GOALS:

The purpose of this lab is to implement a project on a DE2 board. You are free to choose a project from your area of interest. However, you must obtain approval of your project concept from the instructor prior to beginning your project. Otherwise, instructor will assign a list of project for your selection.

PROJECT IMPLEMENTATION STEPS:

1. Construct block diagram of the circuit and demonstrate circuit concepts to TA. Once your circuit concept is approved, you can proceed with circuit design.
2. Simulate your circuit design and demonstrate operation to TA
3. Implement your circuit on DE2 and demonstrate operation of the circuit to TA.
4. Make final presentation of your circuit.

PROJECT ASSUMPTIONS:

1. Project should be done in 2-3 person groups
2. Workload in each group should be distributed equally to all group members
3. Project consists of:
   a. Design implemented on DE2 board
   b. Project report
   c. Project presentation
4. Project report must contain the information about which group member did which part of the project
**PROJECT DELIVERIES:**

**Implementation:**
1. Implement project on DE2 board – it has to be fully operational

**Presentation:**
1. Prepare slides which will be presented by the group during presentation day
2. Presentation should take 10-15 minutes
3. Include:
   a. the description of the project
   b. roles of each group member taken in the project
   c. schematics, diagrams
   d. encountered problems and how they were solved
   e. any information regarding the project, that might be interesting for the audience
   f. conclusions

**Final report:**
1. Include the following:
   a. the goal
   b. roles of each group member taken in the project
   c. background theory
   d. schematics, diagrams, etc
   e. circuit operation
   f. simulation data (if applicable)
   g. Altium output (if applicable)
   h. conclusions

**ORGANIZATION DETAILS:**

**Presentation day:**
1. Please arrive on time, don’t be late
2. Preparation phase:
   a. run your project at the workstation – connect necessary equipment and verify if your project works as expected
   b. get prepared for your presentation
3. Presentation phase:
   a. do not work on your project anymore – focus on presentations
   b. each group:
      i. presents their slides (all group members have to participate)
      ii. answers the questions from the audience
      iii. goes to their workstation to demonstrate working circuit
4. Closing phase