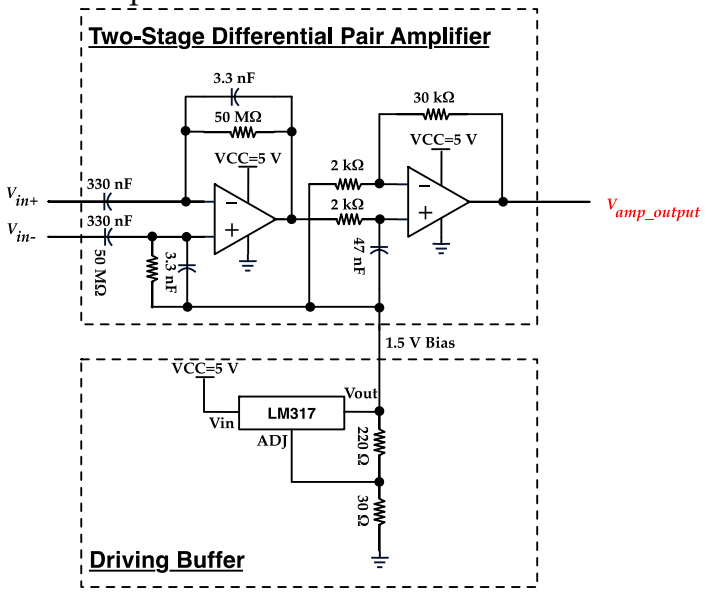
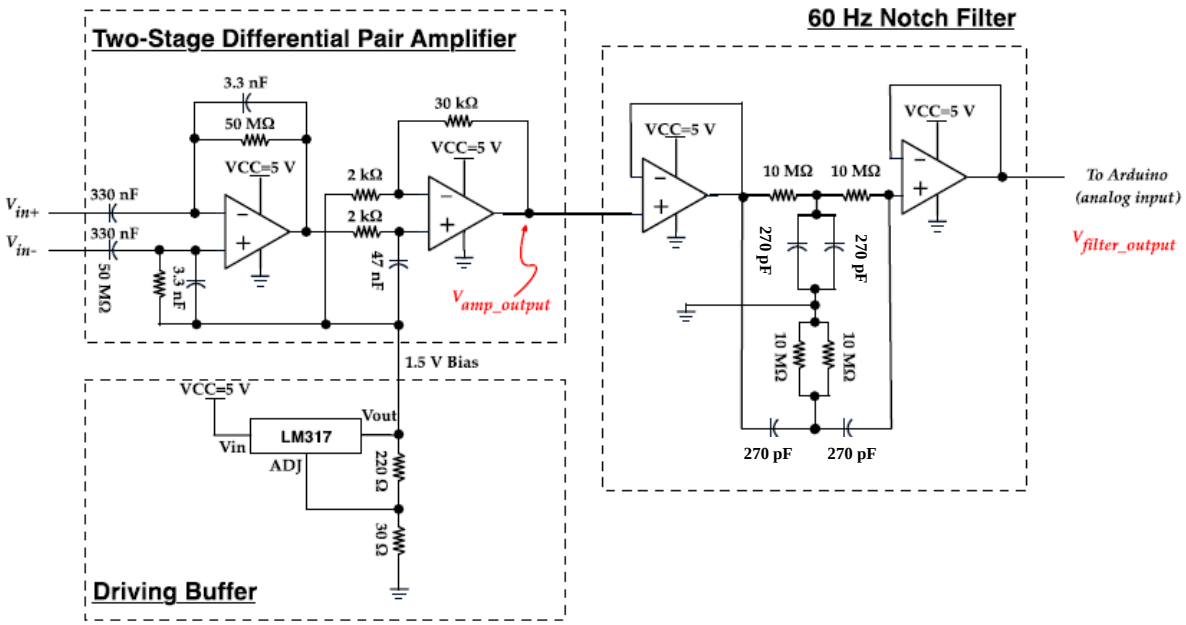
Lab 2: ECG Circuits, Signal Sampling and Digitalization

1 Following the schematic Fig. (a) below, build the ECG signal amplification circuits with the provided circuit elements. Capture and describe the waveform at this stage.



(a) ECG signal amplification circuits.

2 To remove the 60-Hz power noise, we can add a notch filter after the amplifier output. Capture and describe the waveform at this stage. Compare the output signal with that of V_{amp_output}.



(a) ECG signal amplification circuits.

3 Connect the above circuitry (V_{filter_output}) with Arduino platform. Use the ADC in Arduino for the signal sampling and digitization. With the provided sample codes in Lab 1, you can save/monitor the ECG signals on a PC.

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