TALLINN UNIVERSITY OF TECHNOLOGY

Department of computer engineering

Chair of Digital Systems Design

Student Name

Student ID

Finite State Machine (Elevator)

Digital Systems Modeling and Synthesis (IAY 0340)

Lab report

Presented: 30.10.2014

Tallinn 2014

Abstract

In this section, please specify the functionality of the design. Please also specify the type of finite state machine and the target technology used in this design. Motivate your design decisions.

1. Design Overview

In this section introduce how you make your design. What are the key components of the design. Also show the diagram of the design. It can be similar to Figure 1. The diagram should also include any extra hardware that is needed by the finite state machines.
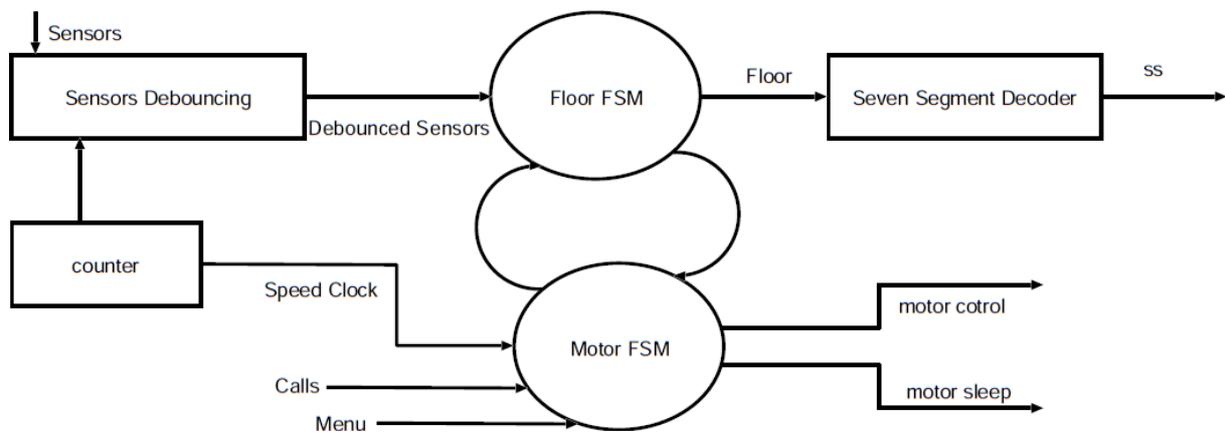

Figure 1. System Overview

1.1 Sensors Debouncing Circuit.

In this section and other sections like this describe in detail. Add supporting diagram and also include any suppositions. Each detail should be explained in a comprehensive and professional manner.

Also add the top level entity showing inputs and outputs of this block.

1.2 Seven Segment

In this section and other sections like this describe in detail. Add supporting diagram and also include any suppositions. Each detail should be explained in a comprehensive and professional manner.

Also add the top level entity showing inputs and outputs of this block.

1.3 Counter

In this section and other sections like this describe in detail. Add supporting diagram and also include any suppositions. Each detail should be explained in a comprehensive and professional manner.

Also add the top level entity showing inputs and outputs of this block.

1.4 Supplementary Hardware

Any supplementary hardware that is added to this design which was not clearly visible in the specification should be explained in a seperate section. If multiple similar hardware blocks are needed then they can be combined into one section and should be explained. Motivation of why these blocks are required should be given. Diagram showing how such sections are required is also an important part of the specification.

Also add the top level entity showing inputs and outputs of this block.

2. Finite State Machines

Make the diagrams for the state machine. Explain in your own words each state and transition of the state machine.

Also add the top level entity showing inputs and outputs of this block.

2.1Transition Tables

The transition tables should be shown in this section. Also explain how these tables are extracted from the state machine.

3. Testing methodology

Define the cases that should be tested to make sure that the design is working properly.