
- CPU reg…

Multi-tasking OS a process may ve rynning but before complete, move to ready or wait because it gets moved to waiting or ready for output, ready when input it is moved, or have multi process switrching/swapping. ID is actrually moved

Assignment 1 due 9/9 at midnight!!!

Recap

Hardware View of System

CPU connects to Address Bus, Address Bus connects to Memory

CPU connects to/from Data Bus, Data Bus Connects to/from Memory

I/O connects to/from **Both** Address and Data Buses.

- KB←→ KB Controller
- Video←→Graphic Controller   Address and Data Bar
- Disk←→Disk Controller

Software View

Instruction

Data

Application

- Embedded
    - o   SW application in consumers devices
- IO with/outOS

Application needs User interface and OS specific- not SW

Evolution

Example: Pressing Buttons (prog)

- Bounce→ debounce()

Example 2: Speaker

- Play sound (freq) **Call function**

Early Programming

Computational:

- I/O
- Common

Programming

- Program→Assembly/Compile→executable→load→memory

Example(program→exe→run)

New→Ready(Queue: FCFS)→Run→Exit (**Ready Queue**)

- Queue Factors
    o Money/Price
    o Priority
    o Short Job First (Runs quickest/fastest)

Switching windows 9different program running same time (**Wait Queue**):

- When reach run→ Wait Queue→ Ready
    o Wait for IO Event, timer, for other running
        ▪ State of thing you are programming/process
            • In **Process Control Block** points to a number
            • **Process ID (**Process and Processing Status- a number: unit num identfier)→**PCB**
- OS needs to know Raw State of Execution about OS, where PCB keeps:
    o What file you are using
    o Who the user is (particularly memory)
    o Where in memory process is
    o CPU Reg
    o Security

OS Types

of users

Processors

1User and 1 processor: CPM Single User Single Processor

1 user many processes (Palm)

Unix N user and N Process