Report 1: Initial Design Report

This report must be submitted by one person from each group

Due: Sunday, October 17, 11.59 PM

Requirements

This report will provide an initial, detailed breakdown of the design based on the planning work your group has done by this point for the design of the Learning with Errors system. This report provides an initial look at how the problem will be broken down into tasks and provides a schedule of when those tasks should occur. It also provides initial ideas, and plan of features that will be supported by your system.

Content

Your report should cover the following information:

- Planned feature set
    - Fully describe all features that you plan to achieve in your final design
    - Explain the different methods to implement each feature and what method is the best according to your group or you (you are implementing the best method because it fits your specific constraints suchas FPGA clock, speed, area etc., and will lead you to your goal)
    - Include all plans you have for additional features you will add (time and resources permitting)
- Modelling in MATLAB
- Future modelling in MATLAB for approximate multipliers
- Hardware design
    - What are your assumptions (how to generate random seed, how the prime number is generated, how the error is generated etc.)?
    - What parts have you already determined you will need?
    - Include circuit or layout diagrams
    - How will tasks be split?
    - Include flow diagrams to show how the various tasks are performed and when.
- Software design
    - How will you test the design?
    - What are the inputs to the hardware modules and the assumptions?

- Timeline
    - Provide a timeline that shows when various tasks should be started and completed
    - Tasks breakdown for each group member
    - Analyse current progress towards the timeline
    - Other information that you would deem useful to aid communicating of your initial design plans

Length and Structure

The report should be several pages in length. A picture is worth a thousand words, you may use photos and diagrams where appropriate to illustrate key ideas (e.g., a depiction of the entire design with tasks and interaction between the hardware and software is clearly shown). The report should be written as if it was a technical document submitted to a manager in your company. Thus, point form is discouraged, and you should properly describe each feature and task of the system. All tasks should be fully described.

Report structure will be marked in addition to the content. Ensure you are using appropriate report style with Introductions and Conclusions.

Grading

This report will contribute for 30% of your total mark. A mark out of 30 will be assigned to the report. The marks will be graded according to the following criteria:

20 marks – Report Contents (see above)

10 marks – Writing Style and Readability

Submission

Submission is via Teams.