

---

# Inheritance

---

## Chapter 14

*The artist is the person who invents the means to bridge between biological inheritance and the environments created by technological innovation.”*

*- Marshall McLuhan*

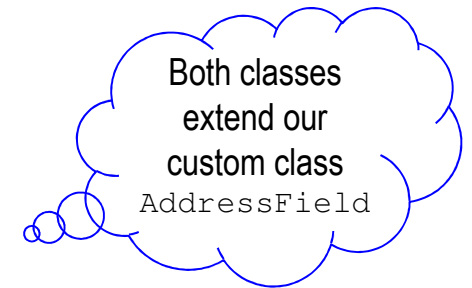
# Extends

- Inherit all the variables, constants, and methods from another class
- Class header specifies that it extends another class
  - Examples:

```
public class FancyButton extends JButton  
public class AddressFields extends JPanel
```

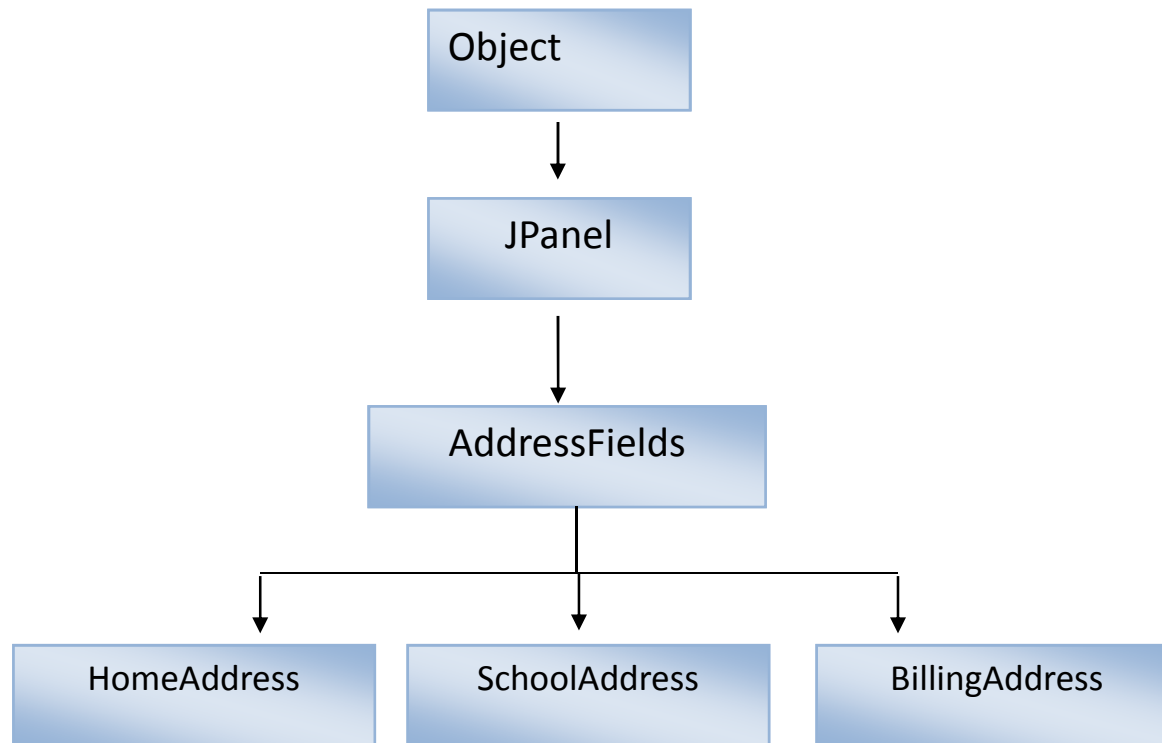
```
public class Sprite  
public class BadGuy extends Sprite  
public class Player extends Sprite  
public class Weapon extends Sprite
```

```
public class SchoolAddress extends AddressFields  
public class HomeAddress extends AddressFields
```

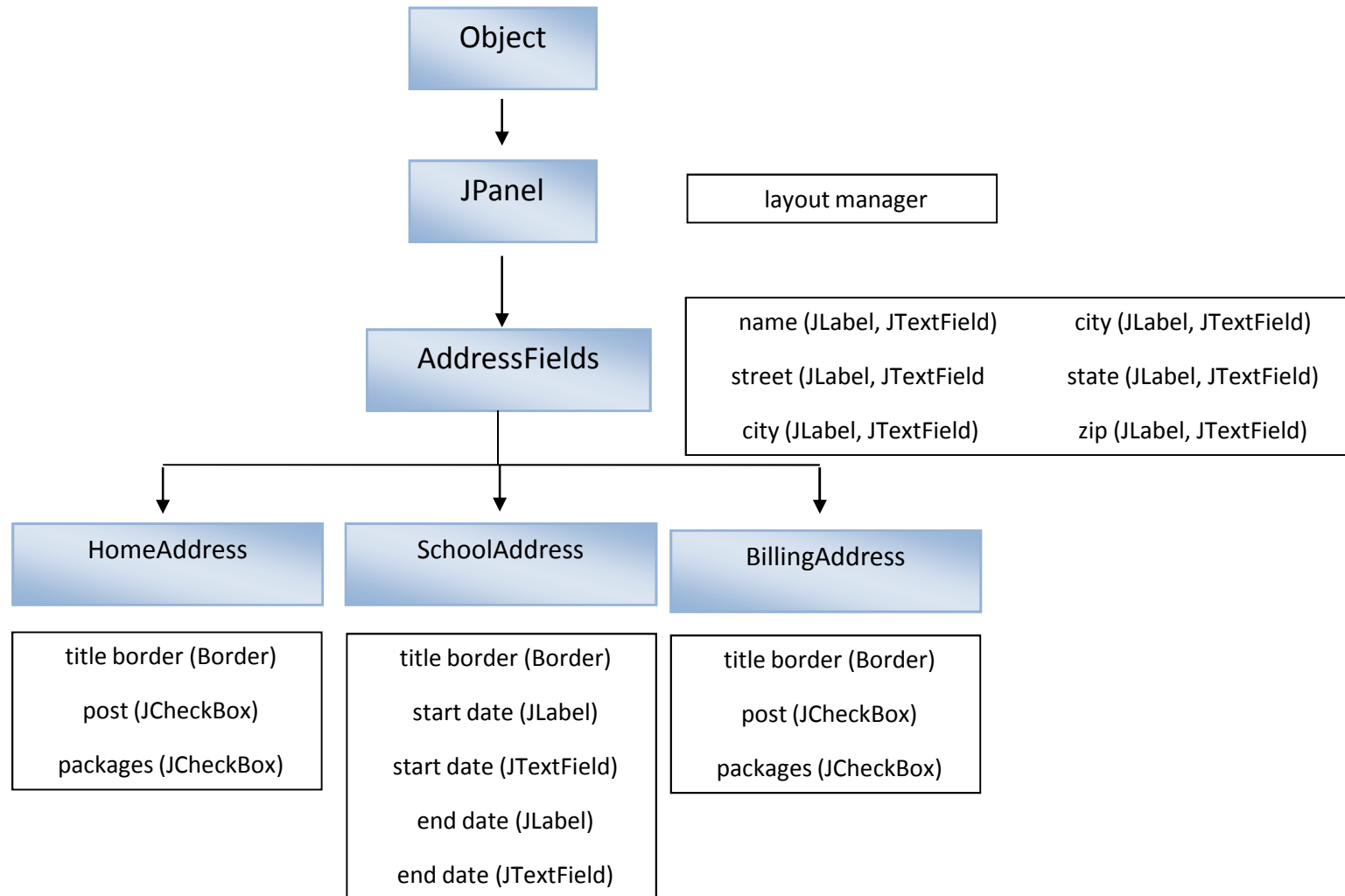


---

# Inheritance diagram



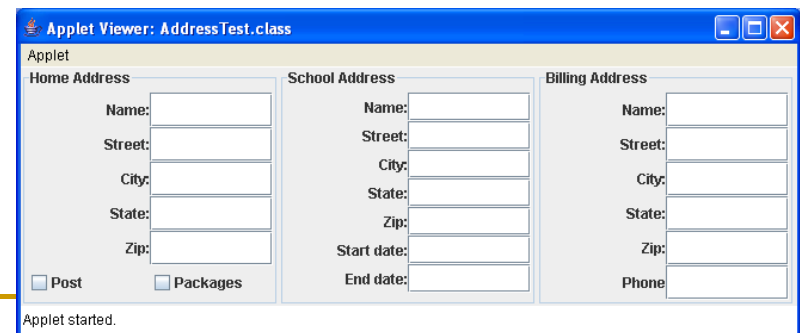
# Inheritance Diagram and methods



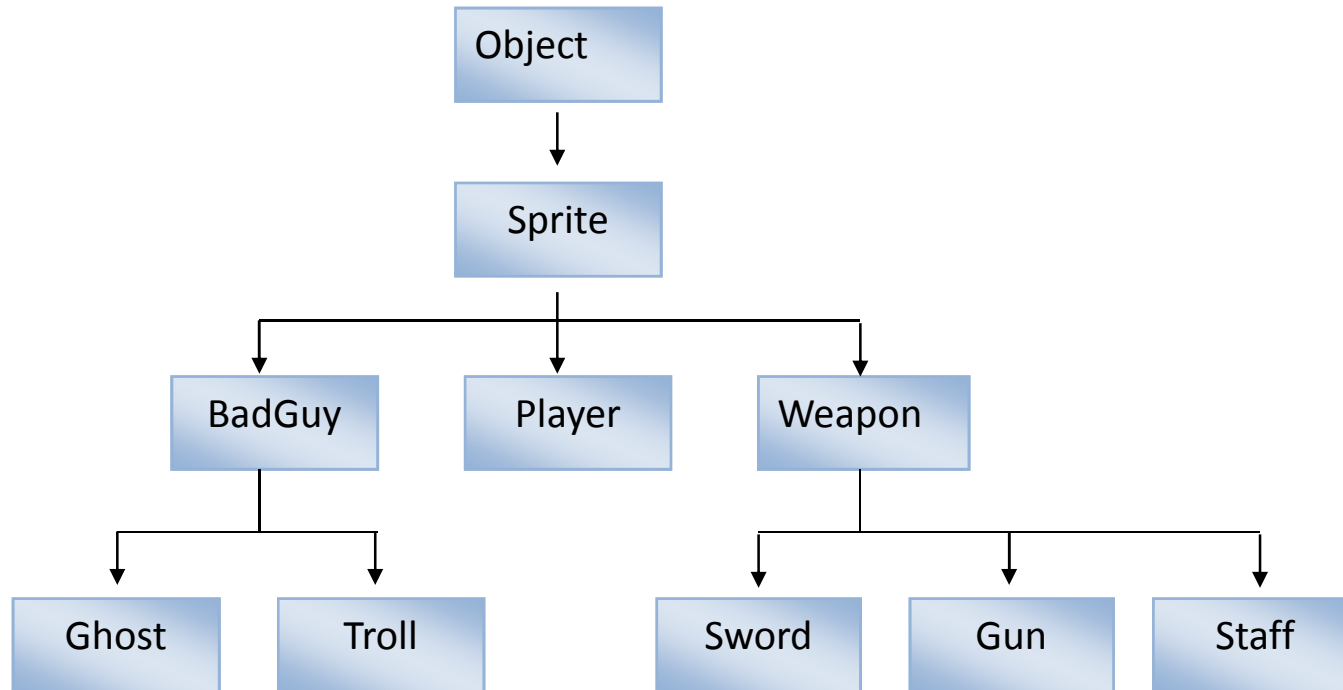
# AddressFields example

```
import java.awt.*;
import javax.swing.*;
import javax.swing.border.*;
public class HomeAddress extends AddressFields
{
    Border titled;
    JCheckBox post, pkg;
    public HomeAddress( )
    {
        setLayout( new GridLayout( 6,2 ) );
        init( );
    }
    public void init( )
    {
        titled = new TitledBorder( "Home Address" );
        setBorder( titled );
        setupMailOptions( );
    }
    public void setupMailOptions( )
    {
        post = new JCheckBox( "Post" );
        pkg = new JCheckBox( "Packages" );
        add( post );
        add( pkg );
    }
}
```

```
import java.awt.*;
import javax.swing.*;
public class AddressTest extends JApplet
{
    HomeAddress home;
    SchoolAddress school;
    BillingAddress billing;
    public void init( )
    {
        setLayout( new GridLayout( 1, 3 ) );
        home = new HomeAddress( );
        school = new SchoolAddress( );
        billing = new BillingAddress( );
        add( home );
        add( school );
        add( billing );
    }
}
```



# Inheritance Diagram



---

# Summary

- Inheritance
- AddressFields example