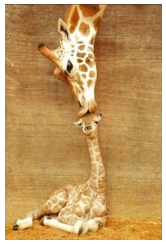
Celebrity Heads
Just add Computer Science!

What do Decision trees do?

We can use them for classifying things!

You just need to ask a series of questions to narrow down the possible answers

What animal am I thinking of?



What animal am I thinking of?

Does it have hair/fur?

YES

NO

Could you keep it as a pet?

Does it have feathers?

YES

NO

YES

NO

Is it a cat?

Is it a Giraffe ?

Is it a farm animal ?

Does it have legs ?

YES

NO

YES

NO

YES

NO

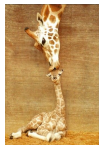
YES

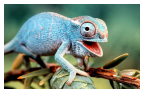
NO

Is it a reptile?

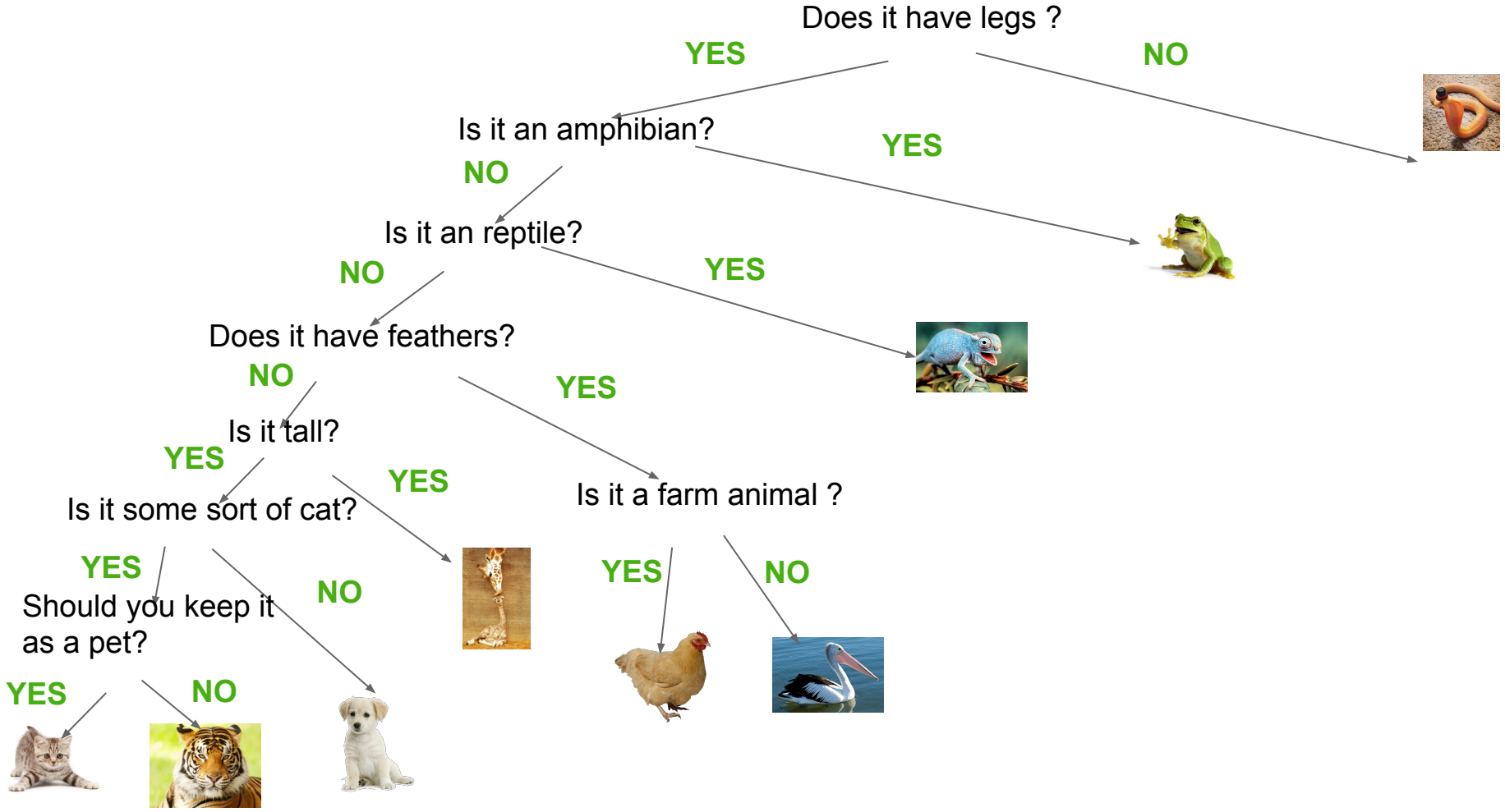
YES

NO

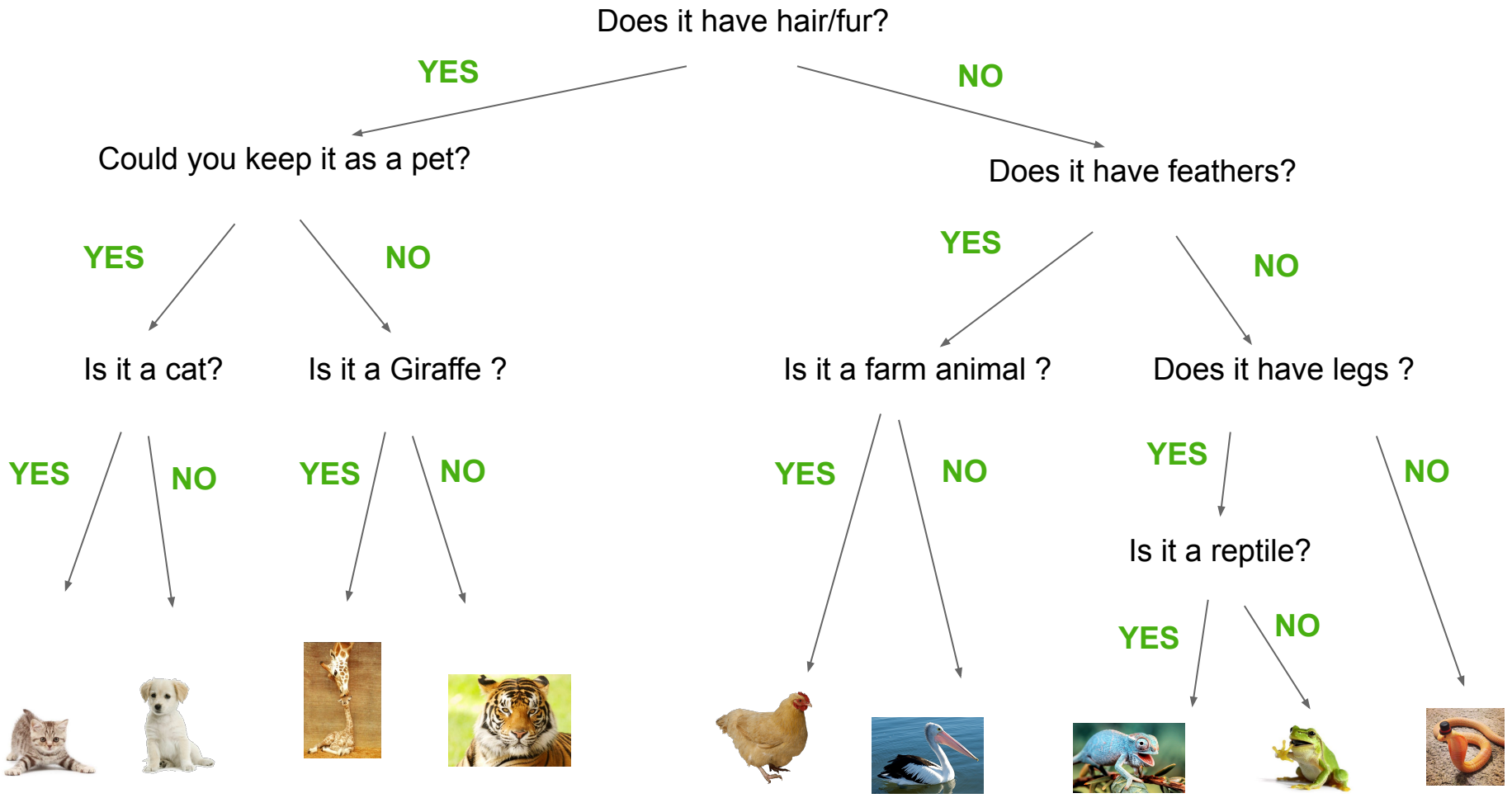




What animal am I thinking of?

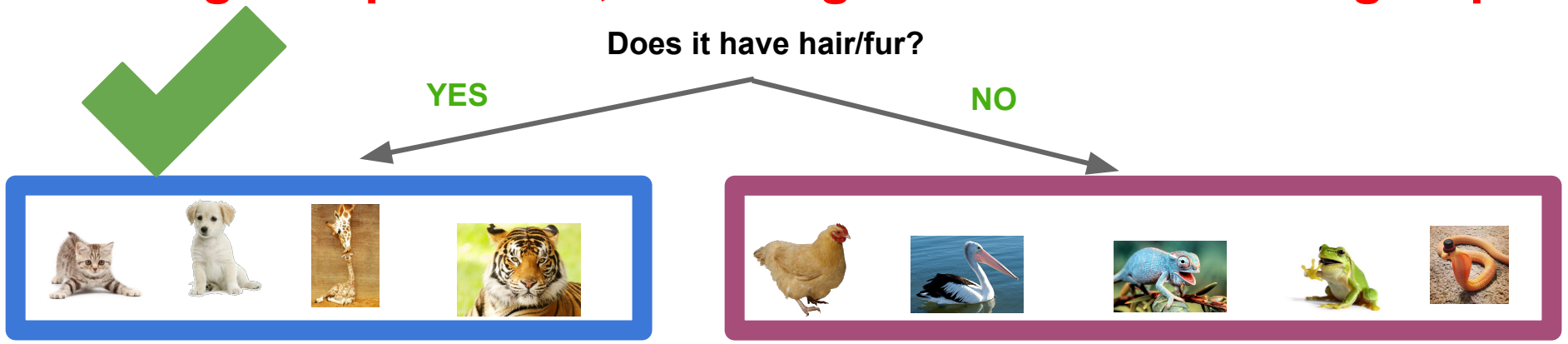


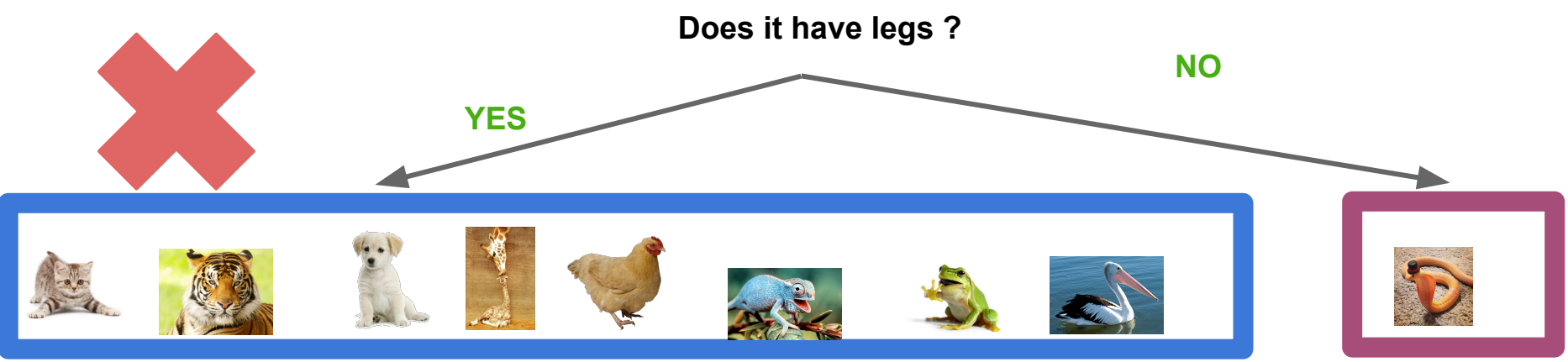
So how do we build a good tree??



So how do we build a good tree??

Ask good questions, at the right time to halve the group





So how do we build a good tree??

Does it have hair/fur?

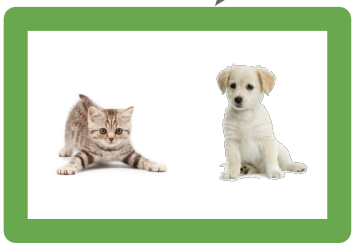
YES

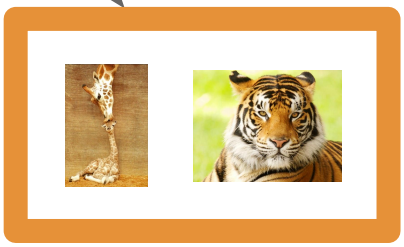
NO

Could you keep it as a pet?

YES

NO





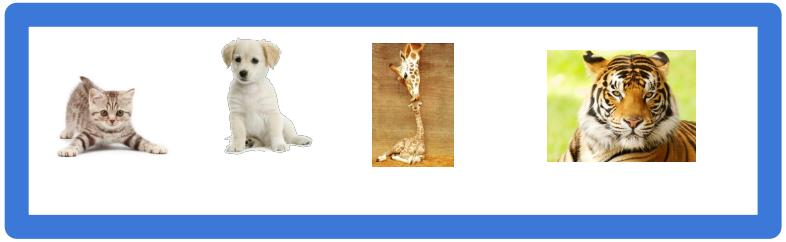
Repeat for each half!

Now you've ruled some out from the blue group maybe some different questions are useful.

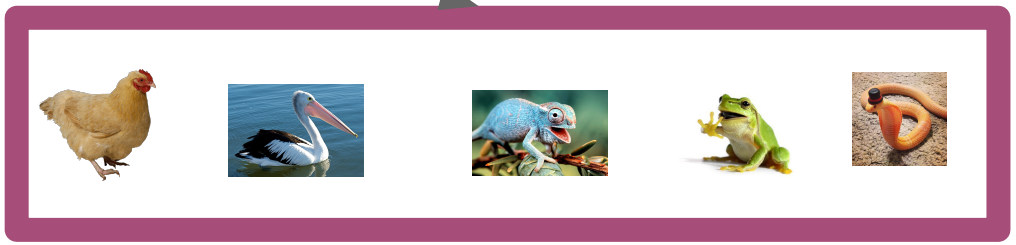
So how do we build a good tree??

Does it have hair/fur?

YES



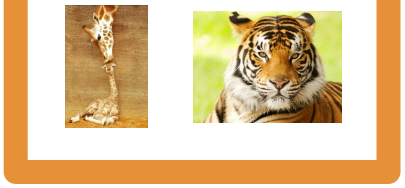
NO



Could you keep it as a pet?

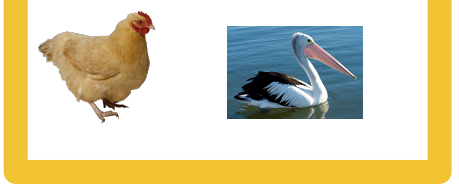
YES

NO

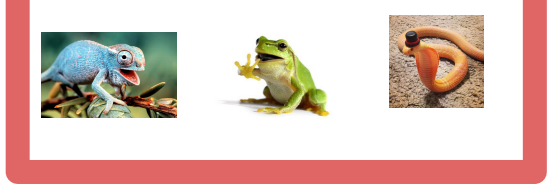


Does it have feathers?

YES



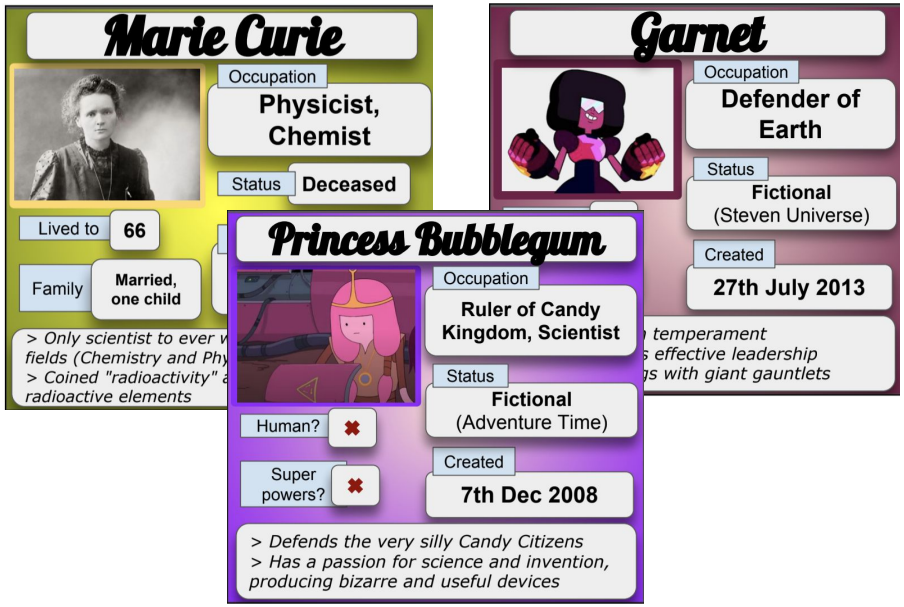
NO



Celebrity Heads Algorithm!

Make a Celebrity Heads algorithm using decision trees!

Guess any celebrity with the fewest questions possible!
Call a tutor over to play when your algorithm is ready!

Remember to:

- Ask good questions for splitting!
- Make a balanced tree!