

# Midterm Review

CS351 : Saelee

1. C

pointers, pointer arithmetic

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## 2. The Process

# 3. OS Abstractions

logical control flow

exceptional control flow

virtual memory

IPC

$\langle /3 \rangle$

# 4. ECF

exceptions:

synchronous / asynchronous

traps & system calls

faults, aborts

hardware interrupts

related **cost**

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# 5. Process Management

creation: fork

process trees

termination: `exit`, `atexit`

zombies



reaping: wait



synchronization (+ `waitpid`)

basic shell

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# 6. Signals

software ECF

sending via hardware

explicitly: **kill**

handling: signal

signal handlers: `sig_t`

user space ECF:  
setjmp, longjmp

$\langle /6 \rangle$

# 7. System I/O

everything as file

regular vs. special

I/O structures (kernel)

file descriptors

open, close, read, write

short counts

robust I/O

buffered I/O; pros/cons

I/O redirection

dup, dup2

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# 8. Simple IPC

general issues

unnamed pipes; pipe

named pipes; `mkfifo`

shell “pipes”

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