

# DASL-100.2

## C++ Programming and Linux

### Homework #2 – Due 2/15/2023

1. You are working with two components: a potentiometer and a servo motor. You are asked to demonstrate that when you spin the potentiometer, the servo motor will spin in one direction. Create a program that consists of three files:
  - A. A main source file (main.cpp), a function files (any name.cpp), a header file (any name.h).
  - B. In the header file, create a structure that contains potentiometer reading and servo motor position.
  - C. In the function file, create two functions:
    - i. Function 1: Generate a set of potentiometer reading with an increment of 100.
    - ii. Function 2: Take the value from the potentiometer reading and update the servo position as follow:  
between 0-200 : servo motor position is 250. Between 201-400 : servo motor position is 500. Between 401-600 : servo motor position is 750. Between 601-800 : servo motor position is 1000. Between 801-1023 : servo motor position is 1023.

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- D. In main source file, run the functions in the function file so that:
  - i. Cout out the potentiometer reading.
  - ii. Cout out the servo motor position.
2. Compile this program with CMake.

\*Note: Every part is worth 5 points. Part C can be earned 2 extra points.