Assignment 1

1) اللي اتقال في المحاضرة عنه

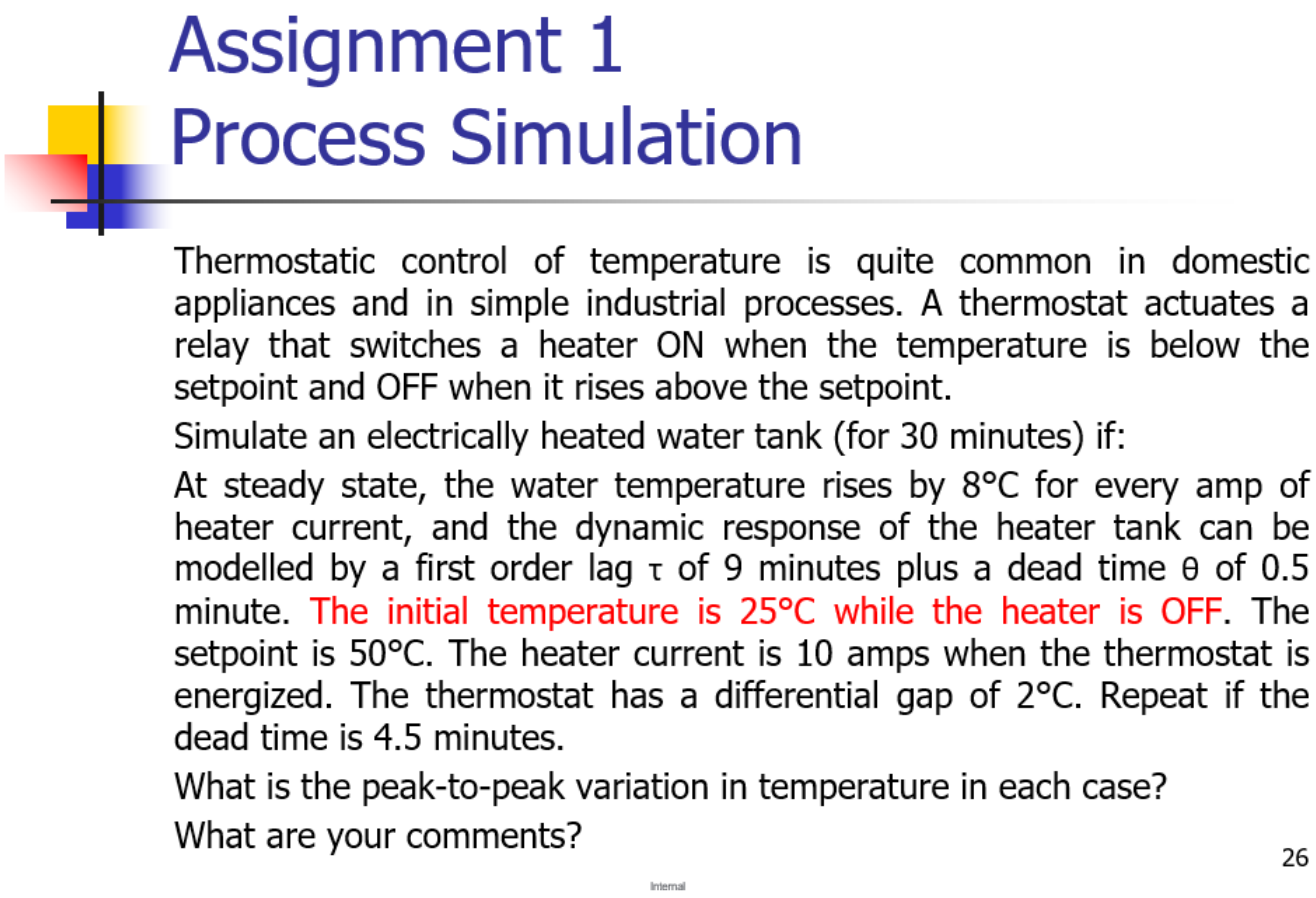
(Can be done in teams of 2)

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



2) رسالة ال **classroom**

Assalam Alaikum ya Shabab,

Here are some instructions for **Assignment #2** that must be followed:

1. The Assignment **Deadline** will be **30th November at 11:59 PM**.
2. You can work in **groups of 2 (maximum)**.
3. The **report must include screenshots** of your steps.
4. **Comment on the results** that you get from the simulator.
5. Only **one submission per group** will be accepted.
6. Any **copied reports** will unfortunately result in a **zero** grade.
7. If you have any questions, please add a **class comment** on this announcement so the answer can be shared with other students (no private comments).
8. It is recommended to submit the file in **PDF format**, as it is easier to download from the classroom.
9. You should **name your submitted file** using your own name and your classmate's name. For example:
   Ahmed Amr _ Bilal Ramadan.
10. Your submitted file should include:
    - Your name, section number, and BN
    - Your classmate's name, section number, and BN
11. **Late submission** is for students who cannot submit the assignment before the specified deadline. Do **not** upload your file under this category unless you fail to submit on time.

Best regards,
Ahmed Amr

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3) MATLAB installation

بالنسبة لل MATLAB ممكن تاخده من هارد الكلية أو لو عايز تحمله فتقدر تحمله من هنا وتمشي مع خطوات ال file "read me"

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4) very useful videos on how to use Simulink

- **implementing a PID controller**
- **Simulink playlist**