## System development, integration and testing lab #4 & 5

# Design Patterns

(Individual work, 2 weeks)

Choose two tasks to implement from Group 1 and one task from Group 2

Group 1

* Calculator (at least 4 operations) or a similar example, using the chain of responsibility design pattern.
* Example of communication between objects, using the mediator pattern.
* Example of handling different behaviors depending on state, using the state pattern. Remember to include transitions between states!
* Example of the memento design pattern.

Group 2

* Example of the builder or template method patterns (provide at least two concrete implementations of the algorithm)
* Example of the object pool pattern.

You can use any OO language of your choice

Examples :

<https://refactoring.guru/design-patterns>

<https://sourcemaking.com/design_patterns>

<https://www.dofactory.com/net/design-patterns>

<https://www.geeksforgeeks.org/software-design-patterns/>