

# Computer Aided Digital System Design

Lecturer: Dr. Hajar Falahati

First Semester 98-99



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## Homework 3

## Modeling, Design & Coding

Deadline 1398/08/14

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**Students who were present for the quiz 2 can exploit their designed FSMs and ASMs for the questions 1 and 2. You can also improve them and submit again. By this, you have this chance to request to consider them as your quiz as well!**

**Other students who were absent for the quiz 2 have to prepare ASM, FSM, and block diagram for questions 2 and 3.**

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### 1- Newspaper Vending Machine

Check the slide number 40 of 11-CAD-Comb-Sequential.pdf file for more information about the newspaper vending machine.

- Draw the block diagram for the newspaper vending machine defined in the quiz 2. Your block diagram should include control part and data part.

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### 2- Arbiter

Check the slide number 40 of 11-CAD-Comb-Sequential.pdf file for more information about the arbiter.

- Draw the block diagram for the arbiter defined in the quiz 2. Your block diagram should include control part and data part.
- Implement data part at the behavioral level in Verilog. Test your program with these inputs and take snapshots from the inputs and outputs. Put your code and your pictures in a file.

```
// r1, r2, r3
0, 0, 0
1, 0, 0
0, 1, 0
0, 0, 1
1, 1, 1
0, 1, 1
```

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## Required Documents

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- Write the answers thoroughly and clearly. Upload the answers as a PDF file on the Edmodo.
- Please note that the name of the file should be on this format:  
<HW3\_[Full Name]\_[Student ID]>.pdf

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## General Rules

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Please consider the course rules.

- Deadlines are tight.

- You have 3-day extra time for submitting assignments/projects in the whole semester.
- 20% penalty for your late assignment/project submissions after 3-day extra time!
- Zero score for the late assignment/project submissions after uploading the solution in the course website!
- Zero score for copied assignments/projects and academic misconduct.

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## **Deadlines**

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Friday 23:59. 1398/08/24.

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## **Contact Information**

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Ask your questions via the course website or send an email to:

[hosseinaminiii75@gmail.com](mailto:hosseinaminiii75@gmail.com)

[estirinevsha@gmail.com](mailto:estirinevsha@gmail.com)

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**Good Luck**