Prolog lecture 5

Go to:

http://etc.ch/kG4y

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# Today's discussion

Videos

- Cut
- Negation
- Databases

Q: Why do the question numbers in the 'all exercises in a single PDF' jump by two each lecture? (Sorry, I know this question is useless but it's been bugging me).

A: Oops. Thanks for the report. I'll fix it (next year so as not to confuse things)

Q: is gnd() special in prolog or is it just a frequently used naming convention?

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A: swipl has ground(X) which is true if X is a ground term. gnd() is just a compound term. Don't use ground(X) in the exam...

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A: If the exam question is interested in efficiency it will say so...past questions have not asked this. You make generate and test more efficient by generating better!

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A: I can't remember an exam question where I asked for a search tree to be drawn out. Instead a question might ask for what happens: e.g. what results do you get

# y2011p3q8: what happens if you ask c(A,B)?

```
a(1).
a(a).
b(3).
b(a).
c(A,B) :- b(B),!,a(A).
c(X,_) :- a(X),b(X).
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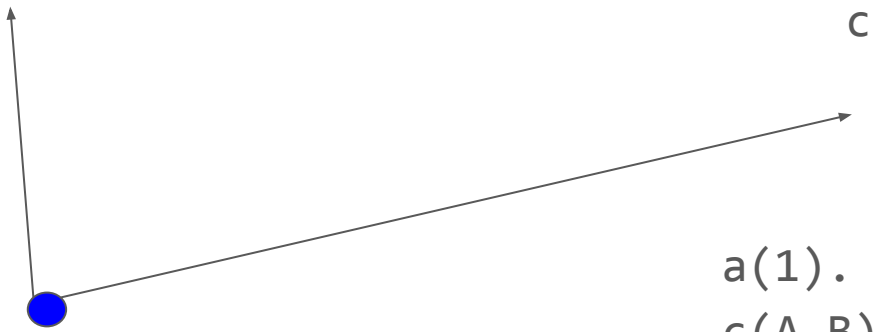

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c(A1,B1) :- b(B1),!,a(A1).
```

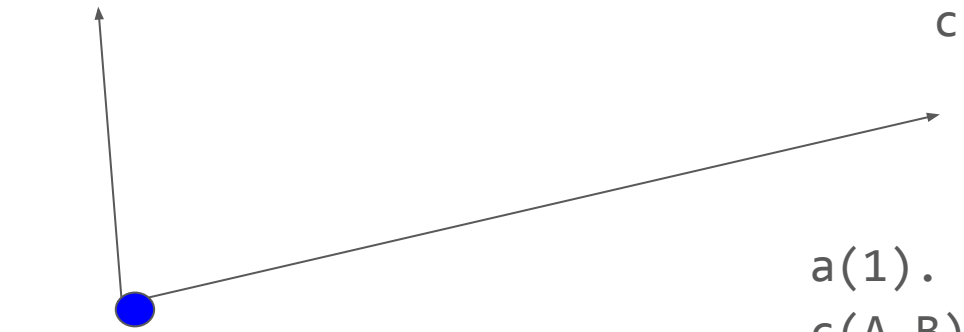

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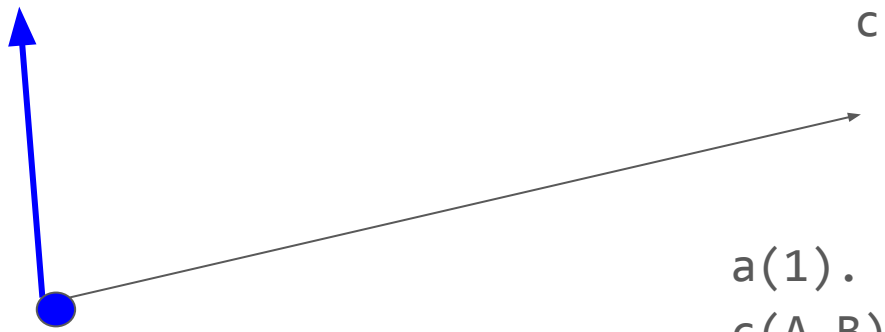

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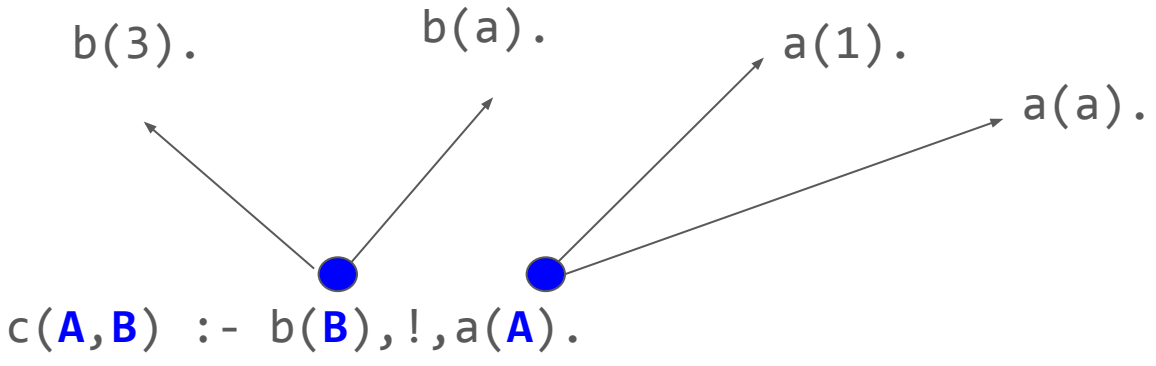


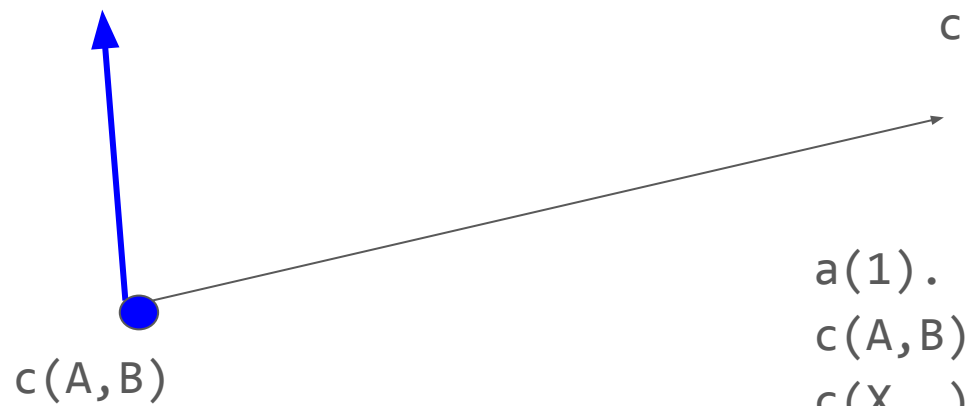


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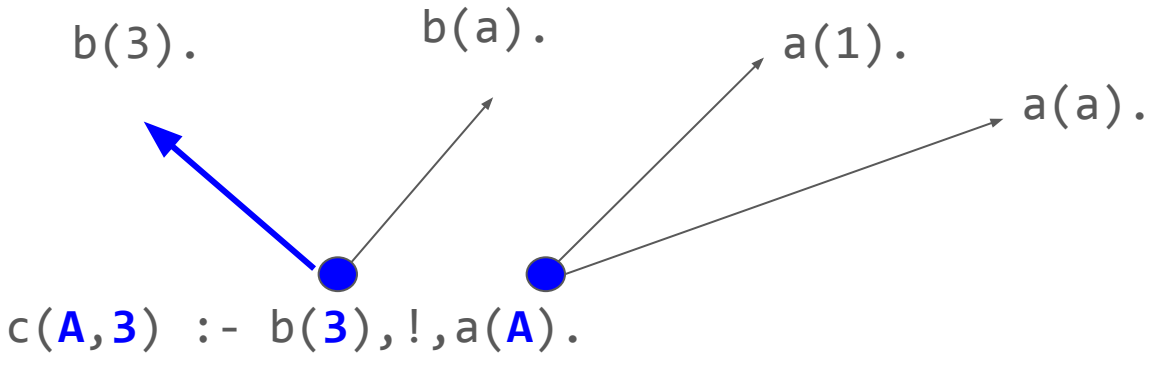


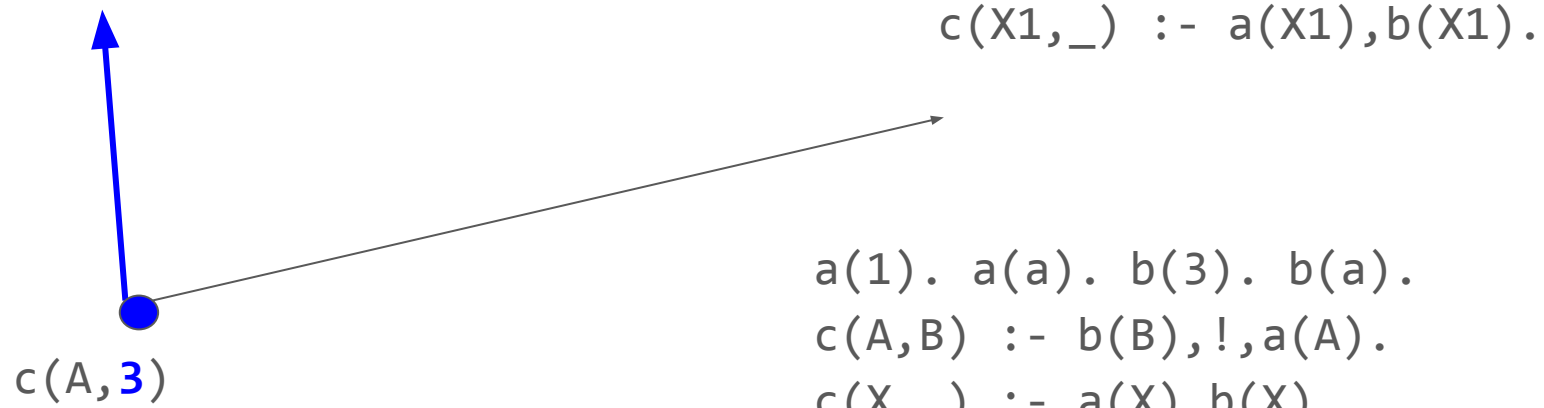


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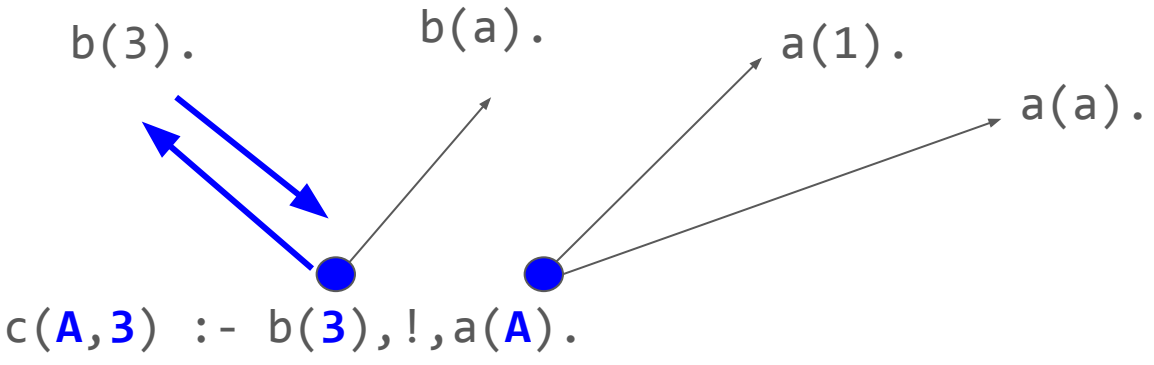


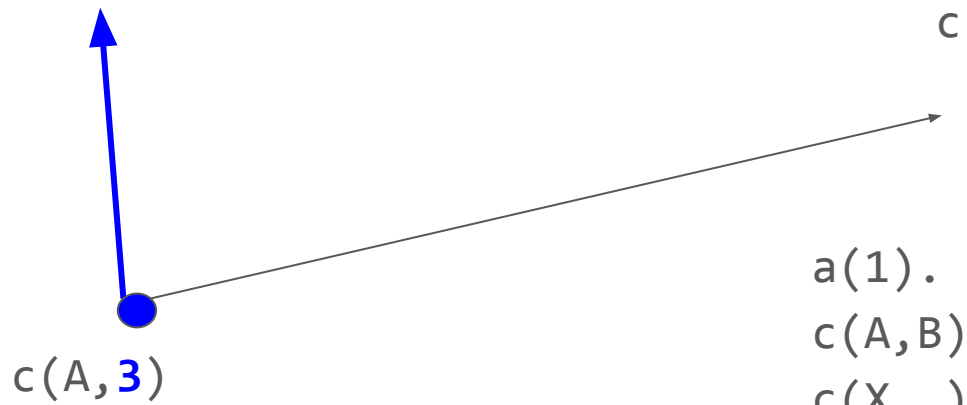


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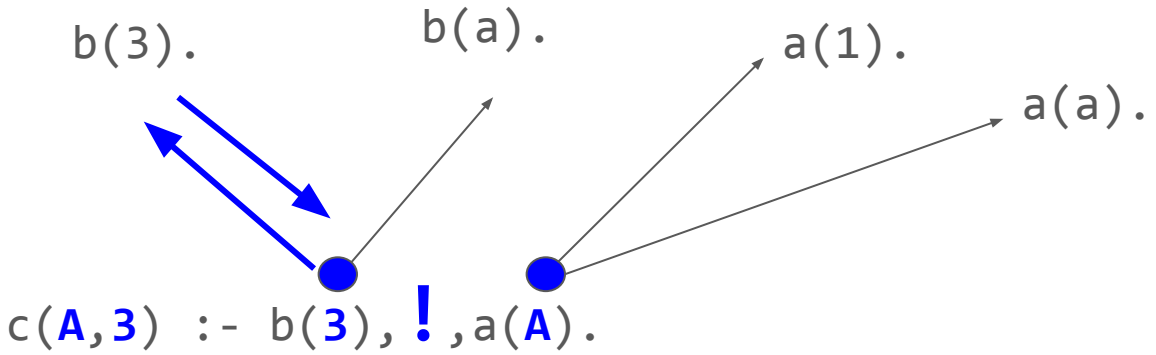


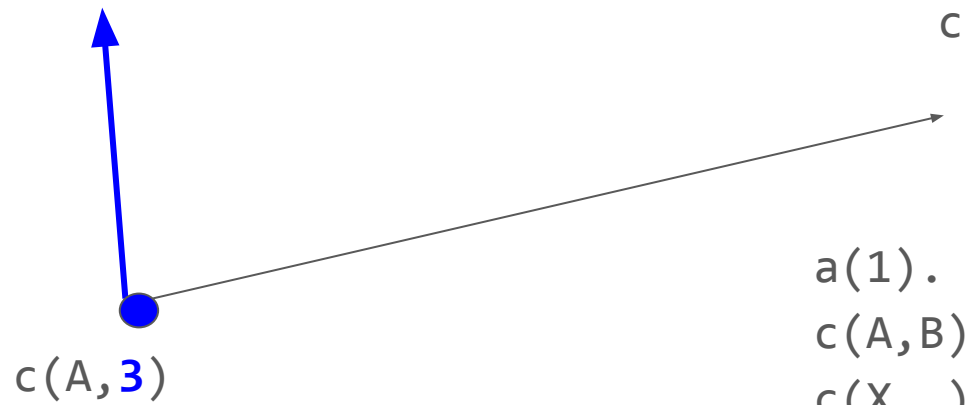


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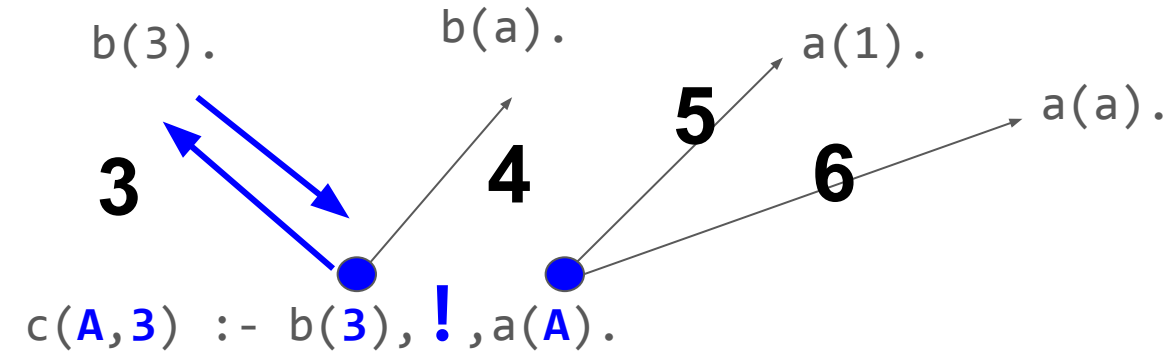
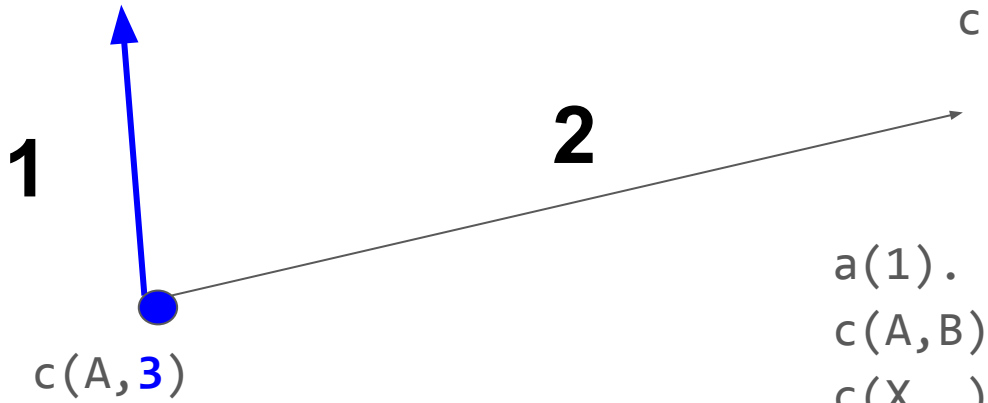
DirectPoll




Which of these edges are removed by crossing the cut?

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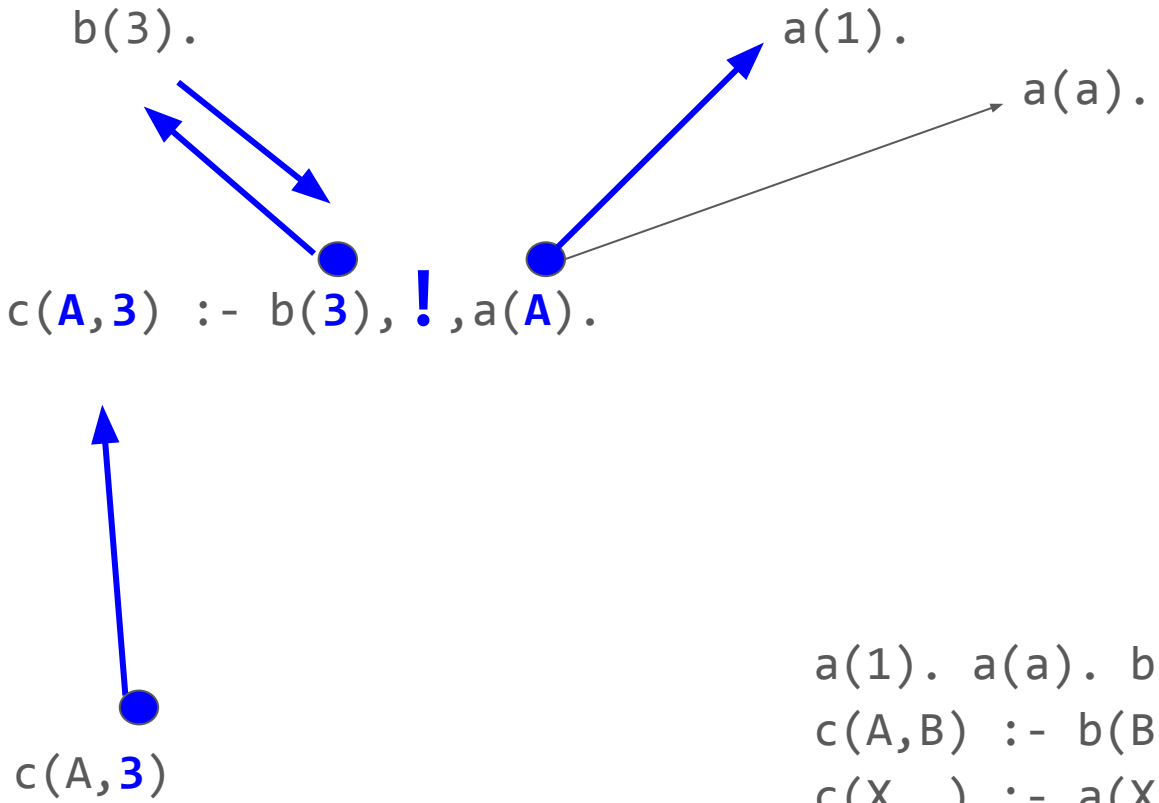


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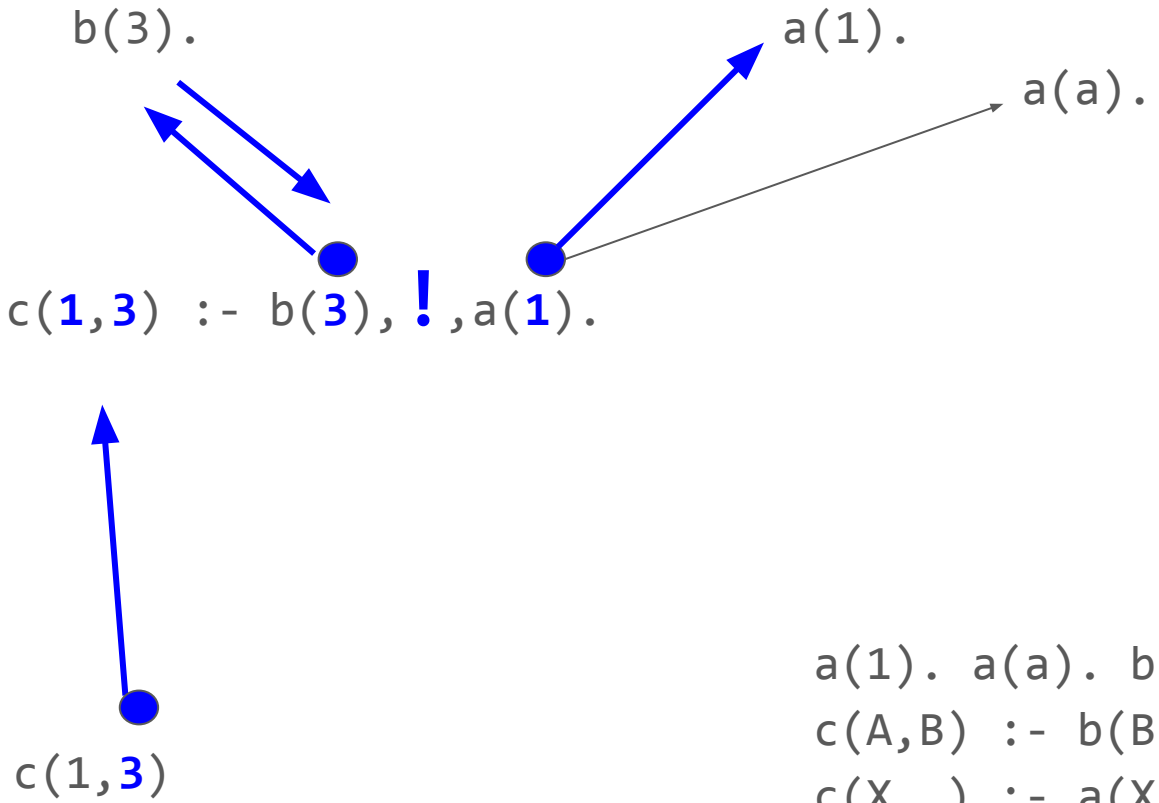


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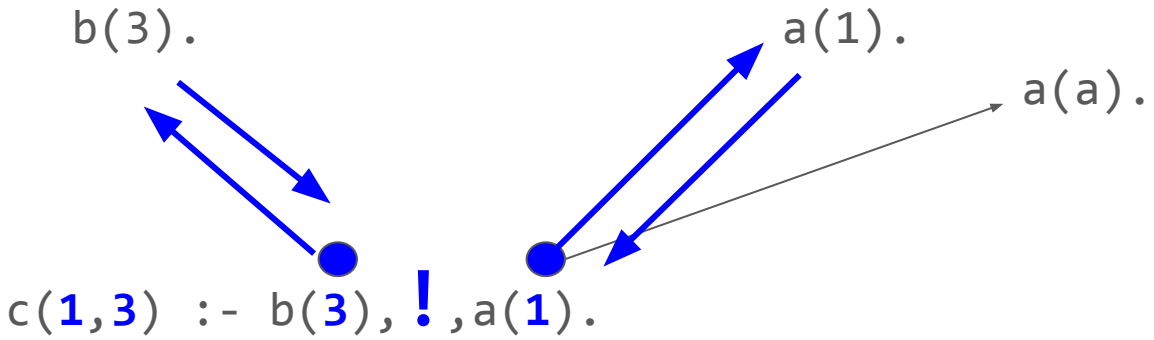


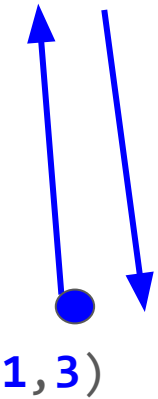


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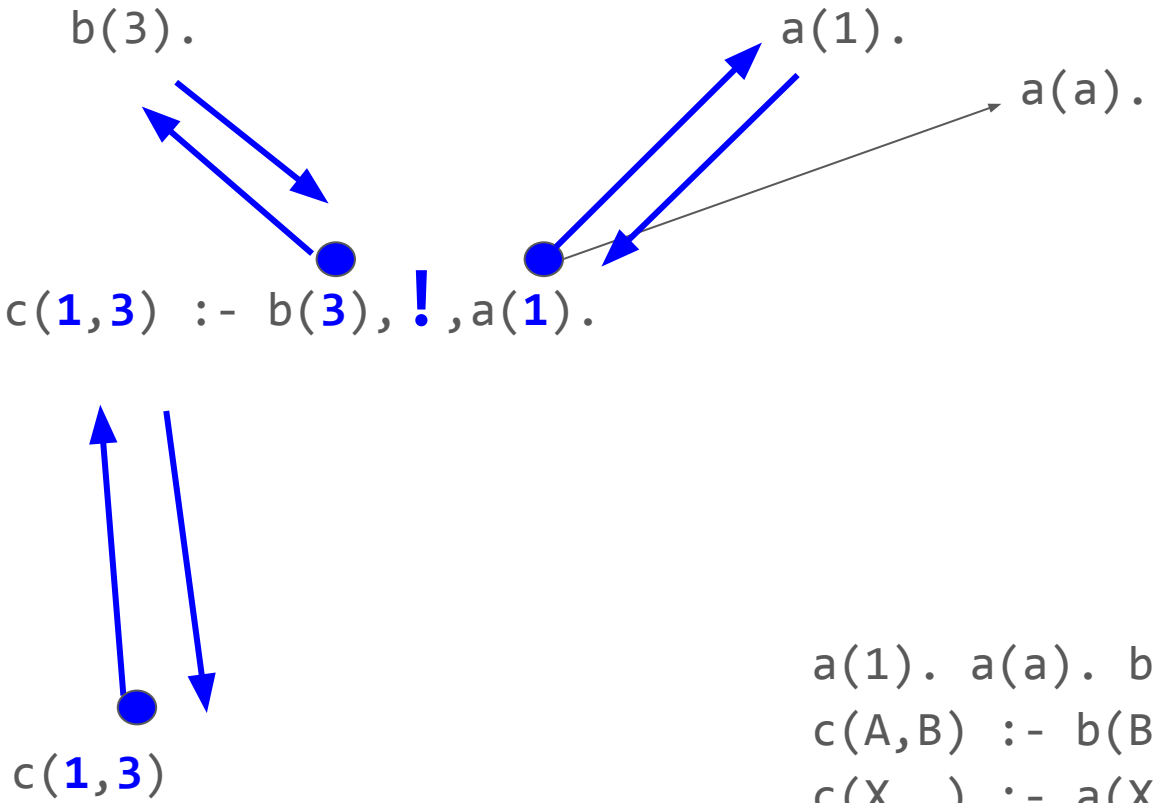


What happens if we backtrack now?

```
a(1). a(a). b(3). b(a).
c(A,B) :- b(B),!,a(A).
c(X,_) :- a(X),b(X).
```

# Challenge: everything

```
a(ham).
a(eggs).
a(cheese).
a(bread).
```

Vote when finished or stuck

Write a predicate `everything(A)` which succeeds if A is a list containing all X such that a(X) is true.

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DirectPoll

# Implement not(X)

Vote when done

http://etc.ch/8WDC

# Next time

Videos

- Countdown
- Graph search

Ask questions at www.slido.com with event code E508