Cascade Circuit Analyser Final Report

*EE20084 - Structured Programming

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***Abstract*—This report details the design choices, implementation and testing of the Cascade Circuit Analyser program. embedded.**

***Index Terms*—circuit analysis, Python, pytest, regex, software testing**

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I. OVERVIEW OF APPROACH

The program largely suck to the design specification, moulding and deviating slightly for improvements in performance or consiceness.

The program is split into four main files, `main.py`, `circuit.py`, `parse_net.py` and `csv_writer.py`. `main.py` is the entry point of the program, and is responsible for parsing the command line arguments, reading the input file and writing the output file. `circuit.py` contains the `Circuit` class, which is responsible for storing the circuit data and performing the analysis. `parse_net.py` contains the `parse_netlist` function, which is responsible for parsing the netlist file and returning a list of components, a dictionary of terminations, and a list of outputs.