



AGH University of Krakow | Faculty of Mechanical Engineering and Robotics
| Department of Robotics and Mechatronics

MECHATRONIC ENGINEERING | I cycle | semester VI | 2025/2026

Object oriented programming and software engineering

Instruction VIII:

Qt framework

You will learn:

How to create a graphical user interface (GUI) using the Qt framework in C++. You will understand how to build simple applications with windows, buttons, and input fields, and how to connect user actions to program logic.

You will learn how to design interfaces using Qt tools and how to respond to events such as button clicks. By the end of the laboratory you will be able to create a simple interactive application that connects a GUI with underlying C++ code.

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1. Initial information

Qt is a C++ framework used to create applications with GUI. It provides components such as windows, buttons, labels, and input fields.

Widget is a basic element of a GUI, such as a button, text field, or label.

Qt Designer is a tool that allows creating a GUI visually by placing widgets in a window.

2. Tasks

TASK 1.

Create a simple calculator application using the Qt framework. The application should allow the user to perform a selected operation such as addition, subtraction, multiplication, or division. Design the interface using Qt Designer.