Builder

Programming courses

Objective

A Builder object can be used with or without a Director to create the basis of a programming course, the courses can be of multiple languages, they have a title and a number of modules.

Builder interface

Contains the methods reset, setLanguage, setTitle and setModules to be used by the concrete builders in the creation of courses.

Director class

Contains the predefined instructions to create a Java or a Python course with the specified title and module number.

Long course and short course

The two type of courses that can be created with builders, contain a programming language, a title and the number of modules.

Long and short course builders

Implementation of the builder interface, they contain a course of the specified length and have methods that modify their attributes, finally a getResult method returns the instance of the object with the specified attributes.

The reset method changes the instance of the course to a new one without any attribute set

Tests

1. Create a short Java course with the director.

2. Create a long Python course with the director.

3. Create a course without director and reuse the builder to create another course.

Coverage

Element	Coverage	Covered Instru...	Missed Instruct...	Total Instructio...
> 🗎 Director.java	▇ 100.0 %	23	0	23
> 🗎 LongCourse.java	▇ 100.0 %	24	0	24
> 🗎 LongCourseBuilder.java	▇ 100.0 %	34	0	34
> 🗎 ShortCourse.java	▇ 100.0 %	24	0	24
> 🗎 ShortCourseBuilder.java	▇ 100.0 %	34	0	34
> 📦 test	▇ 100.0 %	117	0	117