Structured Programming Design Report

# Introduction

I have been tasked with creating a program that will analyse cascade circuits. This program is to receive an input file, analyse that file and then produce an output file.

# Task

The input file describes the circuit. The output file is to contain values which are specified by the input file. The program is to read the input value, extract the necessary data from it and then perform calculations in order to produce the desired output values which are then added into the output file

# Program Flow

## START

## Read input file

This is done by using open(filename, mode)

## Analyse input file

The file needs to be analysed and necessary values need to be extracted. This is done by filename.readlines() which will store the individual lines of the file in a variable. This can then be looped through line by line, then using logic (if statements etc), we can ignore all the commented sections and unnecessary information. Before doing all this we can set empty variables for values such as nodes, resistance, conductance, voltage sources, current sources etc. Then while looping through the lines, we can extract theses values and insert them into their variables that we declared at the start of the program.

## Prepare output data

## Create output file

## END

# Testing