

Lecture 6: Inheritance and Polymorphism

Clicker Question 1:

Which of the following is a superclass/parent of the rest?

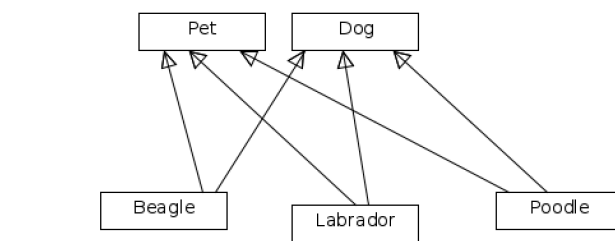
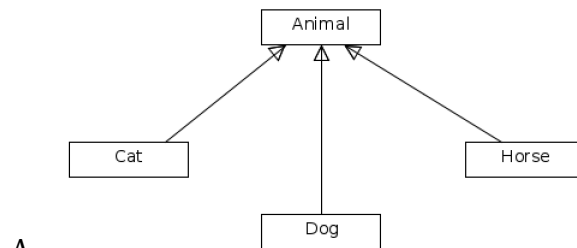
- A. Lions
- B. Tigers
- C. Cats
- D. Leopards

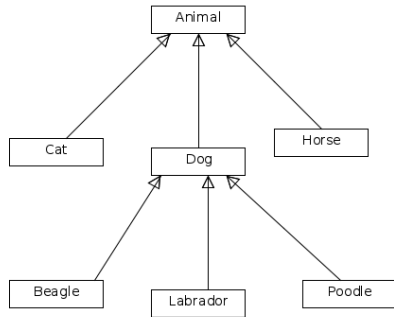
Answer: C

Explanation: By our basic knowledge of biology, lions, tigers, and leopards are all types of cats. So, it would make sense to have Cats be the superclass in this scenario.

Clicker Question 2:

All of the following are appropriate ways to model superclasses and subclasses EXCEPT:





C.

Answer: B

Explanation: Remember that classes can only have one parent superclass. In B, Beagle, Labrador, and Poodle extends from both Pet and Dog. While beagles, Labradors, and poodles are all examples of both pets and dogs, we can only extend from one of these superclasses, not both.

Clicker Question 3:

In the following code, the Elephant subclass extends the Animal superclass, both of which contain and define an eat() method:

```
Animal horton = new Elephant();
horton.eat();
```

Whose eat method is being called?

- A. Animal
- B. Elephant
- C. CS15Mobile
- D. None of the above

Answer: B.

Explanation: Horton is instantiated as type Elephant. So, Horton's eat call will defer to Elephant's eat method rather than Animal's eat method.