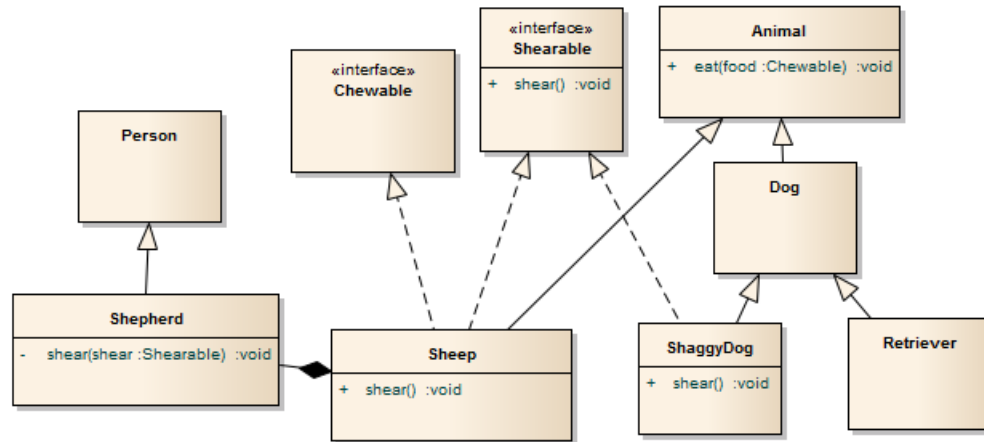# SE1021 Week 4 HW   Name:

Please ask questions if a problem is not clear on this and future quizzes.

1.   (1 pt.) The relationship between Shepherd and Person is
      i.   Inheritance
      ii.   Aggregation
      iii.   Composition
      iv.   Implementation

2. (1 pt.) The relationship between Animal and Retriever is
      i.   Inheritance
      ii.   Aggregation
      iii.   Composition
      iv.   Implementation

3. (1 pt.) The relationship between Shepherd and Person is
      i.   Inheritance
      ii.   Aggregation
      iii.   Composition
      iv.   Implementation

4. (1 pt.) The relationship between Shearable and ShaggyDog is
      i.   Inheritance
      ii.   Aggregation
      iii.   Composition
      iv.   Implementation

5. The difference between aggregation and composition is …

6. To change the relationship between Shepherd and Sheep to aggregation, you would…

7. (3 pts.) Fill in the **type** of the **parameter** (the type expected by the method) and the **type** of the **argument** (the type given). Assume all examples compile except for type casting errors. Write "ref" for object references. Assume

        Shepherd shepherd = new Shepherd();

	Type of parameter (expected type)	Type of argument (given type)	Compiles?
Dog dog = new Retriever(); **dog.eat(shepherd);**	Chewable ref	Shepherd ref	no
Dog dog = new Dog(); Sheep sheep = new Sheep(); **dog.eat(sheep);**			
Dog dog = new Dog(); Dog dog2 = new Dog(); **dog.eat(dog2);**			
Animal animal = new Dog(); **shepherd.shear(animal);**			
Shearable shearMe = new Sheep(); **shepherd.shear(shearMe);**			
ShaggyDog shaggyDog = new ShaggyDog(); **shepherd.shear(shaggyDog);**			
Dog shaggyDog = new ShaggyDog(); **shepherd.shear(shaggyDog);**			
Animal shaggyDog = new ShaggyDog(); **shepherd.shear(shaggyDog);**			

8. Get your example JFrame application to compile with two components. You should have at least one component respond to a user's action. This is just completing an in-class example, no more than that. Then print your source code and include it with your homework. (Please do not email it to me.)