UNIVERSITY OF TEHRAN

Electrical and Computer Engineering Department

Core-Based Embedded System Design
ECE 160 - Spring 1403-1404
Project – Part C: System Implementation
Due Date: Tir 24

Description:

This is the final part of the project and you will complete your embedded system including hardware and software.

Tasks:

A. Building System Hardware

Design and implement your system hardware based on the selected application and its constraints.

B. Building System Software

Implement your software in C/C++ based on your previous algorithmic implementation in Part B of Project. Compile your software and load the machine codes in the instruction memory.

C. Simulate your Embedded System

Simulate your design and verify its functionality. Evaluate its performance, accuracy, and any other metric based on your application.

D. Write the Report:
Follow the provided template to prepare your report. This is the final report that also includes your pervious reports. The report should include:
- **Abstract:** A concise summary of your project, covering its motivation, main idea, and key outcomes.
- **Introduction:** An overview of your application, its challenges, and your motivation. Clearly define the problem and outline all constraints.
- **Embedded System Design:** Algorithmic implementation, extracted C/C++ software, and hardware design of your embedded system. Explain your design completely.

- **Experimental Results:** Validate your implementation, report the results and analyze them.
- **Conclusion:** Summarize your design and the outcomes, i.e., your final results.
- **References:** Cite all sources used in your work.

Deliverables

- All implementation code files.
- A PDF report file
- Put all codes and the report file in a folder and zip it. Name your zipped file using the following format

'Family1_Family2_PJ#C.zip'