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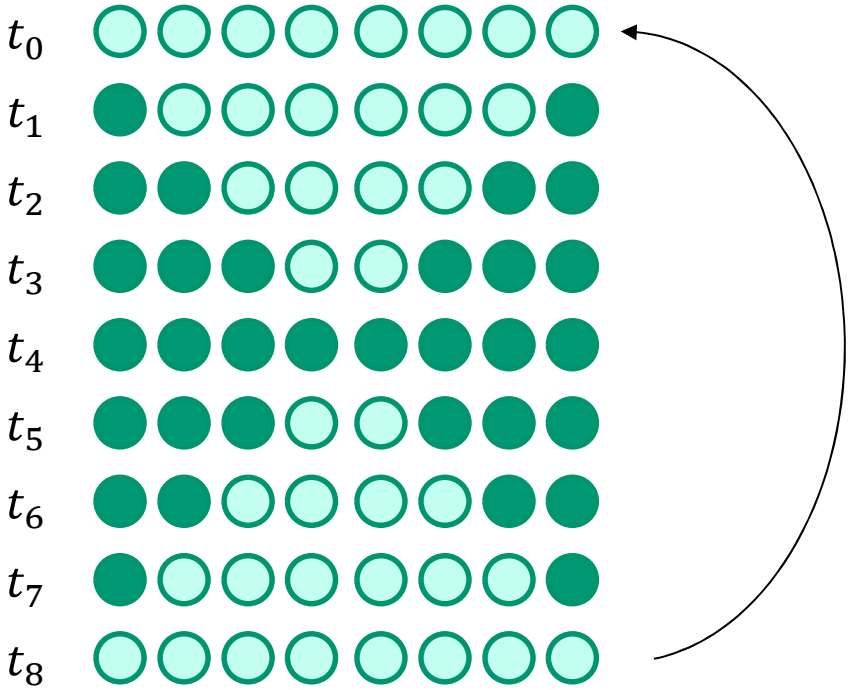
MICROCONTROLLERS

LAB – Practical Exercise

Step 0

- Kitt 2.0: Implement in the PORTD the Kitt 2.0 effect with fixed delay between the transitions
- Counter: Implement a counter clocked at 1 Hz (max 255) and print it on the display



Step 1

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- Kitt 2.0 dynamic delay: Implement the dynamic delay in the kitt 2.0 effect using two push buttons,
  - RA3 → kitt_delay ++
  - RA4 → kitt_delay --
- Stopwatch: Transform the counter in stopwatch using three push buttons for Start/Stop/Reset functions,
  - RA0 → Start
  - RA1 → Stop
  - RA2 → Reset

Step 2

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1. Dynamic refresh: Refresh the display only when needs (e.g. when a new data is ready)

Step 3

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1. Stopwatch Format: Print the stop watch in xx:xx:xx:xxx (h : m : s : ms/10) format
2. Stopwatch Precision: Enhance the stopwatch precision