

DIGITAL DESIGN LAB (EDA322)

LAB GUIDELINES

Examiner: Prof. Ioannis Sourdis

TAs: Ahsen Ejaz, Ghaith Abou Dan, Magnus Östgren, Neethu Bal Mallya
Panagiotis Strikos, Konstantinos Sotiropoulos, Fredrik Jansson

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1 General

- It is **mandatory to complete the introductory lab (Lab 0)** as the tools and the setup will be used for all the subsequent lab sessions.
 - The following labs (Labs 1-4) integrate the knowledge provided in the lectures to gradually enable you to design and implement different components of a simple processor, integrate the components, and verify its correct functionality. Finally, in Lab 5, you will prototype your simple microprocessor to an FPGA board, run a given program, and evaluate it in terms of performance, power, and area.
- It is **compulsory to pass the labs 1-4**. However, lab 5 is optional, and if completed, you will get 6 bonus points.
- You have been given coding tutorials and template code on Canvas. Make use of the resources provided when you solve the lab assignments.
- If there is any part of the lab PM or the code you do not understand, endeavor to find out: ask your TA; post a question on the Discussion Board; google; take every opportunity you can to explore and learn. Good luck with the labs! :)

2 Instructions for Labs

- Download the folder *EDA322_GroupID.zip* from Canvas (*Files > Labs*) and extract the files.
- In ModelSim / QuestaSim, create a project named, **EDA322_<GroupID>**. For example, if your GroupID is *101*, **your project should be named** as *EDA322_101*.
- Once you have created the project, use “Add to Project” -> “Existing File” to add all the files provided in the *EDA322_GroupID.zip*. Make sure you select “**Copy to project directory**” while adding the file.
- We have provided entity definitions for some of the VHDL components that you will be building on. **You should not change the given entity definitions.**
- The deadlines for the labs are in the respective lab session of each group, during the following weeks:

Lab #	Deadline
Lab 0	16/1 - 18/1 (W1)
Lab 1	30/1 - 01/2 (W3)
Lab 2	06/2 - 08/2 (W4)
Lab 3	20/2 - 22/2 (W6)
Lab 4	27/2 - 29/2 (W7)
Lab 5	End of the study period

If you pass the lab’s demonstration (Labs 1 - 4) before the respective deadline, you will get a bonus of 1 point each.

- You are not allowed to take help in terms of suggestions and code from other groups.
- Your code will be checked for plagiarism at the end of the course.