

## What should be in the report

The report will contain (at least):

- Front page (title, names, student numbers).
- Summary of the report itself.
- Table of contents.
- Introduction.
  - What is the context of the assignment? DSPs, digital filters, give a short introduction in your own words.
  - Describe your assignments.
- Design and realization of your FIR filter.
  - What were the requirements for this filter?
  - How are the coefficients determined? Describe the settings you used in MATLAB's FDAtool and explain the choices you made.
  - Show charts and tables of your filter design generated by MATLAB.
  - The (unoptimized) software codes.
    - ▷ How did you implement the filter and why did you do it that way?
    - ▷ Explain your use of fixed point numbers.
    - ▷ Clearly explain your code.
  - The results.
    - ▷ How and with what method did you test your filters in the lab.
    - ▷ What did you measure? Input/Output graphs and tables (dB).
    - ▷ Compare your bode plot to MATLAB's version.
- Design and realization of your IIR filter.
  - What were the requirements for this filter?
  - How are the coefficients determined? Describe the settings you used in MATLAB's FDAtool and explain the choices you made.
  - Show charts and tables of your filter design generated by MATLAB.
  - The (unoptimized) software codes.
    - ▷ How did you implement the filter and why did you do it that way?
    - ▷ Explain your use of fixed point numbers.
    - ▷ Clearly explain your code.
  - The results.
    - ▷ How and with what method did you test your filters in the lab.
    - ▷ What did you measure? Input/Output graphs and tables (dB).
    - ▷ Compare your bode plot to MATLAB's version.
- Optimization.
  - Which filter did you choose to optimize?

- How did you profile your code?
- Which techniques did you use to optimize your code?
- Which specific DSP features did you utilize to optimize your code?
- Clearly explain your optimized codes.
- How fast was your implementation before and after optimization?
- Conclusion and recommendations.
  - Don't introduce new facts in your conclusion.
  - Do your filters fulfill all their requirements?
  - How well could you optimize your code?
  - What could be done to further improve on your filters?

## **What should not be in the report**

The report will not contain:

- Material that's not your own.
  - Someone else's text without quotes and without a proper reference.
    - ▷ Proper citations are only allowed for short texts with a definite added value.
    - ▷ The same goes for paraphrasing.
  - Someone else's code.
    - ▷ Also if you changed the names of the variables and functions.
    - ▷ Use of code snippets from the lab work handbook or TI documentation is allowed but don't forget to use a proper reference.

Upon finding one or more of the mentioned points in your report, you will not be graded and your plagiarism will be reported to the exam committee.