

CS4543/5543 - Embedded Systems

Assignment #5

Fall 2025

The purpose of this assignment is to write a function to implement a two-digit display of the value presented to the function. Write a sketch that demonstrates its function. This sketch should display a percentage of voltage level of the potentiometer setting. You can use the Arduino `analogRead()` function to determine the position of the potentiometer, and `millis()` for timing.

The prototype of the function should be as shown below:

```
void display(int value, char base, char blanking);
```

where:

- `value` - the int value to be displayed
- `base` - a zero for decimal, a one for hexadecimal
- `blanking` - a zero if a single digit value should be displayed without a leading zero, a one otherwise

The display should be free from any noticeable flicker - this might require adjusting some of the timing parameters of the display multiplexing, and optimizing the formation of the digits.