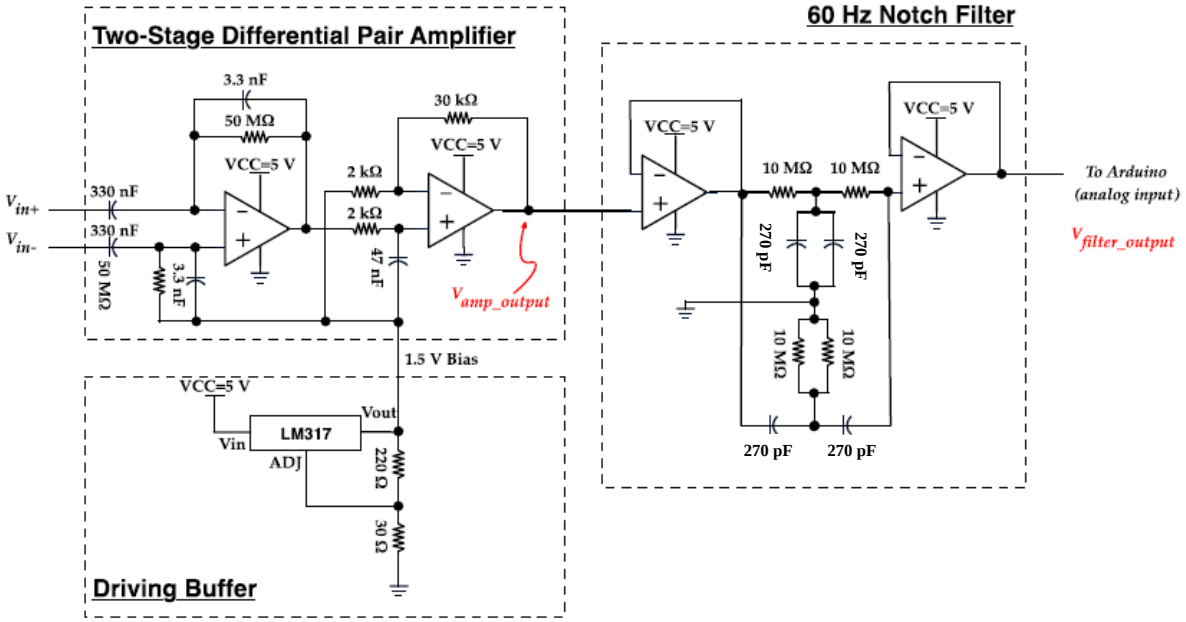
Lab 3: Pre-processing of ECG Signals

1 Remove the notch filter circuits in lab 2. Connect the ECG amplification output to the analog input of Arduino board directly. Construct a digital filter to remove the 60-Hz power noise.



(a) ECG signal amplification circuits.

2 There exist a baseline wander noise in the recorded ECG signal. Try to use some filters to remove this low frequency noise.

3 Use 8 bits instead of 10 bits for the digitization of ECG signals. Design an algorithm and implement in Arduino to maintain the maximum dynamic range of the input ECG signal with 8-bit sampling.

TA: _____

