

Due Date: 08/05/2016

EE-142--Digital Design

Project 2: Coffee Machine Dispenser

Project overview:

Your task in this project is to design and simulate a coffee machine dispenser controller that takes coins as the input and gives three different types of coffee (and possibly change coins) as the output. Operation properties of the required machine are described as follow:

- The machine takes 50 Kr (0.5 TL) and 1 TL coins, only.
- The machine can dispense:
 - ✓ Latte: 50 Kr
 - ✓ Turkish coffee: 1 TL
 - ✓ Cappuccino: 2 TL
- The machine should output the change, if extra coin is inserted. For instance, if you put 1 TL and select Latte, the machine should give back your 50 Kr.
- The machine has a reset button, which aborts operations and returns all money inserted, at any time.
- Only one input may be active at a given time.
- A product can be dispensed in one clock cycle.
- If no inputs are active, the state machine stays in the current state.

Grading policy:

- Functioning implementation: 50%
- Demo: 15%
- Report: 35%

Your report should include your design schematics, clearly explaining the design strategy used in the project along with all necessary details and results (such as states of the machine, type of sequential elements, proper citations, and etc.). You should refer to the guideline for writing project reports, which has already been given in the course's syllabus, for compliance. **Please note that, your report must be at most 5 pages long.**

At most by end of the due date, you have to submit your full project report. Late reports will not be accepted. For demo presentations, further arrangements will be made and you will be informed. Please note that each student has to work individually and teamwork is not allowed. Unethical behavior and plagiarism will definitely not be tolerated.