

1. Give an example of inheritance from this activity.
In this activity, Animal class is parent class while Cow, Chicken and Dog are child classes which inherits all fields and methods that are declared as protected or public from the parent class(Animal).
2. Briefly explain the differences between the private and protected instance variables used in this activity. Why is not every variable private in the activity?
Private instance variables can be accessed within the same class only.
Protected instance variables can be accessed by the classes within the same package and the subclasses outside of the package.
In this Activity, we declared value as protected variable in Animal class rather than private variable. Thus, other subclasses can easily reassign or get the value of the protected variable.
3. Briefly explain why we cannot create an instance of the Animal class.
Animal class is an abstract class which cannot be instantiated.
4. What is a key benefit of having the IProductionAnimal interface?
By using interface can define common behaviors(harvestable and harvest) that can be implemented by unrelated classes(Cow and Chicken).
5. What could be the benefits and consequences of changing the Animal class to an interface?
If we change Animal class from adstract class to interface, then we can implement multiple inheritance in this activity. For example, Cow can implement two interfaces(IAAnimal and IProductionAnimal) at the same time.