

EXERCISE #32

SSDLC REVIEW

Write your name and answer the following on a piece of paper

At what point in the software development life cycle should threat modelling begin?

EXERCISE #32 SOLUTION

SSDLC REVIEW

Write your name and answer the following on a piece of paper

At what point in the software development life cycle should threat modelling begin?

SDLC

- Requirement analysis
- Design
- Development
- Testing and verification
- Deployment
- Maintenance and evolution

ANNOUNCEMENTS

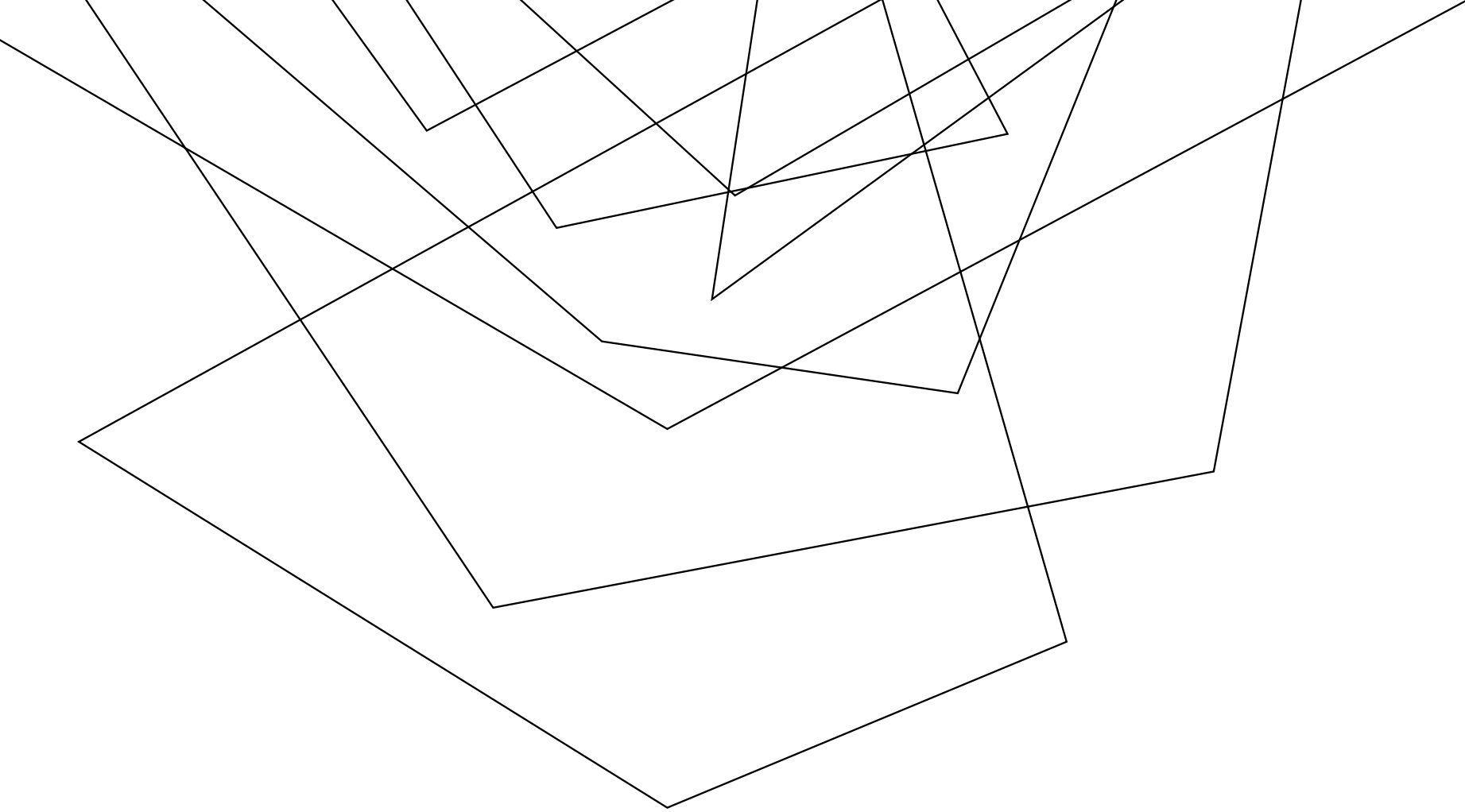
ADMINISTRIVIA

Drop day!

ANNOUNCEMENTS

ADMINISTRIVIA

Exercise Swap



QUIZ 3 REVIEW

EECS 677: Software Security Evaluation

Drew Davidson

TOPICS

QUIZ 3 REVIEW

- Points-to Analysis
- Reference Monitors
- Program Instrumentation
- Static Instrumentation
- LLVM Instrumentation
- Dynamic Analysis
- Control Flow Integrity
- Fuzzing
- Symbolic Execution
- Concolic Execution
- Sat solving
- SMT solving
- SSDLC

REVIEW

QUIZ 3 REVIEW

Apply pure literal elimination to the following until no longer applicable

$$(a \wedge b) \wedge (a \vee c) \wedge (\neg b \vee \neg c) \wedge (\neg d \vee \neg c) \wedge (\neg d \vee \neg b)$$

eliminate a (true)

$$(a \wedge b) \wedge (a \vee c) \wedge (\neg b \vee \neg c) \wedge (\neg d \vee \neg c) \wedge (\neg d \vee \neg b)$$

eliminate b (false)

$$(\neg d \vee \neg c)$$

eliminate c (false)

$$a = \text{true}, b = \text{false}, c = \text{false}, d = \text{any}$$

REVIEW

QUIZ 3 REVIEW

CNF \leftarrow "and of ors"

- conjunction - and (\wedge)

- disjunction - or (\vee)

- negation - not (\neg)

$a \vee b$

$a \vee b \vee c$

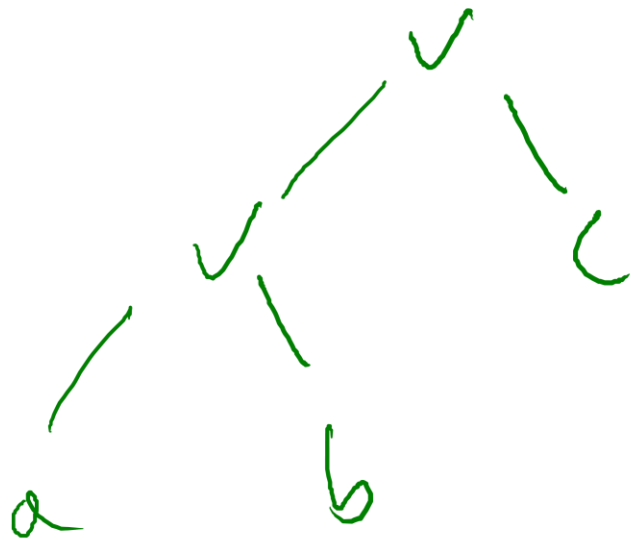
$(a \wedge b) \vee c$

REVIEW

QUIZ 3 REVIEW

$(a \vee b) \vee c$

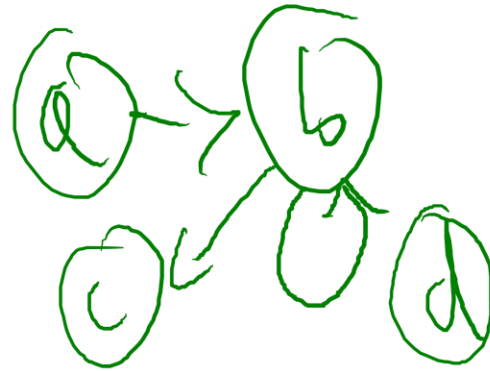
$a \vee b \vee c$



REVIEW

QUIZ 3 REVIEW

Points - to



$a = \{b\}$
 $b = \{b, c, d\}$
 $c = \{a\}$
 $d = \{a\}$

$a = \&b$

a's set includes b itself

$b = a$

b's set includes a's ~~points to~~ ^{points to}

$b = \&c$

b's set includes c itself

$b = \&d$
 $d = \&d$

b's set includes d's set
d's set includes d itself

REVIEW

QUIZ 3 REVIEW

$a = &c$

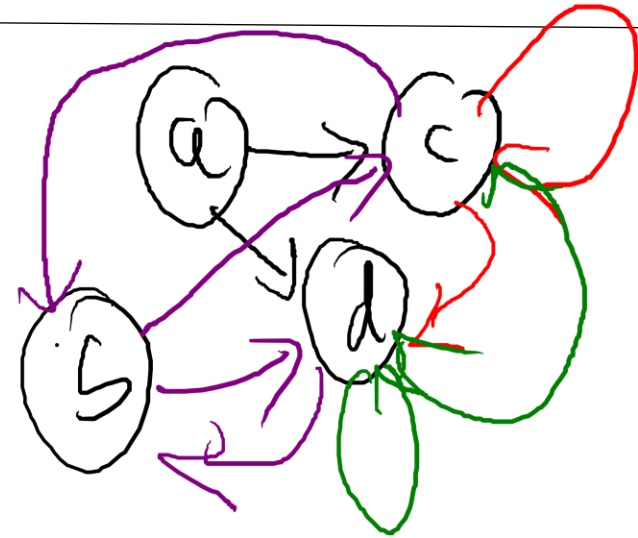
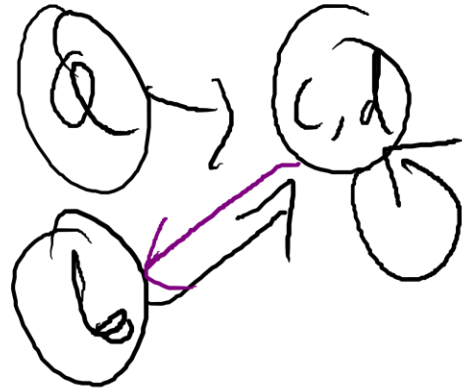
$a = &d$

$c = &$

$c = b$

$d = *a$

~~$a = &b$~~



b's set includes a's pointer set

c's set includes b's pointer set

d's set includes a's pointer set

REVIEW

QUIZ 3 REVIEW

REVIEW

QUIZ 3 REVIEW

REVIEW

QUIZ 3 REVIEW

REVIEW

QUIZ 3 REVIEW

REVIEW

QUIZ 3 REVIEW

REVIEW

QUIZ 3 REVIEW