Session 3: *UART, I2C, and ADC*

- **Topics**
  - UART
  - I2C
  - ADC
  - Projects

- **Objectives**
  - Self-learning from different resources
  - Gaining hands-on skills
  - Teamwork
  - How to use Microcontroller documentation and get what you need?

- **Applications in Industry**
  - To be discussed

- **Prerequisites**
  - C language knowledge
  - Session 1 and 2 topics

- **Resources**
  - Mazidi Book in references on Microsoft Teams.
  - https://microcontrollerslab.com/introduction-tiva-tm4c123g-launchpad/
  - You may need more resources from the internet, search for what you need.
  - You are always free to contact us, anytime, for any questions or need for more information or resources.

- **Task 1**
  - UART, make this project work on your board using UART 0: https://microcontrollerslab.com/uart-communication-tm4c123-tiva-c-launchpad/ . You **must** understand each line in your code. Make your own modifications to the projects.

- **Delivery Date of Task 1**
  - Wednesday 2/8/2023, each team will present his working project on Tiva C TM4C123GH6PM microcontroller board. **[ONLINE]**

- **Task 2**
  - ADC, make this project work on your board, send the voltage value to your PC using UART 0: https://microcontrollerslab.com/adc-tm4c123g-tiva-c-launchpad-measure-analog-voltage-signal/ . You **must** understand each line in your code. Make your own modifications to the projects.

- **Delivery Date of Task 2**
  - Saturday 5/8/2023, each team will present his working project on Tiva C TM4C123GH6PM microcontroller board. **[ONLINE]**

- **Task 3**
  - I2C, make this project work on your Tiva C board and another Arduino board: https://microcontrollerslab.com/i2c-communication-tm4c123g-tiva-c-launchpad/ . You **must** understand each line in your code. Make your own modifications to the projects.

- **Delivery Date of Task 3**
  - Monday 7/8/2023, each team will present his working project on Tiva C TM4C123GH6PM microcontroller board. **[FACE-TO-FACE]**