Inheritance Exercise 2

Question 1

1. Genus is superclass, and Species is subclass of Genus.
2. Composition
3. Genus (-genusName | +Genus(String g), +getGenusName(): String, +setGenusName(String s): void)

-> Species(-speciesName | +Species(String s, String g), +getSpeciesName(): String, +setSpeciesName(String s): void, +toString(): String, +equals(Species s): boolean)

1. They minimize the amount of duplicate code in an application by sharing common code amongst subclasses.

They can control the visibility of other object to client classes and reuse only what we need

1. subclasses will be forced by the compiler to implement it

Question 2

1. Encapsulation is to hide the internal representation, or state, of an object from the outside of a class.
2. Encapsulation protects an object from unwanted access by clients.

Encapsulation allows access to a level without revealing the complex details below that level.

1. getName()
2. name
3. in code.
4. enables you to create better APIs, but you can also use it to make your code easier to maintain and modify. As long as a class gets only used by your own code, you can easily change it and adapt

other answers in code