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Module 10: Design Patterns in TA Frameworks implementation (Java)

## home task

1. Implement the following design patterns in your solution from previous module\*:
   1. Singleton
   2. Factory Method
   3. Decorator

You can use any area of you code to apply the pattern (any code layer – test, service or page object and their combinations).

You may consult with your mentor about the specific area of applying the pattern as well, but try to make a self-dependent final decision.

1. Revise your code to match S.O.L.I.D. principles. Provide list of corrections to your mentor, e.g.:

|  |  |  |
| --- | --- | --- |
| Class | Problem | Solution |
| WebDriverManager | Class single responsibility is broken. Contains methods irrelevant to browser/WD management. | Dedicated class XYZ is created for utility methods, some are shifted to abstract PO class. |
| HomePage | Open-closed principle is broken. Fields of the PO class are exposed (public), some redundant methods are present. | Fields of the PO class are set private, redundant/extra methods are eliminated from HomePage PO class and shifted to the class XYZ, which extends HomePage |

## Bonus TAsk

Implement any extra pattern mentioned during the training session (for extra mark) or any other pattern instead of the list above. Exact pattern list should be discussed with your mentor.

## acceptance criteria

1. **PATTERNS**: All patterns from mandatory part (Singleton, Factory Method, Decorator) should be implemented.
2. **PATTERNS**: Classes which were modified/created during pattern implementation should be invoked during the test run. Just storing them in project packages is NOT enough.
3. **S.O.L.I.D.:** Code is revised to match S.O.L.I.D. principles.
4. **S.O.L.I.D.: at least** 3 fixes are described within the table per example above and delivered to a mentor.
5. **S.O.L.I.D.:** fixes are implemented in code structure.
6. **BONUS TASK:** extra patterns mentioned during the training session are implemented considering criteria from point #2 above.