

## 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