**DSP Lab 4**

A close up of a map

Description automatically generated

A close up of a piece of paper

Description automatically generated

The pole-zero plot is for a low pass filter since the zeros and poles are closest when the real part is high and the magnitude response shows that the lower cycles per sample the higher the gain.

**TASK 2:**

Questions 1,2, and 3 were answered in our prelab.

A close up of a map

Description automatically generatedA close up of a mans face

Description automatically generated

4. The bandpass filter has a gain of 0.5 at about .11 cycles/sample and at .44 cycles/sample which is about 900 Hz and 3604 Hz.

5. The train sound is only the high pitches and low pitches once going through the filter. The sounds in the middle are filtered out by the bandstop filter.