EE230: Lab-7
Active Filters

Prateek Garg, 20D070060

March 13, 2022

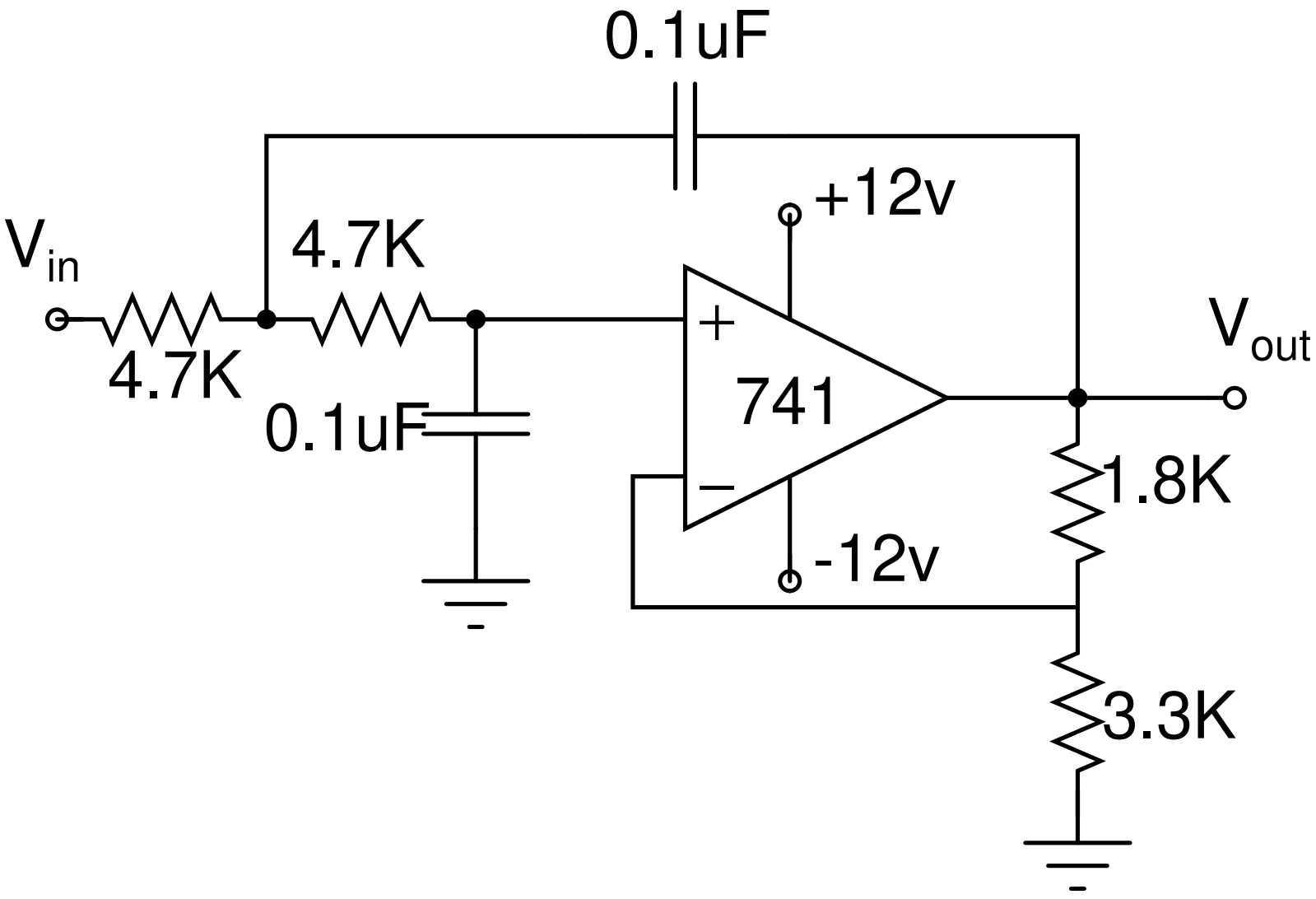
1 Overview of the experiment

1.1 Aim of the experiment

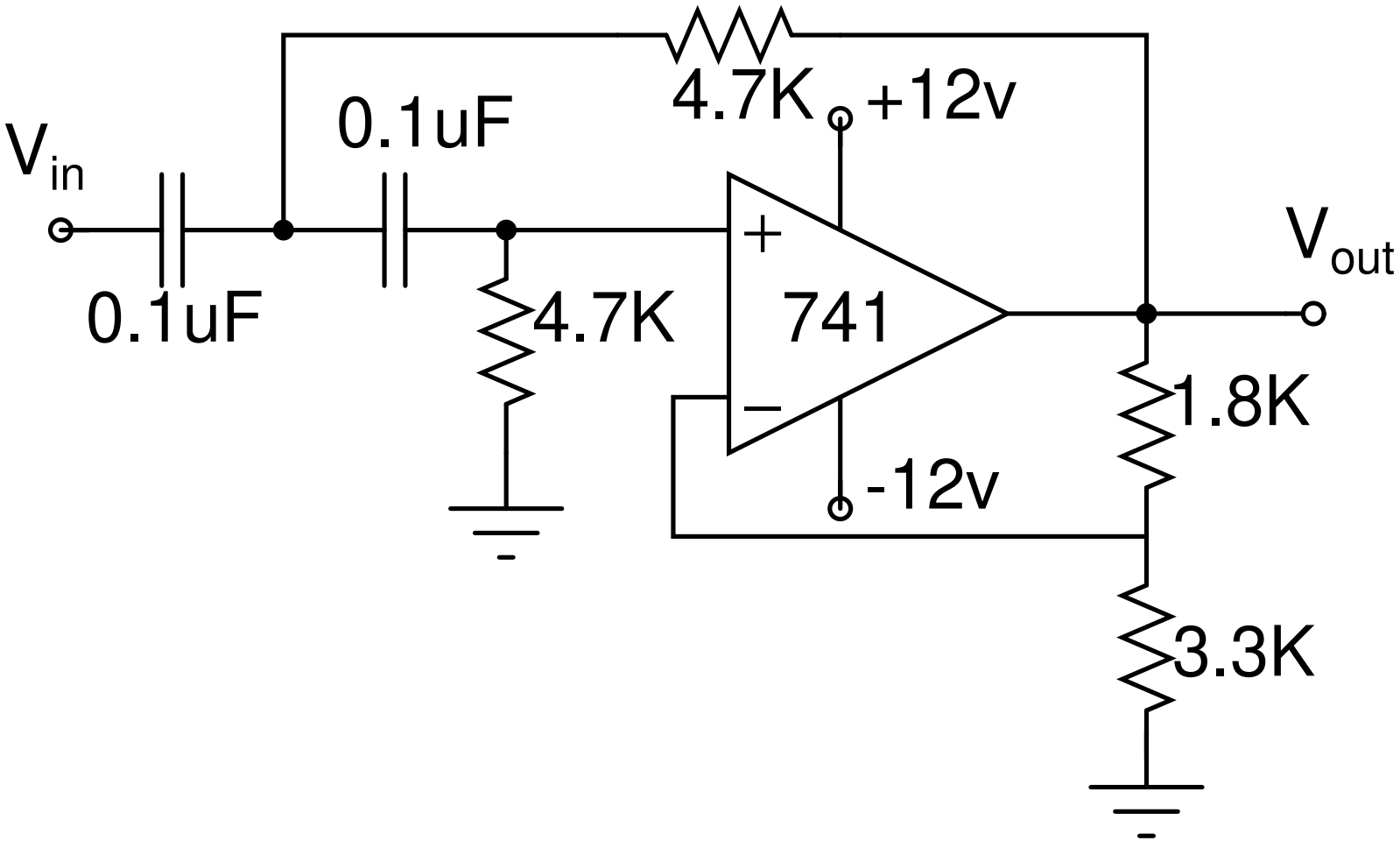
The aim of the experiment is to create Active filter circuits using opamp LM741 and plot gain vs frequency. g the values to a python script to plot them using Matplotlib.

2 Design

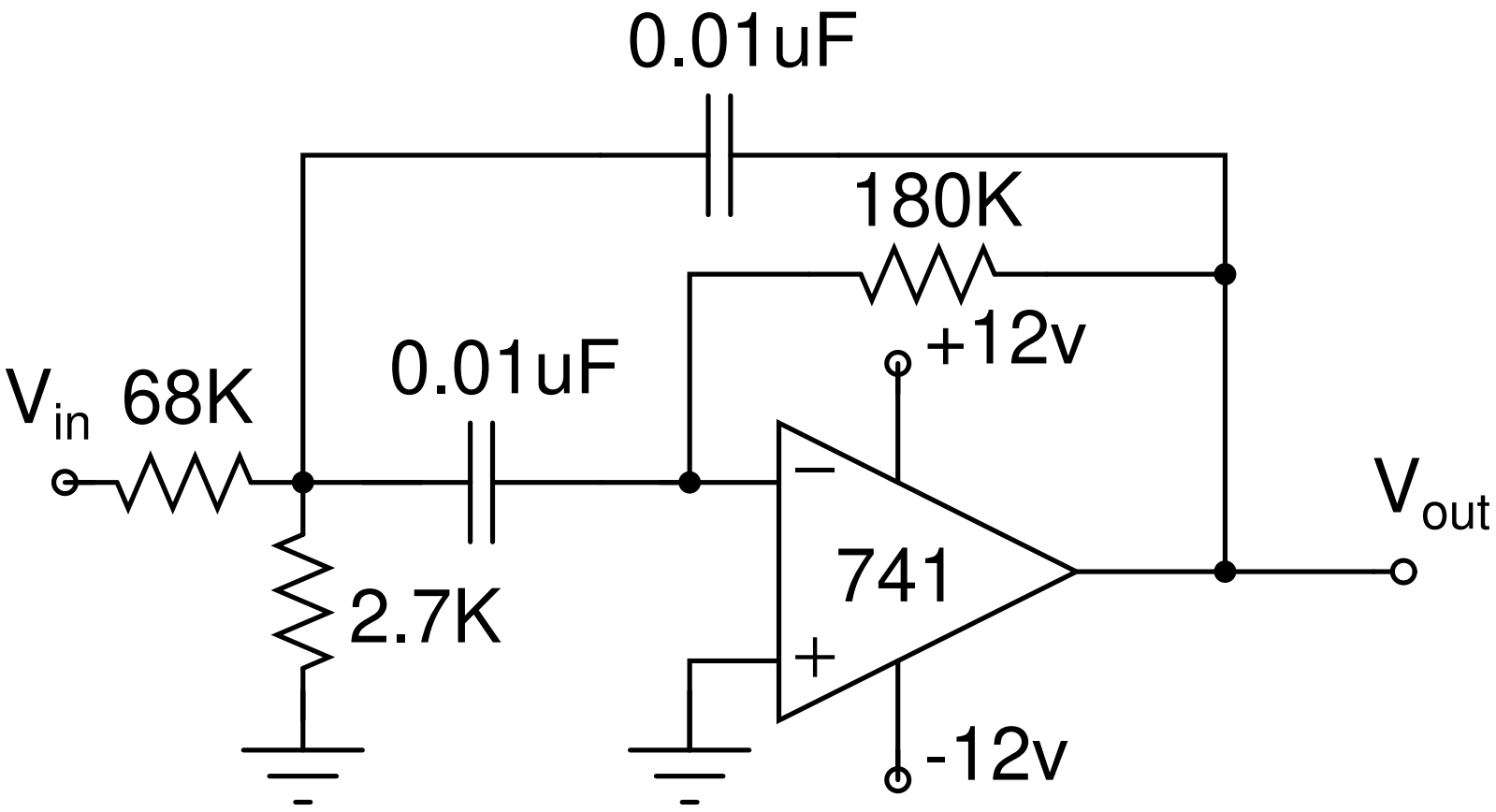
2.1 Sallen-Key Active Low-Pass Filter



2.2 Sallen-Key Active High-Pass Filter

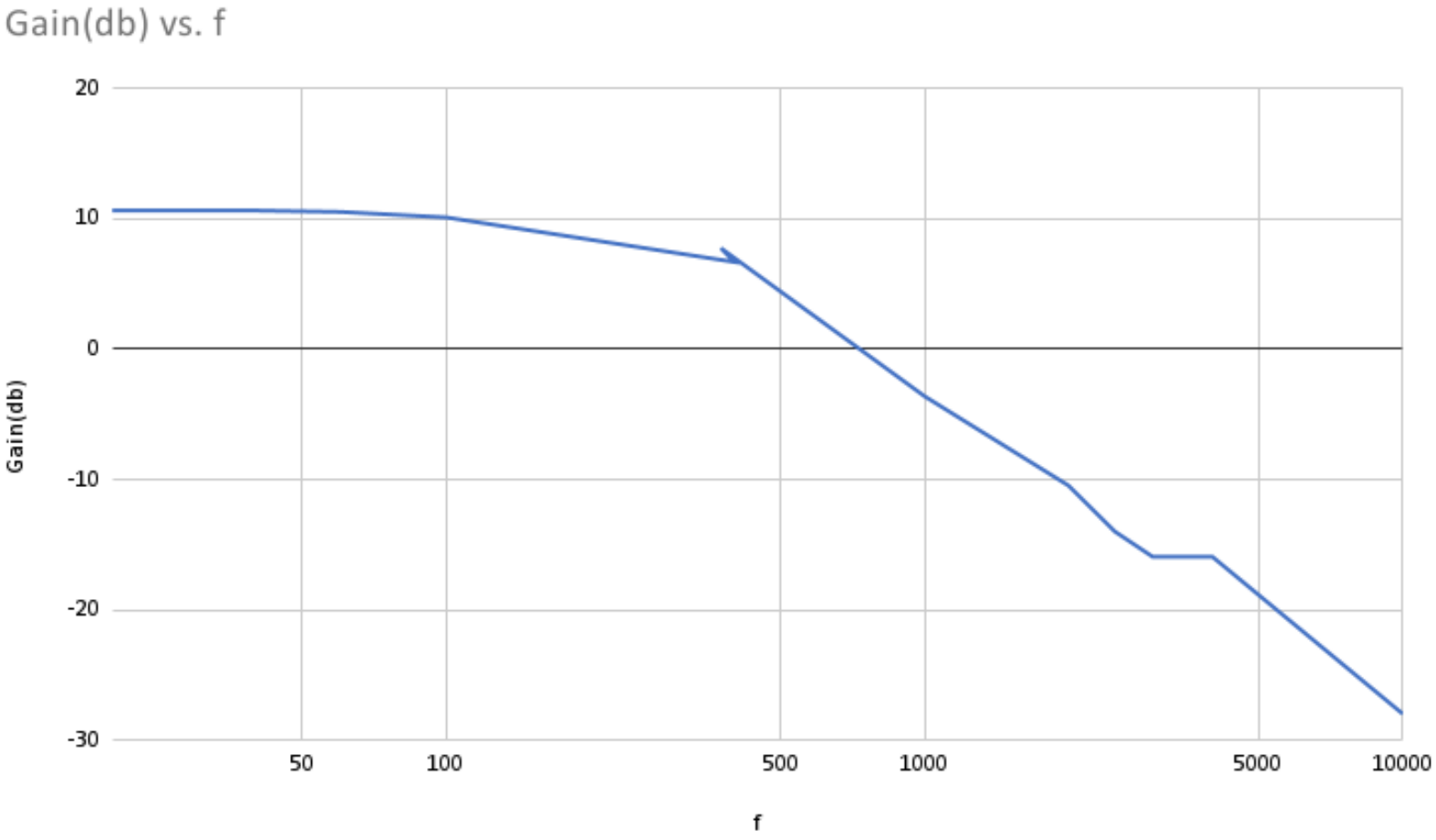


2.3 Multiple-feedback Active Bandpass Filter



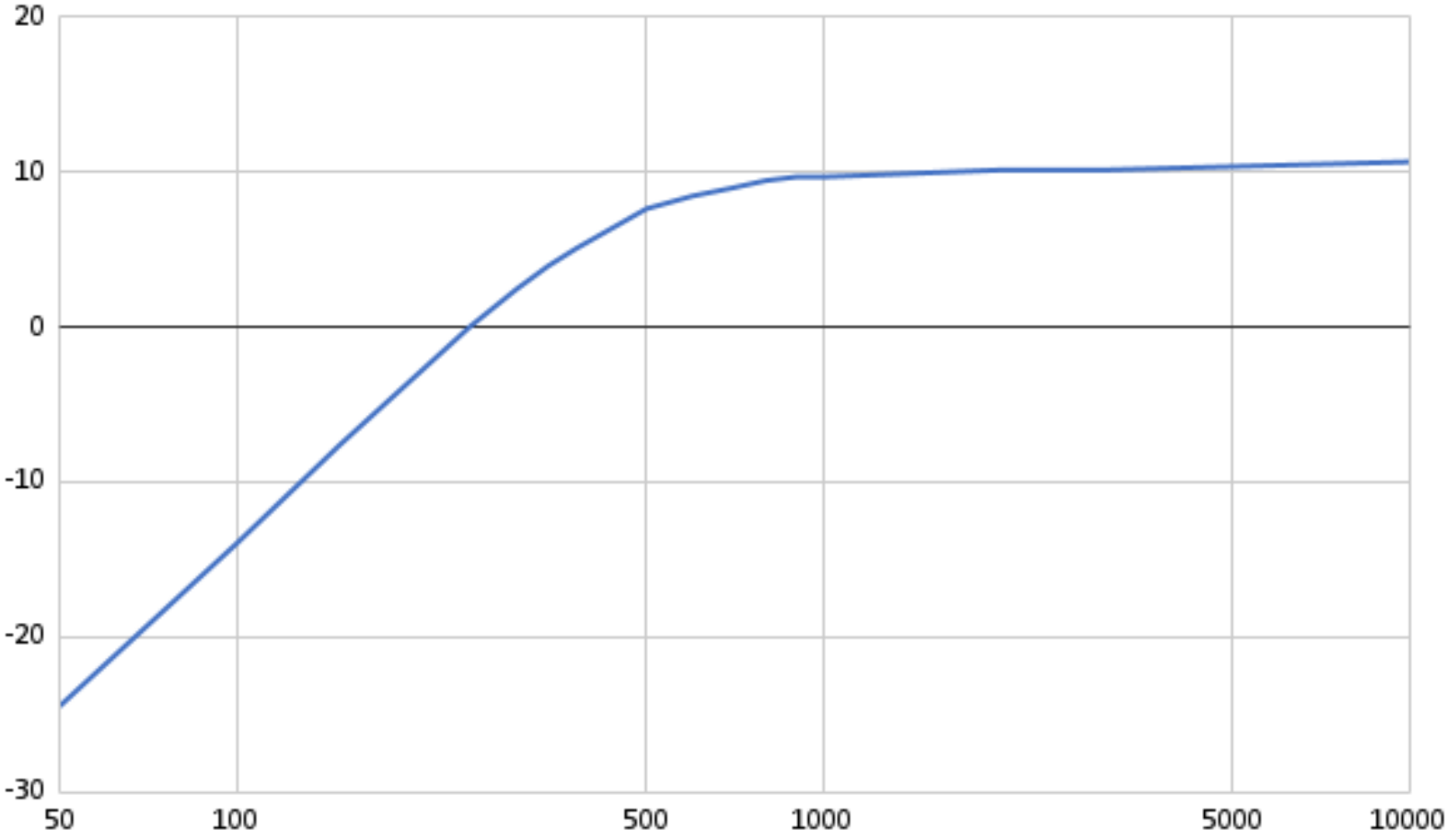
3 Experimental results

3.1 Sallen-Key Active Low-Pass Filter



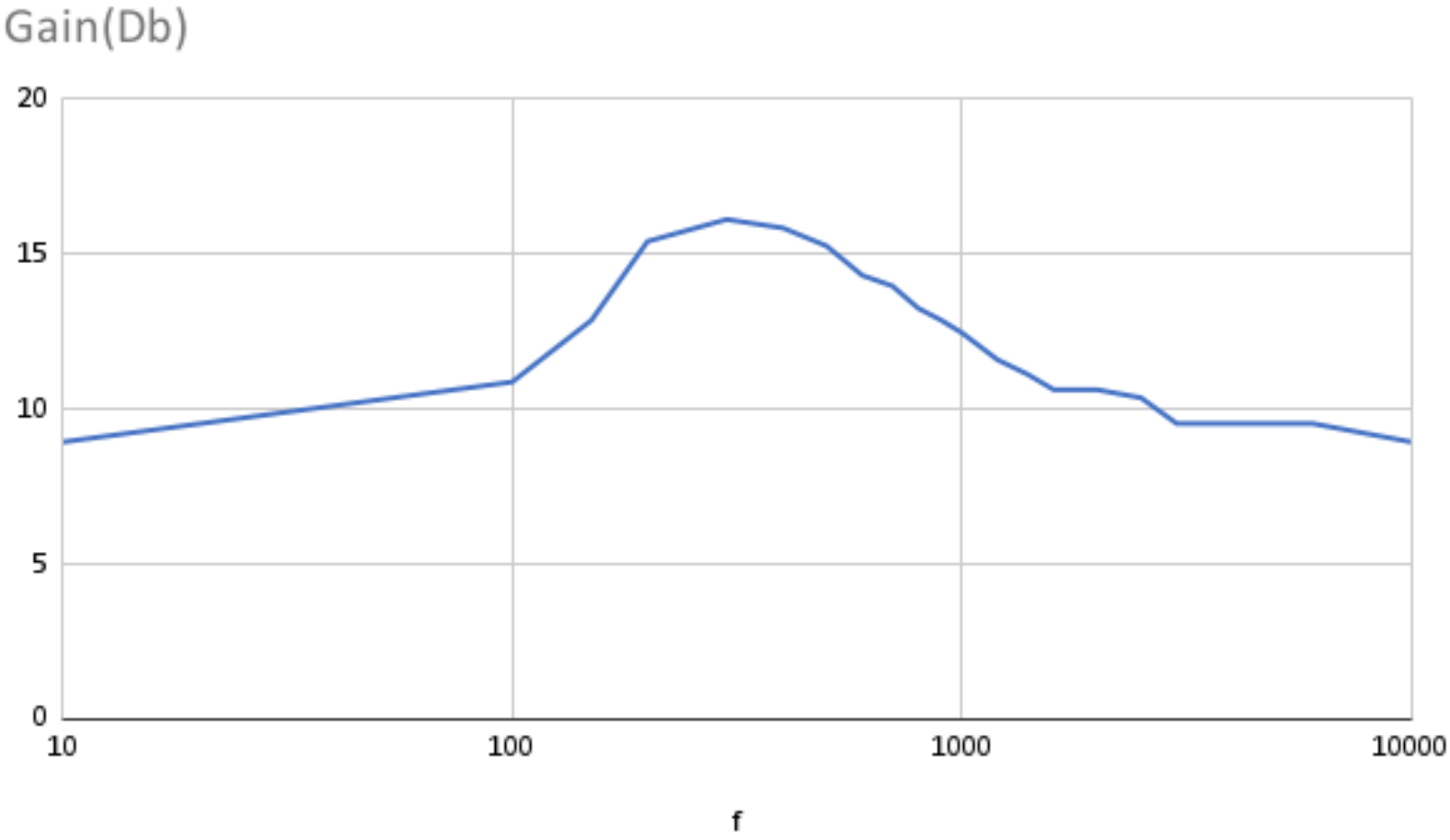
Theoretical Cut-off frequency=338.62Hz Experimental Cut-off frequency=375Hz Roll-off=-22.6 Experimental Values quite match the theoretical Expectations.

3.2 Sallen-Key Active High-Pass Filter



Theoretical Cut-off frequency=338.62Hz Experimental Cut-off frequency=400Hz Roll-off=36.124 Experimental Values quite match the theoretical Expectations.

3.3 Multiple-feedback Active Bandpass Filter



4 Experiment completion status

All the sections were completed