Searching Earthquake Data

Relationships Between Classes

The QuakeEntry Class

- QuakeEntry class is essentially a POJO
    - Plain Old Java Object — but here cannot create object without all characteristics

```
public class QuakeEntry {

    private Location myLocation;
    private String title;
    private double depth;
    private double magnitude;

    public QuakeEntry(…){

    }
…
```

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    - No default/parameterless constructor

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public QuakeEntry(double lat, double lon, double mag,
                  String t, double d) {
   myLocation = new Location(lat,lon);
   magnitude = mag;
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- Immutable with getters()

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    public Location getLocation(){..
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    public String getInfo() {…
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The QuakeEntry Class

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  - Plain Old Java Object — but here cannot create object without all characteristics
  - No default/parameterless constructor
- Immutable with getters()
- Reasonable `.toString()` method

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public class QuakeEntry {
    public Location getLocation(){..
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The Location Class

- Many, many contexts: beyond QuakeEntry
    - Use simple, functional design for course?
    - Use industrial strength design for course?
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The Location Class

- Many, many contexts: beyond QuakeEntry
  - Use simple, functional design for course?
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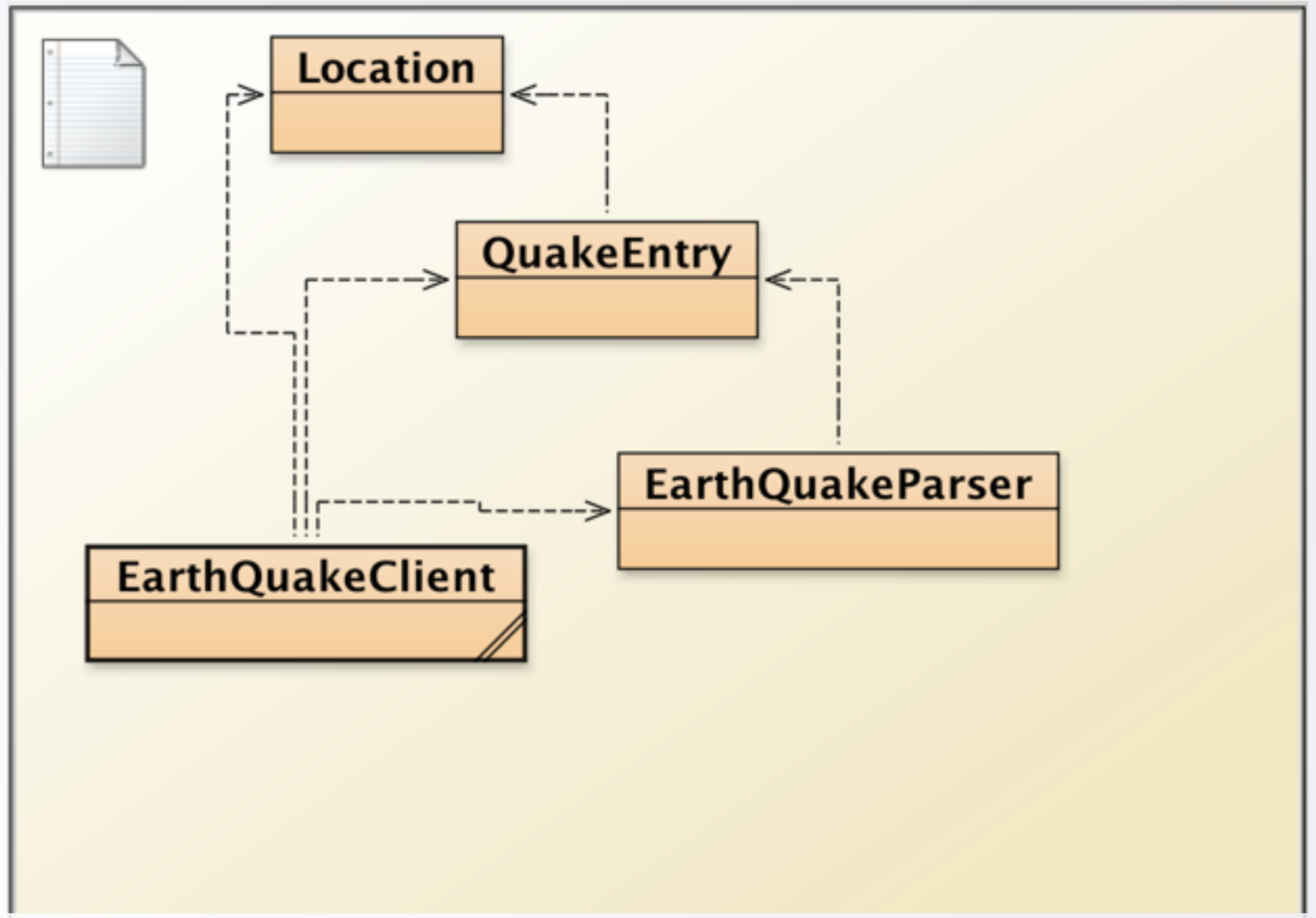
    - We'll adopt Android class
- Latitude and Longitude
  - Initialize from source
  - Distance from A to B?
  - More than state/POJO
    - Behavior!

Has-A and Uses-A Relationships

- QuakeEntry object created by Parser



Has-A and Uses-A Relationships

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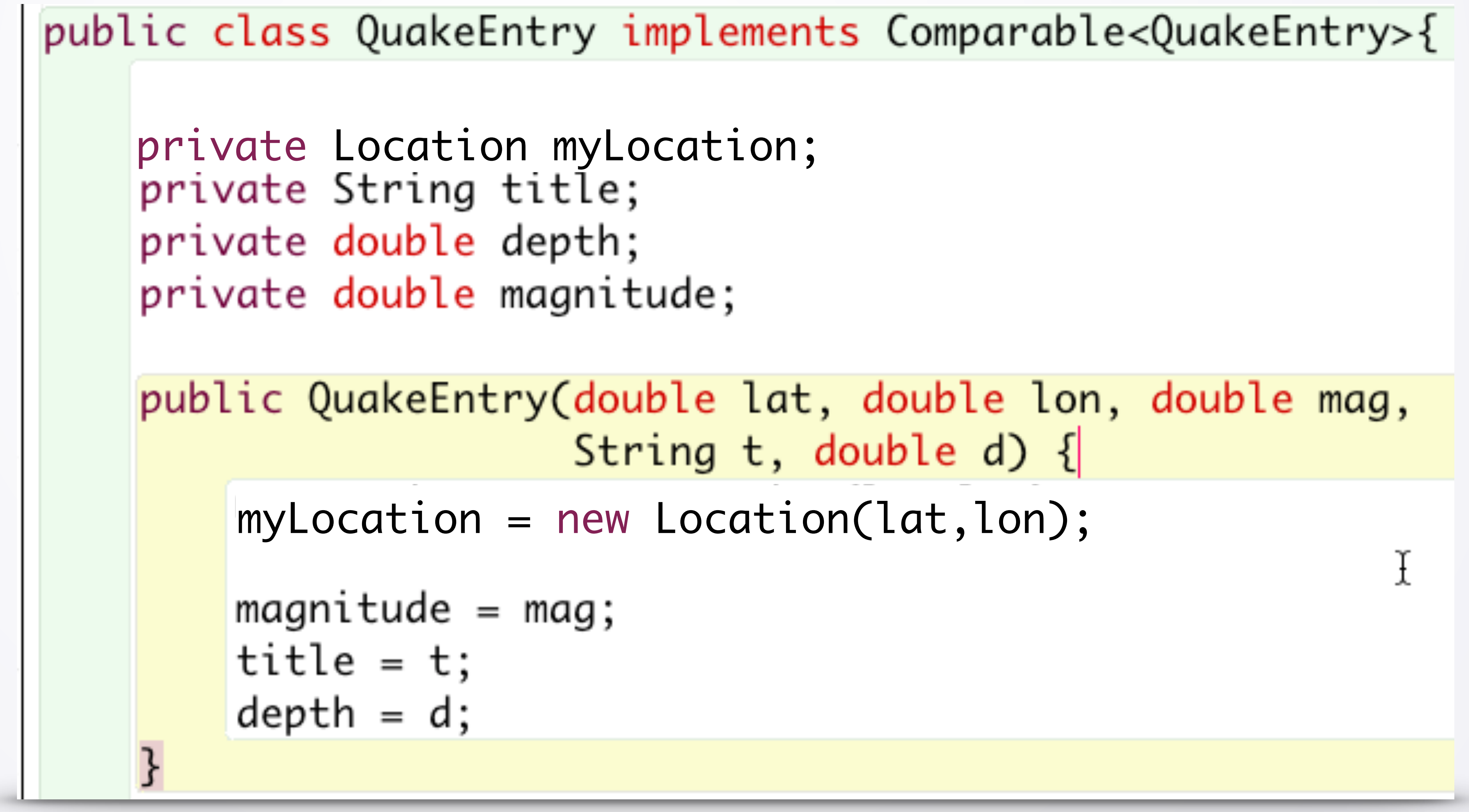

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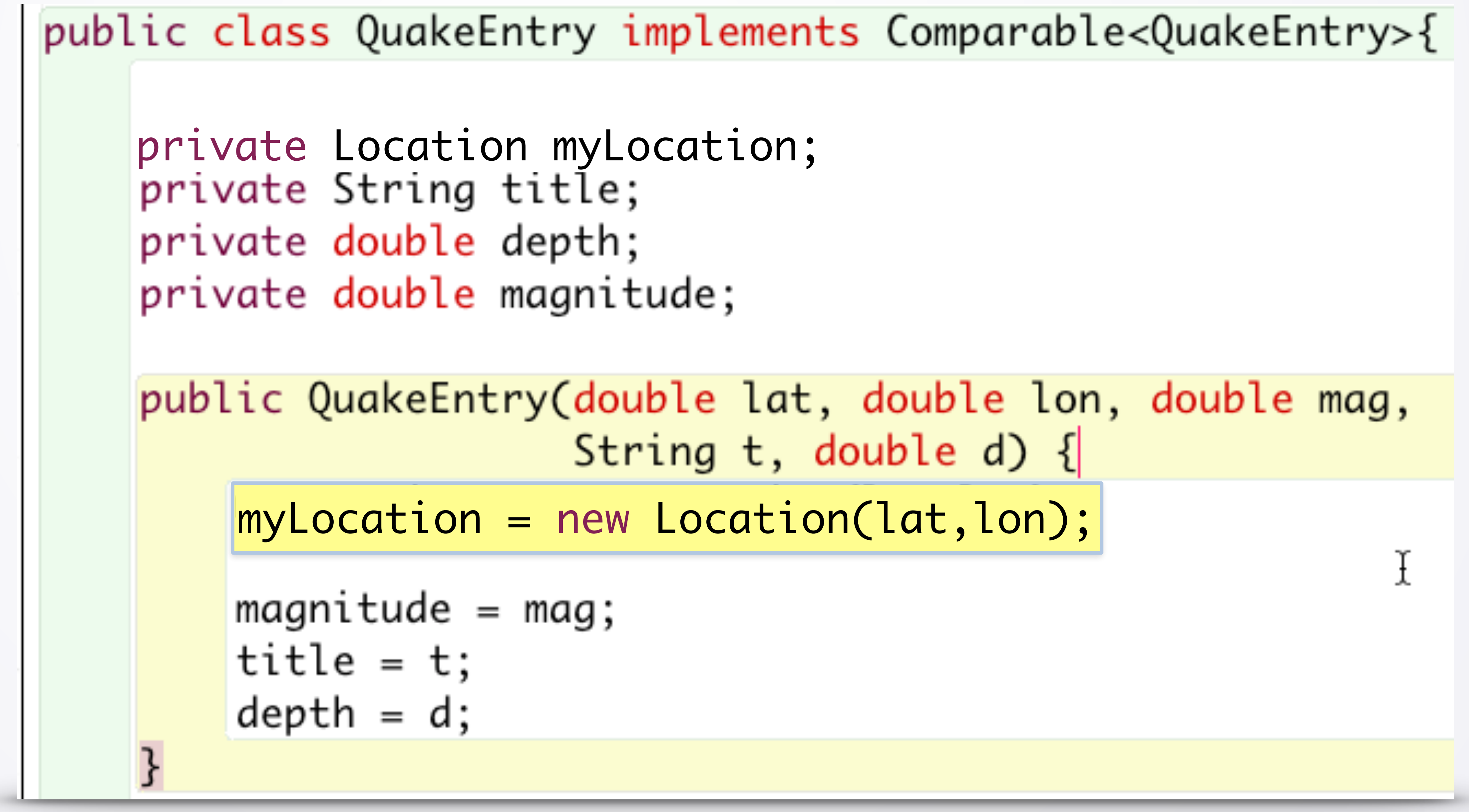

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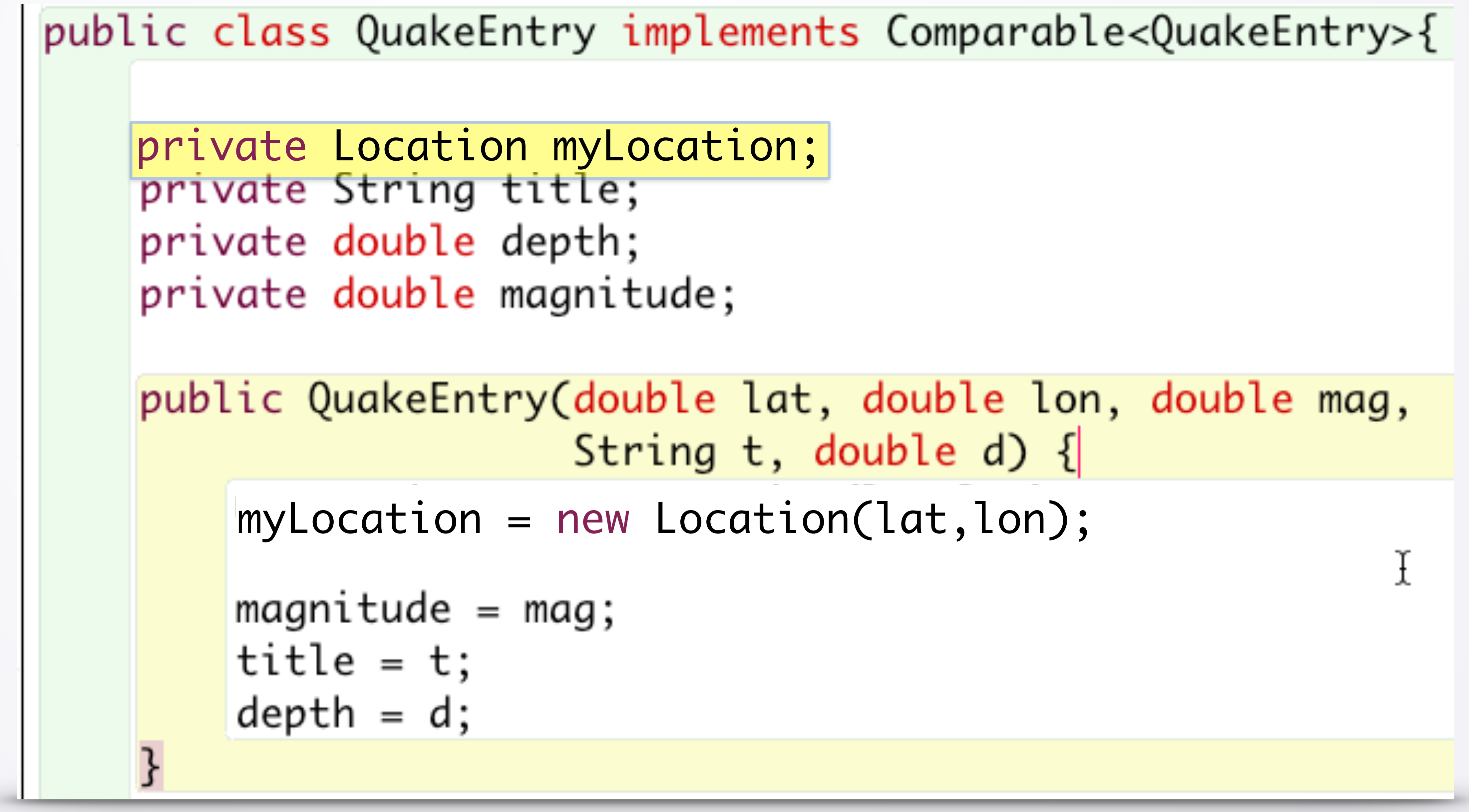

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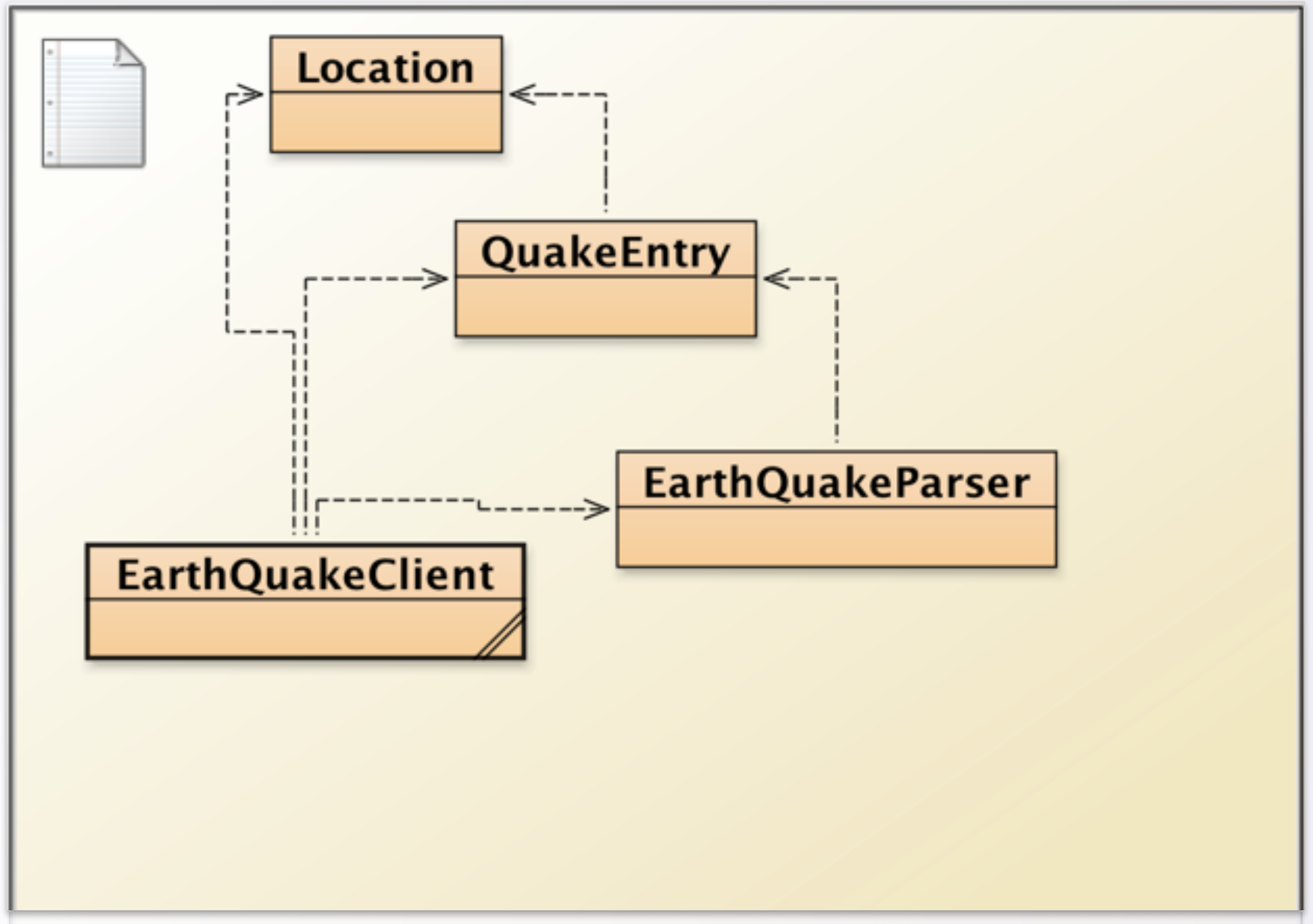
Has-A and Uses-A Relationships

- QuakeEntry object created by Parser
  - Location constructor called from QuakeEntry constructor
  - myLocation is instance field in QuakeEntry: Has-A relationship
- Location used in EarthQuakeClient
  - `.distanceTo`(..)
- QuakeEntry used in EarthQuakeClient too
  - `getMagnitude`(..)


Location
QuakeEntry
EarthQuakeParser
EarthQuakeClient