

Factory Method Pattern



Bryan Hansen

Director of Software Development

@bh5k

Concepts



Doesn't expose instantiation logic

Defer to subclasses

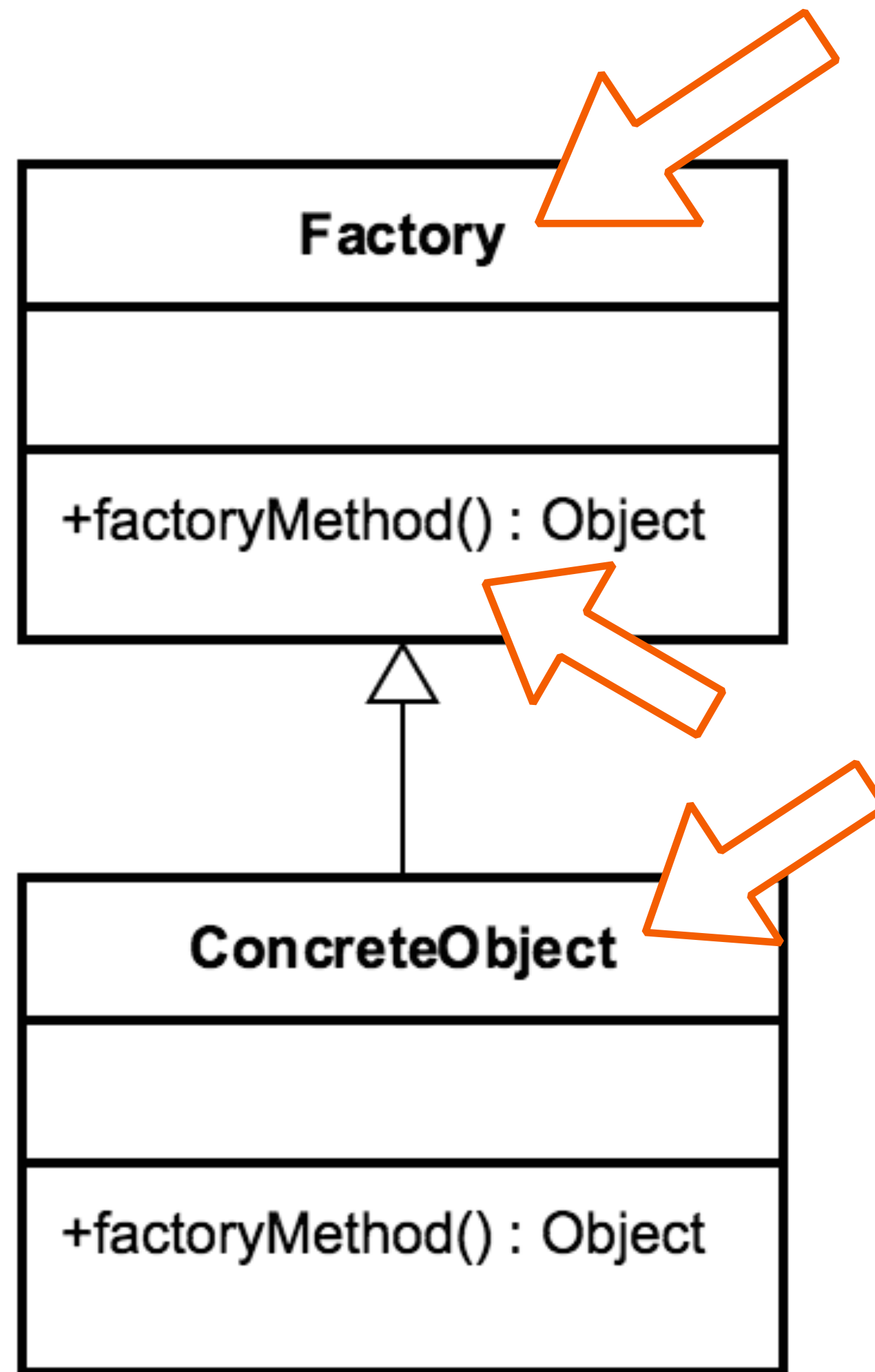
Common interface

Specified by architecture, implemented by user

Example:

- **Calendar**
- **ResourceBundle**
- **NumberFormat**

Design



Factory is responsible for lifecycle

Common Interface

Concrete Classes

Parameterized create method

Everyday Example - Calendar

```
Calendar cal = Calendar.getInstance();
```

```
System.out.println(cal);
```

```
System.out.println(cal.get(Calendar.DAY_OF_MONTH));
```

Demo

Create Pages

Create Website

Create Concrete Classes

Create Factory

Enum

Pitfalls



Complexity

Creation in subclass

Refactoring

Contrast

Singleton

Returns same instance

One constructor method - no args

No Interface

No Subclasses

Factory

Returns various instances

Multiple constructors

Interface driven

Subclasses

Adaptable to environment more easily

Summary

Parameter Driven

Solves complex creation

A little complex

Opposite of a Singleton