

CMP5 109

Smart pointers:

Usually hard to manage
normal pointers.

- if heap memory isn't
freed properly, the memory
leaks can happen.

Auto_ptr:

Wrapper object

- destructor will be invoked.
- operator * to return pointer itself.

Unique_ptr

- ∇ special case of shared_ptr
where the # of cov = 1;

STL

- classes, functions, etc.



Iterators

- mechanism to access data stored in containers.
 - uses templates
 - for each loop
 - simplifies loop condition
 - instead of looping thru all items in container you can extend iterator and set own condition
 - output iterator : used for output
 - input : used for input
 - forward : forward
 - bidirectional : both directions (forward & backward)
 - random : for some custom data
- = use lambda function instad of loop to be more efficient.

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Build up of 4 parts.

TCP dump

ARP Protocol

- address resolution protocol.
- maps the IP address
- ~~is~~ functions in the operation layer.

reuse socket
when ~~a~~ a
program crashes
check if usable
or not.

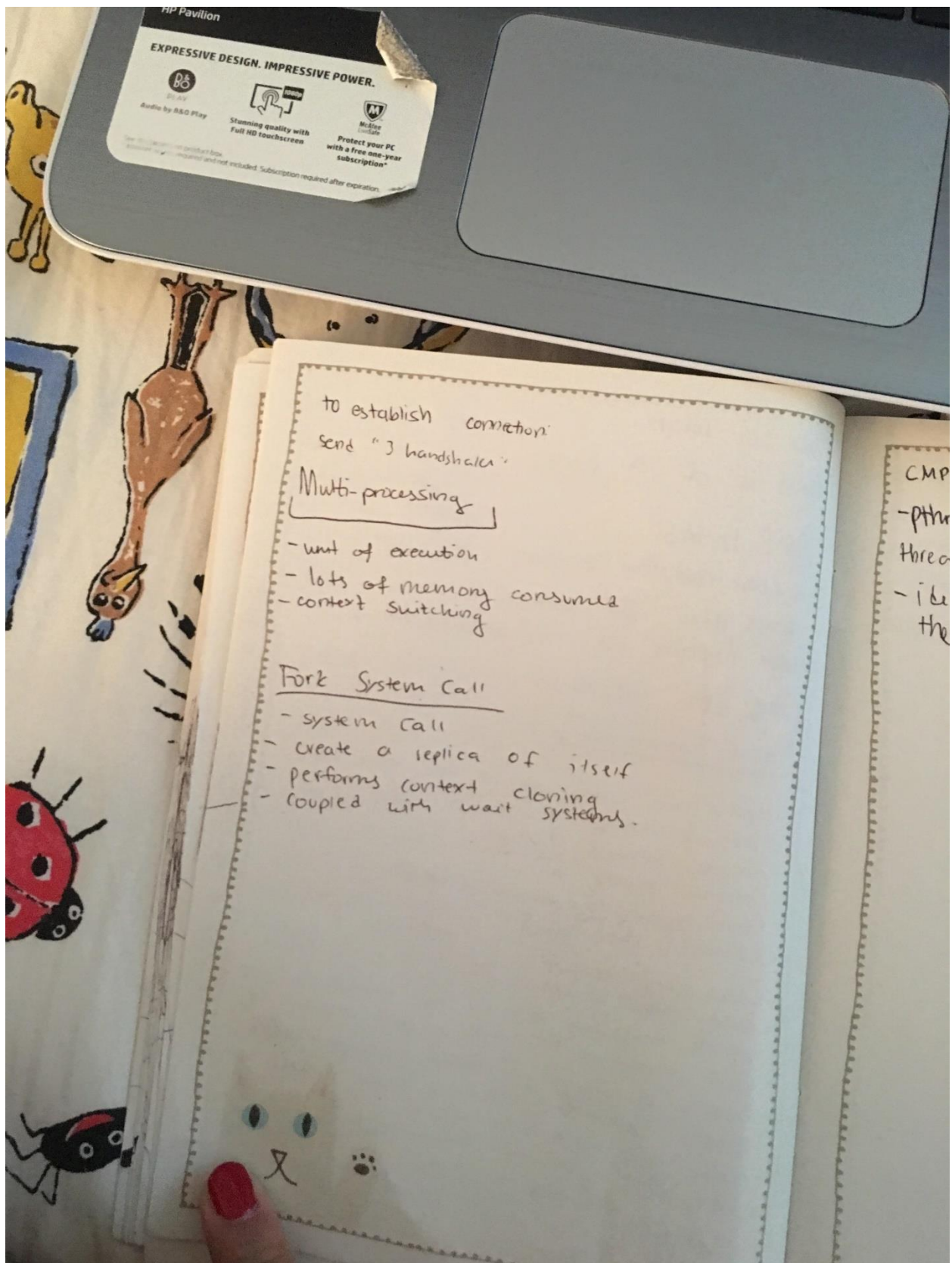
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Packet Transmission

- 1) call a send system call to send some data.
- 2) software interrupt
- 3) invoke software interrupt
- 4) invoke system call
- 5) store data to outbound buffers
- 6) notify the kernel.

- socket: create socket
- close: destroy socket
- connect: connection between two sockets
- bind: bind an IP address & port to process ID
- listen: configure a socket & accept conditions.
- accept: accept connection (new) & make a new socket
- read: read data from socket
- write: write data to socket
- setsockopt: set socket options
- getsockopt: gets value of socket.







CMPS.109 - Lecture 3.3.17

- pthread exists far before the thread class has been created.
- ideally give pthread a method inside the class.

