

# 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](#).

## 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                            |