

**California Polytechnic State University Pomona**

DEPARTMENT OF ELECTRICAL & COMPUTER ENGINEERING

IINTRO TO MICROCONTROLLERS LAB

ECE 3301L.03

Report #2

**LAB 3 – Introduction to Assembly Language**

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# INTRODUCTION

## Objective

In this lab, we will learn the basics of Assembly language. Through implementing last week’s lab in Assembly, we will understand how C commands we are familiar with translate to Assembly.

## Summary

The hardware for this lab did not change much from Lab 2. The exception to this being changes to the wiring of PORTE and the Logic Analyzer. The software for this lab, however, is a different story. Students will be required to code in Assembly for the first time, presenting a whole new array of challenges. However, by implementing a lab we have already completed in a different language, it was easier to spot what was wrong when debugging the code if the LEDs we not lighting up correctly.

# DATA AND RESULTS

A screen shot of a computer

Description automatically generated

Logic Analyzer output of part 5 of the lab.

# CONCLUSION

In this lab, students learned how to code in Assembly language by implementing a previous lab. In converting the C code to Assembly, students gained a better understanding of the syntax of Assembly and how to debug the code when problems arise. Students saw how different languages of code could implement the same function on the same hardware configuration.