Politecnico di Torino
III Facoltà di Ingegneria

Lab 2 Report
Integrated Systems Architecture

Master degree in Computer Engineering

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CHAPTER 1

Introduction

The lab 2 assignment consisted in various synthesis experiments on a floating point multiplier and in the development of a unsigned integer multiplier, based on the Booth's algorithm and Dadda's tree, to be used within the floating point multiplier.

As required, there is a GitHub repository available at the following link: `https://github.com/leoizzi/isa_labs/tree/main/lab2`.

The folders are organized as follows:

- `fpuvhdl`, the folder containing all the VHDL files of both the floating point and integer unsigned multipliers.
- `lab2_report.pdf`, this file.
- `report`, the folder containing the Latex files of the report.
- `sim`, the folder where all the simulation scripts are stored.
- `syn`, the folder where all the synthesis script, as well as the reports, are saved.
- `tb`, the folder containing the testbench files.
- `dadda.py`, a python script that generates the VHDL instantiation of the Dadda tree.