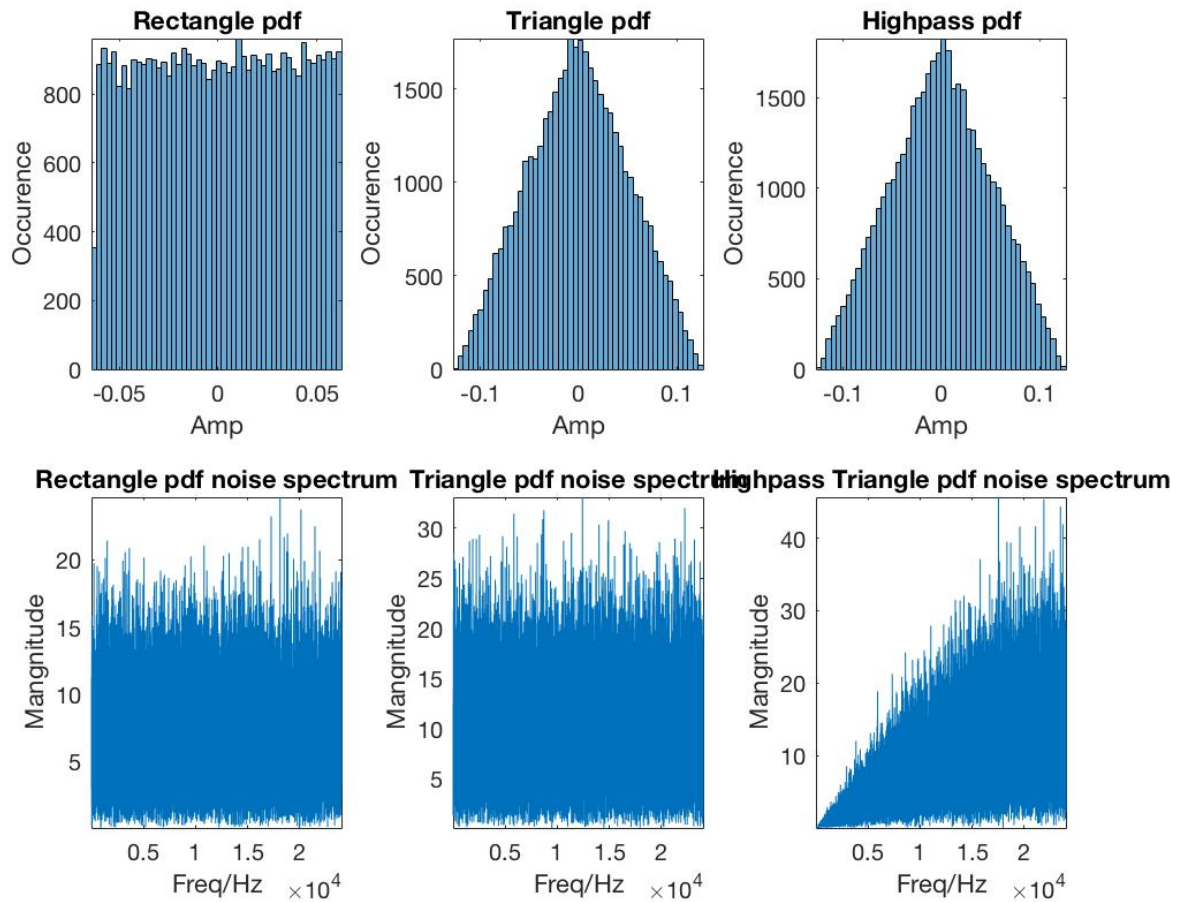
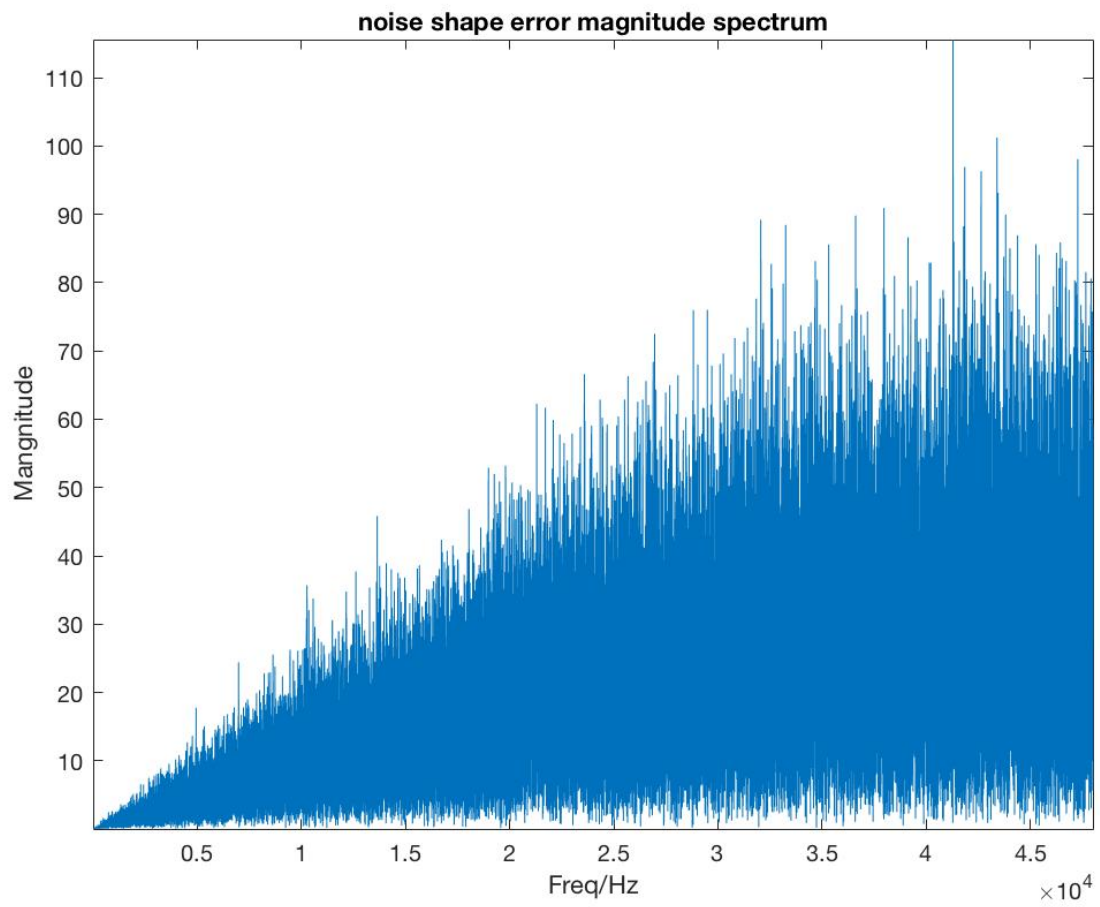


Discussion

Question 1

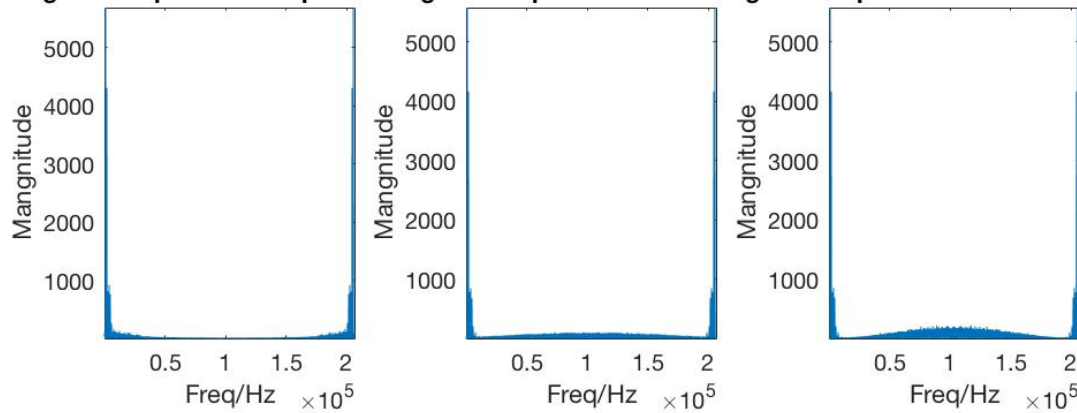


Question 3

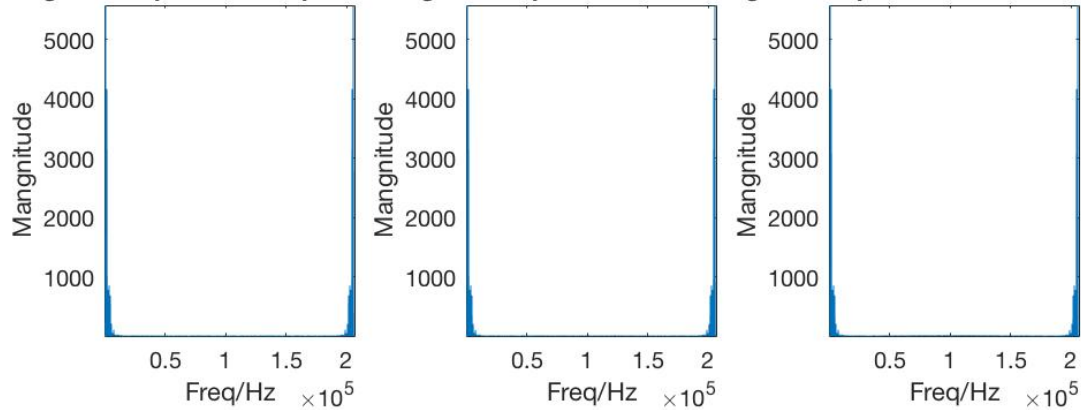


Question 4

magnitude spectrum of quantized 4 bit magnitude spectrum of dithered 4 bit magnitude spectrum of noise shape 4 bit



magnitude spectrum of quantized 8 bit magnitude spectrum of dithered 8 bit magnitude spectrum of noise shape 8 bit



Discussion

the sound of quantize souds very annoying, a lot of high frequency content and ear-piercing, the sound of dithering kind of reveal the nature of the flute timbre, which I clearly heard the added noise but also I can recognize the sound of flute. The sound of noise shaping is like improving the result of dithering, I can hear the change of the frequency of the noise is moved toward high frequency which makes it less audible. 8 bit word length has much better quality than 4 bit word length.