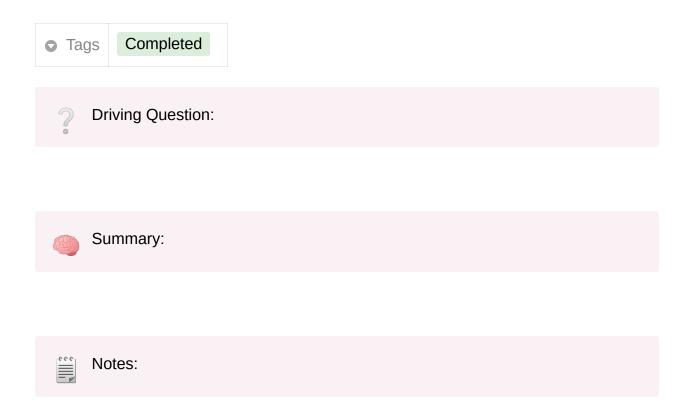


Writing Classes



User Defined classes are service classes, they encapsulate data

▼ Data Hiding

Publishing the API but not the body of the code. The client does not have to know how the code works

- User defined classes are reusable
- Client programs call/invoke methods and constructors

```
public class ClassName {
  private datatype variableName
}
```

Writing Classes 1

Objects have:

▼ State

Instance variables - attributes

▼ Behaviors

Methods

```
public Auto() {
  model = "unknown";
}
```

- Methods signature includes the method name and parameter types
- Main/Caller passes arguments
- Method/Constructor receives parameters

```
System.out.println(suv.toString());
```

```
public String toString() {
  return ("Auto " + model + "miles driven " + milesDriven + "gallons " + gallonsOfGas);
}
```

▼ Pg. 372

```
public Auto setModel (String model) {
  this.model = model;
  return this;
}
```

Constuctors do not have a return value

▼ Main Method Client

Test and run class

WeatherForecastClient

▼ Service Class

Writing Classes 2

WeatherForecast

- **▼** Constructor
 - Set default constructor
 - Overload (2 parameters)
- Gets
- Sets
- toString
- equals
- convert
- consistent
- **▼** Static Class Members

Instance Variables should be private and the constructors and methods should be public

The return type should match the type of the variable being returned

Writing Classes 3