Assignment 1

(Can be done in teams of 2)

In this assignment, we will simulate a heater using Simulink.

- We will implement an ON/OFF controller for the heater.
- The simulation should start with an initial temperature of 25°C, as shown in the slide below since a real-life heater would not start from zero.
- The differential gap (or deadband) is ±2°C, meaning the setpoint of 50°C allows a temperature range of [48°C, 52°C].
- The ON/OFF controller has only one parameter: the differential gap, making it a very simple control method.

We should also observe how increasing delay affects both the system's response and its peak-to-peak value.

Deadline: End of November