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CIE 442 Project Part 1 Important Updates

1 message

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Dear CIE 442 Students,

Please note that based on the feedback from many students, it has been decided to simplify the DSP project requirements in two ways:

1- The following tasks will be considered as bonus (limited by the maximum of 15 marks in the whole project):
    - FFT core implementation (2 extra marks maximum)
    - Error handling (2 extra marks maximum in case of handling all possible errors, otherwise you will get a portion of the 2 marks only)
    - Animation task in convolution (1 mark maximum)

2- Some tasks of part 1 in the project will be moved to part 2, accordingly, the remaining tasks of part 2 (which are not given yet) will be quite incremental to ensure that each part has 5 marks.
The following features (section 1.32 in the project pdf file sent to you) will be moved to part 2:
• Calculation mode.
• RMS averaging.
• Peak finding.
• Bias finding.
• Different display options.
• Markers.
• Frequency band choices.
• Different input options.

While the first four features will remain in part 1:
• Time and Frequency domain analysis.
• Discrete time convolution.
• Windowing effect.
• Comparison mode.

You have the option to submit all the features in case you already started working on all of them. In that case each set of features will be graded with its corresponding part, including the report.

Regarding the grading criteria, the grade will divided as follows from **100 marks**:

Functionality of the GUI: 60 marks:

- **10**: Time and Frequency domain analysis.
- **10**: Discrete time convolution.
- **20**: Windowing effect.
- **20**: Comparison mode.

Documentation and coding style: 40 marks:

- 20: Code documentation (i.e., comments inside your code that explain your functions and variables) - ==Code readability== (carefully selected variables/functions names, etc.), ==modularity== (using functions instead of writing inline code), and re-usability (depends mainly on all the previous points).
- 20: Documentation manual (report). This manual should explain your product and how to use it as a professional user manual. That means you need to include an explanation of all the ==buttons==/==features== of your spectrum analyzer with clear figures, a==s well as clear examples of using the analyzer with snapshot figures of the results.== The introduction can be a very short one introducing the product. The theory associated with each function should be mentioned in the form of mathematical equations that you implemented in your analyzer, along with supporting references.

The deadline of part 1 will **not** change. It is on **Saturday 17th Nov 11:59 PM.**

Best Regards,
Mahmoud