

# CPSC 501 – Assignment 2

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## Overview

[ObjectInspector](#) is a reflective object inspector. It performs complete object inspection at a runtime. `Inspector` handles the object inspection. General project setup is described in project [README.md](#). Project can also be found on GitLab [artem.golovin/ObjectInspector](#)

## Refactoring

Some refactoring was done to the project after the working version was implemented. The following is the list of commits with description of what refactoring was done

**Implement `InspectorResult` to store inspected information; Implement `FieldPair` to make it easier to test object inspection** [e9870e19](#), [d6a2812c](#)

It was necessary to implement some sort of storage for object inspection in order to test the `Inspector#inspect(Object, boolean)` properly. [InspectorResult](#) contains different `HashMap`s to store inspected information about object. Using that class, we can test the `inspect` method without having to compare outputs.

**Use `IndentedOutput` interface and use custom `forEach` to iterate array** ([645bfdce](#))

Since the output needs to be indented in order to make it easier to read and to say which values are nested, [IndentedOutput](#) and method [indentOutput](#) helps to achieve that result. Originally, indentation was calculated per each `inspect` method. To remove duplicated code, [indentOutput](#) method was added.

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## Extract value inspection into its own method ([c039ea3e](#))

`inspectArray` and `inspectField` were performing the same tasks, therefore to eliminate redundant code, `inspectValues` method was added.

## Git Log

Commit	Author	Description
<a href="#">5ec816d</a>	Artem Golovin	Initial commit
<a href="#">788ddb</a>	Artem Golovin	Add option to output inspection results in std out
<a href="#">c84133d</a>	Artem Golovin	Implement <code>inspectSuperclass</code> method and add function for padded output
<a href="#">bff1f6f</a>	Artem Golovin	Implement <code>inspectInterfaces</code> method
<a href="#">67279bd</a>	Artem Golovin	Implement <code>inspectConstructor</code> method
<a href="#">5a3c07a</a>	Artem Golovin	Implement <code>inspectMethod</code> method
<a href="#">7f2db0a</a>	Artem Golovin	Implement <code>inspectFields</code> and <code>inspectArray</code>
<a href="#">deb1f1d</a>	Artem Golovin	Add basic README, move test classes to data package and create inspector package
<a href="#">afce1c3</a>	Artem Golovin	Add step to inspect array object
<a href="#">2ad8560</a>	Artem Golovin	rename value to <code>referenceValue</code> for ref objects
<a href="#">521bf14</a>	Artem Golovin	Change newline characters
<a href="#">7db97f7</a>	Artem Golovin	Add util join method and rename Console to Utils
<a href="#">3ab0166</a>	Artem Golovin	Store inspected objects in HashMap's for testing and add simple tests
<a href="#">540bb7a</a>	awave1	Inspect methods and fields when inspecting interfaces instead of inspecting class
<a href="#">b73d7e6</a>	Artem Golovin	add different hashmaps to store inspection data
<a href="#">e9870e1</a>	awave1	Add <code>InspectorResult</code> object to store results of object inspection
<a href="#">d6a2812</a>	awave1	Create <code>FieldPair</code> class to store field information for <code>InspectorResult</code>
<a href="#">3cf2305</a>	awave1	Add tests for inspection with inheritance
<a href="#">992eda3</a>	Artem Golovin	add primitive variables to tests
<a href="#">d87c9a6</a>	Artem Golovin	Test recursive inspection on <code>ClassWithOneParent</code>
<a href="#">2cc0213</a>	Artem Golovin	Test method inspection and fix bug to include private/protected methods
<a href="#">6033cc0</a>	Artem Golovin	Add <code>SomeInterface</code> interface for tests
<a href="#">992de84</a>	Artem Golovin	Turn off std output when running tests

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<a href="#">c039ea3</a>	Artem Golovin	Add array tests and move inspectValues to its own method to prevent duplicate code
<a href="#">5a60494</a>	Artem Golovin	Include object inspection before inspecting array objects
<a href="#">5e47e8d</a>	Artem Golovin	Move leftpad methods to Console util class
<a href="#">66343ed</a>	Artem Golovin	add primitive args handling
<a href="#">645bfdc</a>	Artem Golovin	Use IndentedOutput interface and use custom forEach to iterate array objects
<a href="#">c0fa48b</a>	Artem Golovin	Add tests for class with constructors and fix addConstructor method
<a href="#">bff6ce3</a>	Artem Golovin	Turn off std output for unit tests
<a href="#">2ce2c5c</a>	Artem Golovin	Fix cli args and make directories to store scripts
<a href="#">ec35706</a>	Artem Golovin	Implement simple dynamic inspector loader
<a href="#">f156f9b</a>	Artem Golovin	Move class loading into InspectorLoader
<a href="#">04db097</a>	Artem Golovin	use java 1.8
<a href="#">5d8eaeef</a>	Artem Golovin	update scripts for java 1.8
<a href="#">9e0bc12</a>	Artem Golovin	set recursive to true by default
<a href="#">ef755fe</a>	Artem Golovin	Finish refactoring.pdf
<a href="#">e8744de</a>	Artem Golovin	better handle exceptions for DynamicReflectiveInspector