

Memento Pattern

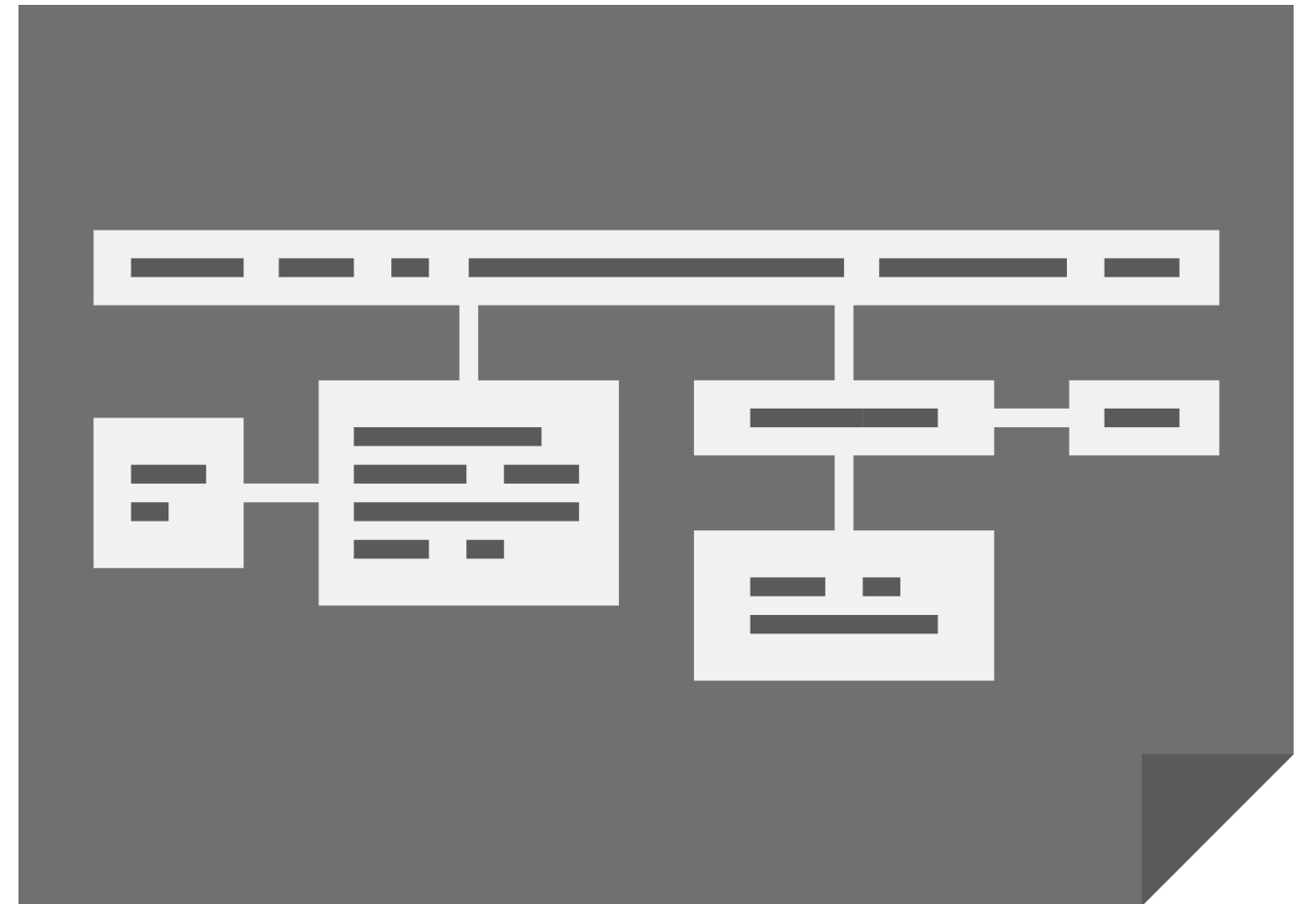


Bryan Hansen

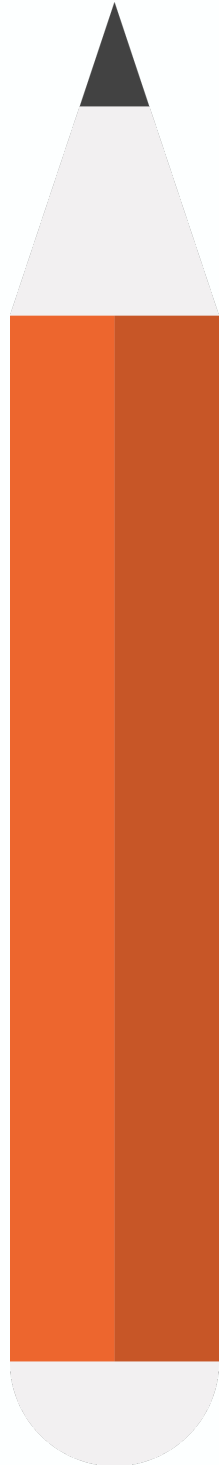
twitter: bh5k | <http://www.linkedin.com/in/hansenbryan>

Concepts

- Restore Object to previous state
- Externalize internal state
- Undo/Rollback
- Shields complex internals
- Examples:
 - `java.util.Date`
 - `java.io.Serializable`



Design



Class based

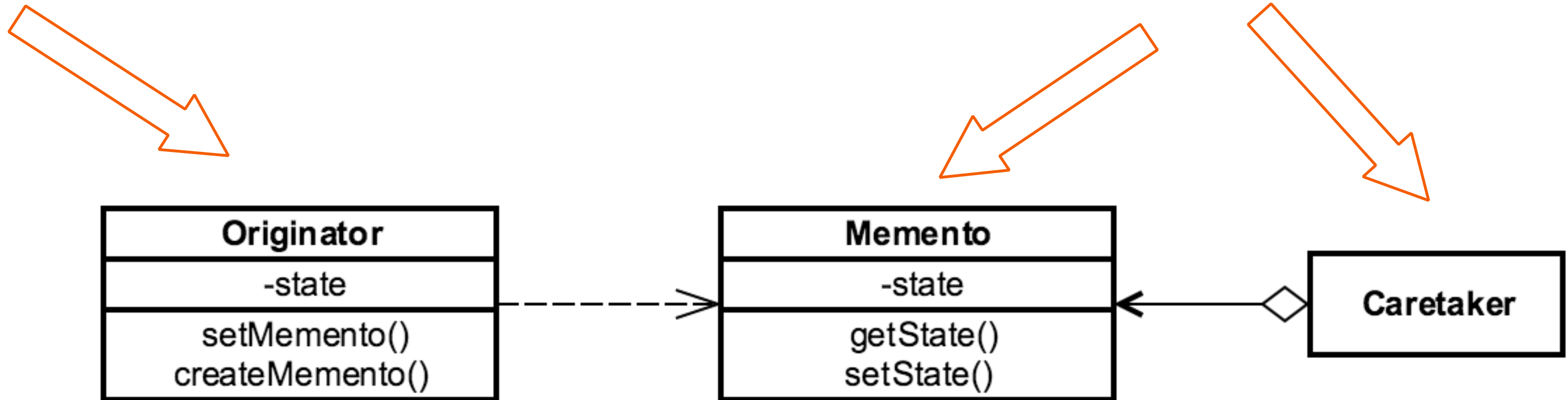
Originator

Caretaker

Memento

Magic Cookie

UML



Everyday Example - Serializable

```
Employee emp = new Employee();
```

```
emp.setName("Bryan Hansen");
```

```
emp.setAddress("111 E Code Street");
```

```
emp.setPhone("888-555-1212");
```

```
serialize(emp);
```

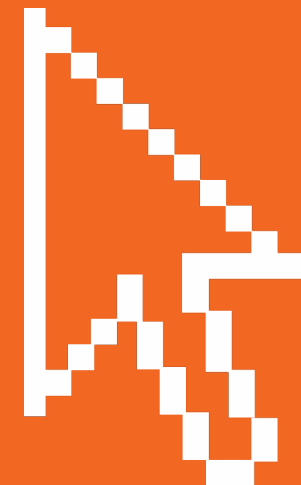


```
Employee newEmp = deserialize();
```

Exercise Memento

Originator, Caretaker, Memento

Create Memento



Pitfalls

- Can be expensive
- Deletes/history
- Exposing information



Contrast

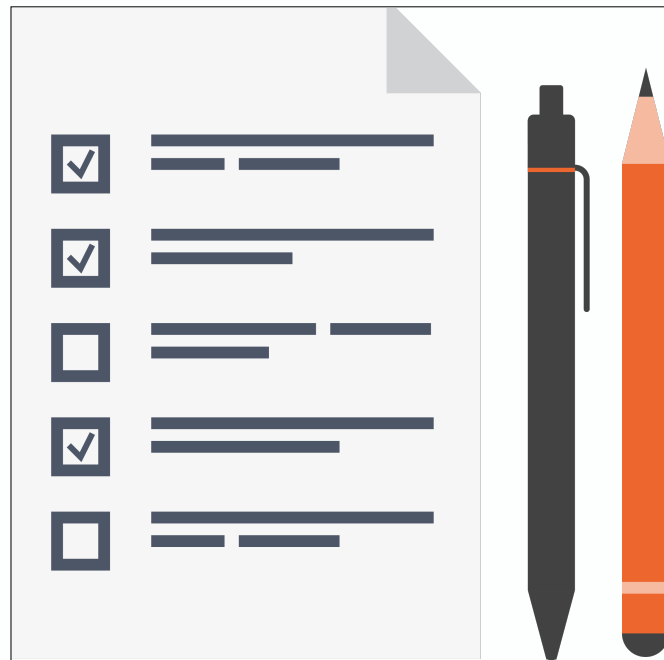
Memento

- State captured
- Independent state
- Caretaker/History

Command

- Request captured
- Independent request
- History side benefit

Memento Summary



- Capture state
- Can get heavy with history
- Recreate state
- Command