Factory

Factory constructors are a way to enable a class to be initialized/constructured using logic that might not always return a new instance of the class, rather, it's a way for a class to make special calculations, such as returning an instance from a cache, or initializing instance variables of the class with given data, that cannot otherwise be done inside the constructor of the class.

Further reading:

- Factory Constructors - dart.dev
- Factory Constructor in Dart - Medium
- Understanding Factory constructor code example - newbedev.com
- Factory Constructor In Dart - learndartprogramming.com
- Exploring the 3 Types of Constructors in Dart - betterprogramming

Examples

```dart
class Number {
  // this factory method allows anybody to
  // instantiate a Number class using an Object value
  // but underneath, this factory constructor creates
  // an instance of the Integer class should the
  // given value be of type int
  factory Number.from(Object value) {
    if (value is int) {
      return Integer(value);
    } else { throw 'Invalid value'; }
  }
}
class Integer implements Number {
  const Integer(int value);
}
```