Section 17: Polymorphism

1) Casting objects up the inheritance chain (casting to a class that inherits the class of the object to be cast)

   object
     └── Animal
         └── Cow, Pig, Horse, Person

   Cow daisy = new Cow();
   Animal beast = daisy;

2) to discover what class an object belongs to: instanceof

   example:

   public void actionPerformed(ActionEvent e) {
       if (e.getSource() instanceof TextField)
           handleTextFields(e);
       if (e.getSource() instanceof Button)
           handleButtons(e);
   }

3) polymorphism allows correct version of a method to be auto-selected:

   example:

   Cow, Pig, Horse and Person each have a function Talk

   In the case of

   Person fred = new Person();
   Animal beast = fred;
   beast.Talk();

   the talk used is the talk from class Person.