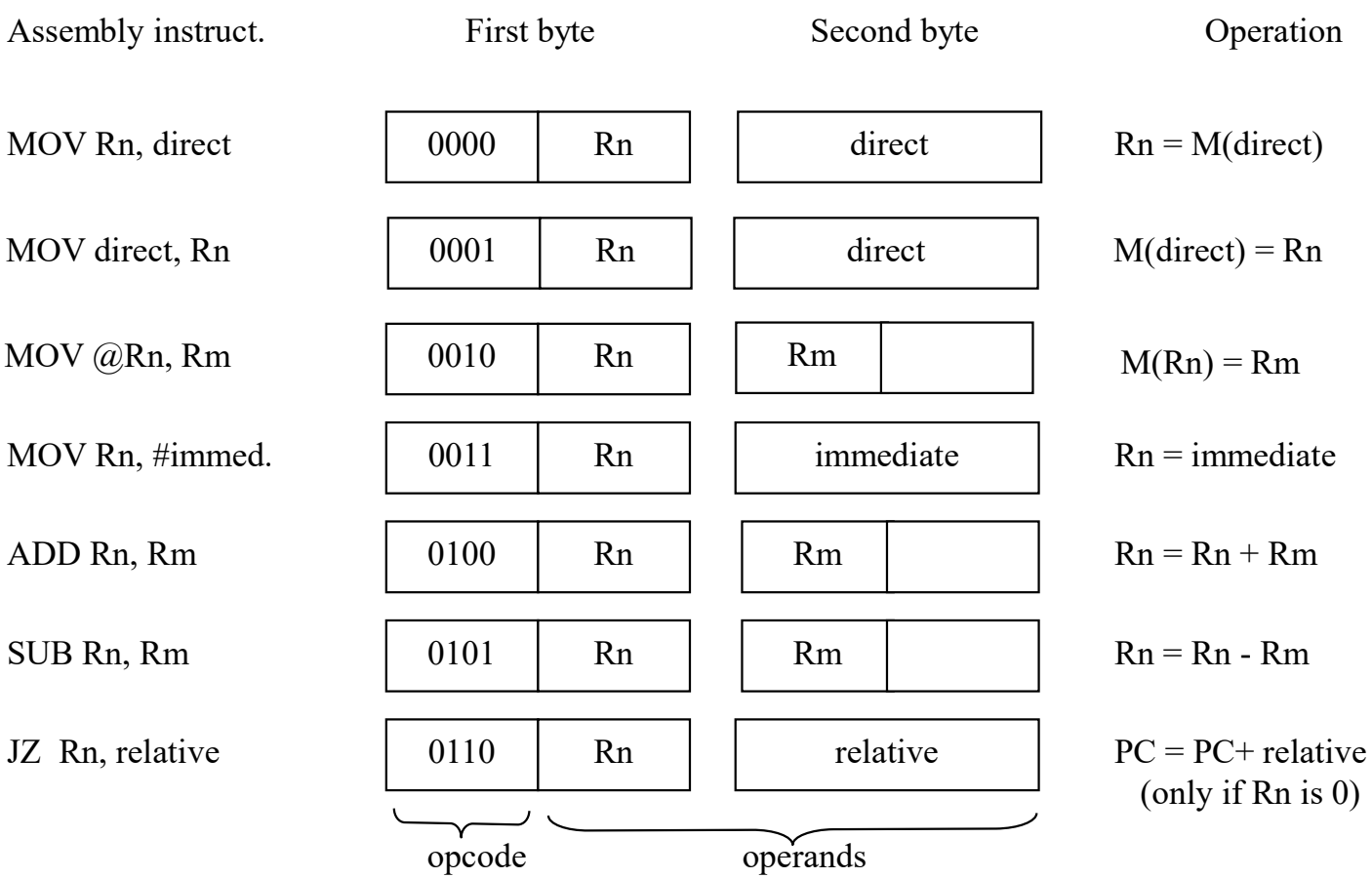
Embedded Systems Design: A Unified Hardware/Software Introduction

GPP/AS(I)P

Exercises

GPP/AS(I)P-EX1: given the following trivial IS and the related ISS (see 02_DUMMY_ISS folder) write a program in machine code that evaluates the element F_{11} of the Fibonacci sequence (see the provided example that evaluates F_{10}).



GPP/AS(I)P-EX2: try to understand the main features of the following suites of benchmark. Try to understand in which way it could be experimented by yourself (download, requirements, licenses, demo version,…)

- EEMBC – EDN Embedded Benchmark Consortium
  - www.eembc.org
    - Suites of benchmarks: automotive, consumer electronics, networking, office automation, telecommunications

- **Tis topic is suitable to be further experimented for a project (also in connection with the *Electronic Design Automation* course) and/or a Thesis.**

ASIP-EX1: try to understand the main features of the following ASIP-oriented design environments. Try to understand also which ones can be easily experimented by yourself (download, requirements, licenses, demo version,…)

- ASIP methodologies and tools:
  - https://www.synopsys.com/dw/ipdir.php?ds=asip-designer (2026)
  - https://codasip.com/products/codasip-studio/ (2026)
  - https://www.cadence.com/en_US/home/tools/silicon-solutions/compute-ip/tensilica-xtensa-controllers-and-extensible-processors.html (2026)
  - https://www.andestech.com/en/products-solutions/custom-computing/ (2026)
  - http://openasip.org/ (2026)
  - https://github.com/ArchC/ (2026)

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