

# Laboratory Session 7

## 1.1 Pre-Laboratory Report

Complete this report before coming to the Laboratory Session

**Due Date** Week of September 6th-September 10th, 2021 in lab section. Submit report electronically before start of Lab via Blackboard (check assignments folder)

**Format** Follow the Pre-Laboratory Report Template found on Blackboard

**Content** Sections to be included in the Pre-Laboratory Report include

1. **Header**
2. **Problem Statement**
3. **Research & Investigation**
4. **Alternative Solutions**
5. **Optimum Solution (with flowcharts)**
6. **Sources/Works Cited**
7. **Code Attachments**

**Additional Task** Answer the following questions and include them in the Pre-Laboratory Report

- a. What are servos and how do they work?
- b. What Arduino functions are utilized to control the servo?

**Additional Task** Create flowcharts for the code you plan to generate in Laboratory 4

- a. Make 1 flowchart for the sample code that you have been provided in the Research & Investigation section
- b. Make 1 flowchart for your Optimal Solution
- c. You can use PowerPoint, or any other software, to create your flowcharts
- d. Your flowcharts should use simple English, not IC syntax
- e. Include the flowchart in the Optimum Solution section of your Pre-Lab report

## 1.2 Post-Laboratory Report

**Due Date** Week of September 6th-September 10th, 2021 in lab section. Submit report electronically before start of Lab via Blackboard (check assignments folder)

**Format** Follow the Post-Laboratory Report Template found on Blackboard

**Content** Sections to be included in the Pre-Laboratory Report include

1. **Header**
2. **Problem Statement**
3. **Research & Investigation**
4. **Alternative Solutions**
5. **Optimum Solution**
6. **Analysis & Testing**
7. **Final Evaluation**
8. **Sources/Works Cited**
9. **Code Attachments (as needed)**