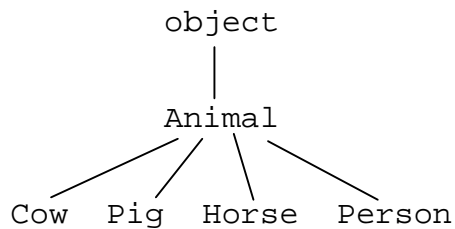


Section 17: Polymorphism

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



```
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.