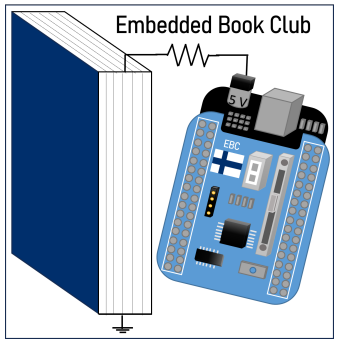



# Linux Device Driver Development Meet-and-Greet

**Jonathan Velasco**

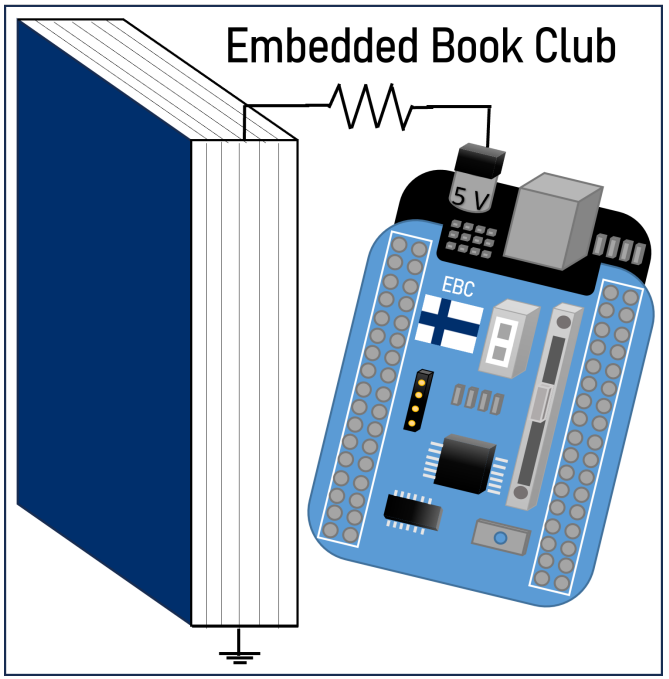
September 9th, 2023

# Embedded Book Club Finland

We're knowledge sharing enthusiasts, focused on hosting in-person events, to bond over technical topics related to embedded systems.

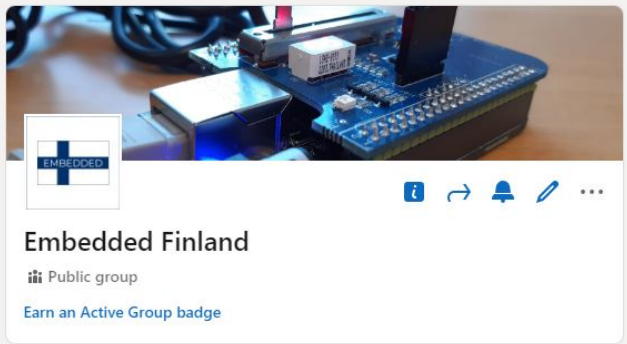
Our goal is to

- Create a community focused on Embedded Systems and related topics
- Share knowledge, and to learn about new topics, trends and practices
- Having fun learning and working on projects together



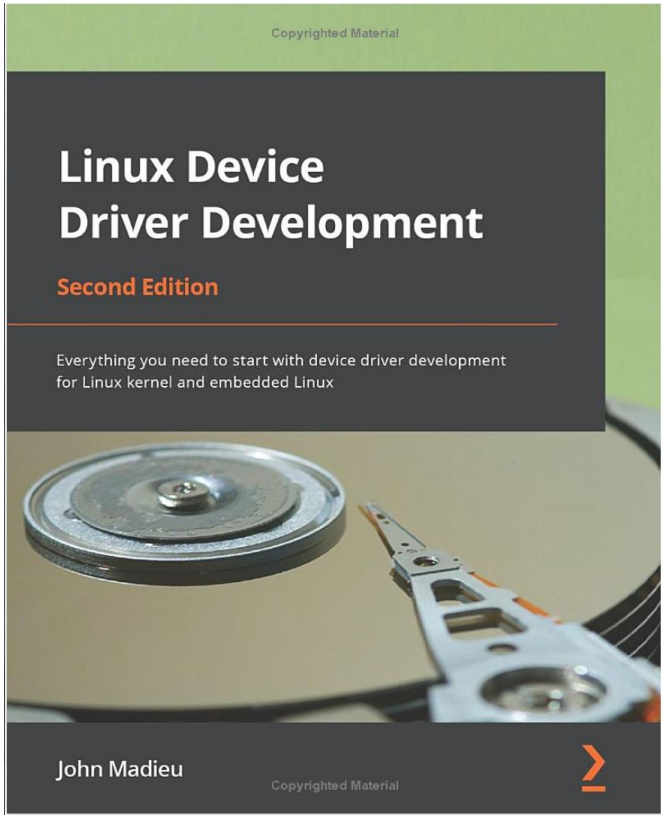
# Introduction

- Who am I? Jonathan Velasco
- Who are you?
- Profession, company?
- Previous experience in Embedded, Linux, etc
- Interests



# Points to Address

- Book:
  **Linux Device Driver Development**
  Author: John Madieu.
  Second Edition.
  Publishing Company: Packt
- Where to obtain the material and costs
- Sharing information
- Rotation system and Event Recurrence



# Book - Copyright

# Book - Preface: What does the book offer

- The book starts with two general chapters to set-up the environment and go over the basics of device drivers
- Thereafter, the book covers development based on Linux subsystems: industrial input/output (IIO), general-purpose input/output (GPIO), Interrupt request management (IRQ), and Inter-integrated Circuit (I2C) and Serial Peripheral Interface (SPI)
- Source code tested on x86 and UDOO QUAD (ARM) for Linux Kernel v5.10
- Some drivers are provided for testing purposes (e.g. MCP23016, 24LC512). GPIO controller and EEPROM.
- The examples are available on Github

# Book - Preface: What do we need to get the most out of it

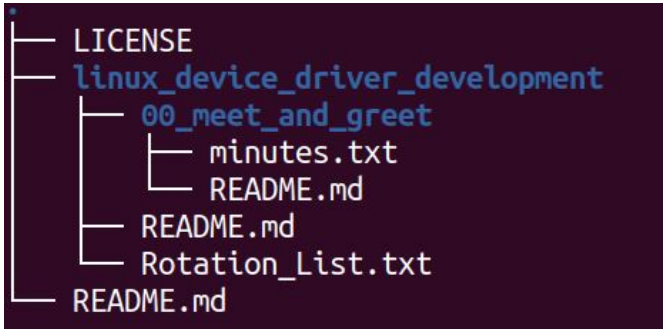
- Basic C and Linux cmd commands are needed.
- Since the code is tested on x86 and UDOO QUAD (ARM) we could the exercises on host (I'm assuming) or on target
- Evidently a computer/VM with enough disk space and RAM to download and build the Linux Kernel is needed.
- Suggested hardware: Any cortex-A embedded board: UUDO quad, Jetson nano, Raspberry Pi or BeagleBone.

# Where to obtain the material and costs - some suggestions

- **Book**
  - Amazon Germany €41.99
  - Adlibris €57.50
  - Amazon USA USD 34.89 (Kindle)
- **Board**
  -
  - KIWI Electronics Beaglebone Black Rev C €71.68
  - Digikey Beaglebone Black Rev C €47.39
- Any other hardware suggestions? If we go with the the BBB we might also need a serial cable TTL-234X-5V.
- Should we also consider MCP23016, 24LC512 GPIO controller and EEPROM or wait?

# Sharing information

- Github Repository
  - Fork and create a new branch
  - MIT License
- Overleaf: LaTeX slides



# Rotation system and Event Recurrence

- Jonathan Velasco - Chapter 1 and 2
- When should we have our first/next session?
- Should we wait until everyone's got the book?
- Who's going next?