**Laboratory Report Cover Sheet   
DeVry University  
College of Engineering and Information Sciences**

**Course Number:** ECET230

**Professor:**

**Laboratory Number:** 5

**Laboratory Title:** Design of a Simple State Machine

Note that this is a formal lab and needs to be submitted as an individual separate document.

***Questions:***

The following questions are to be included in your formal report.

1. In Figure 5.3, what is the purpose for the arrows going from S1 to S0 and from S4 to S3? Why are these needed?
2. What are the advantages of using state variables instead of a series of IF…THEN…ELSE statements?
3. Give an example of a finite state machine that can be easily development using state diagrams and state variables?
4. Do some research and determine when the state variable method of design was developed. Be sure to properly cite your sources.

The grading rubric for this lab is below.

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| **Deliverable** | **Points Available** |
| Formal Lab Content | 35 |
| Working Circuit(s)/Program(s) | 25 |
| Questions | 10 |
| **Total Points** | 70 |