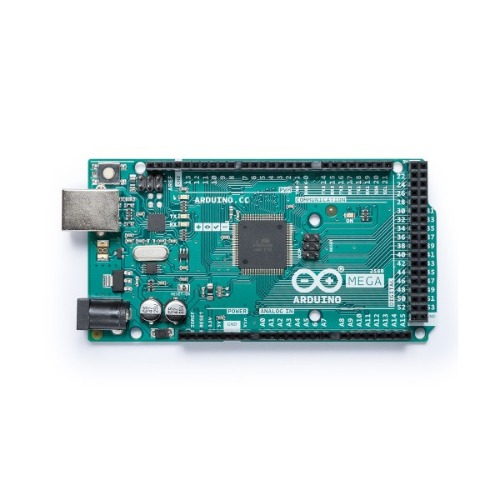
**REPORT**

|  |
| --- |
| **Experiment 1:** **Sampling and aliasing** |



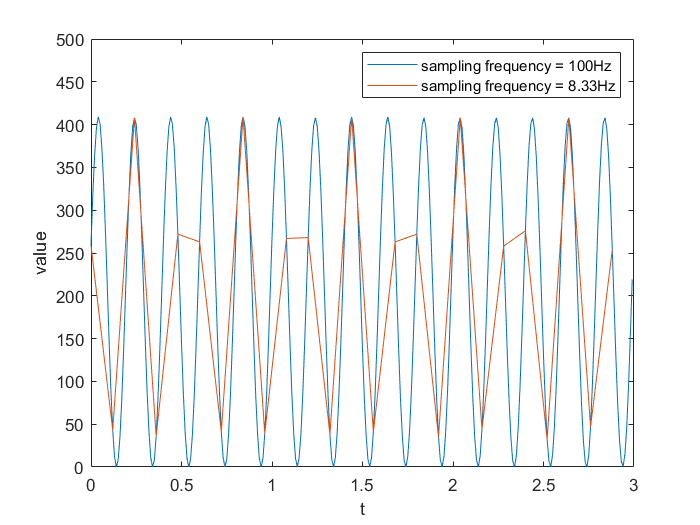
F.G.

A0

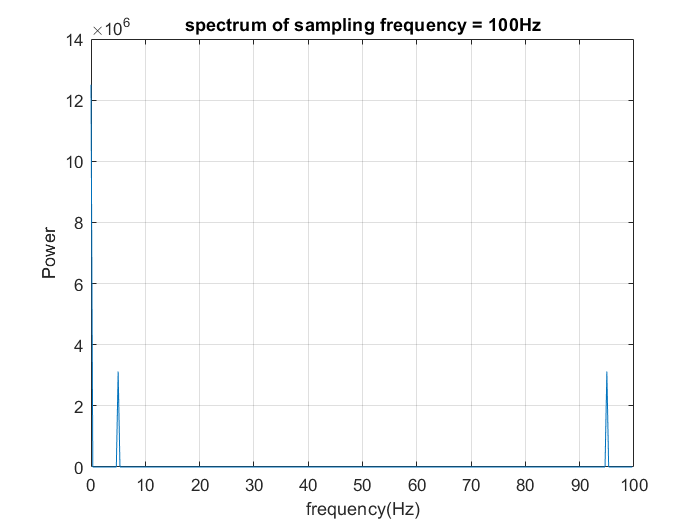
GND

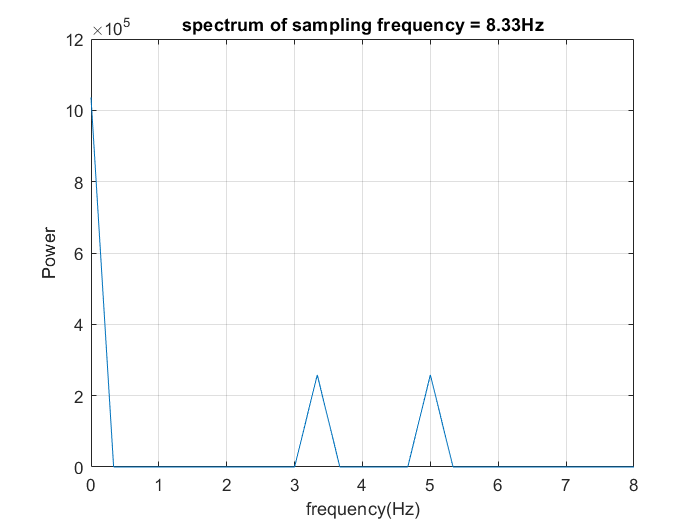
|  |  |  |
| --- | --- | --- |
|  | **wave frequency** (normal) | **wave frequency** (aliasing) |
| **Theoretical Result** | **5Hz** |  |
| **Experiment Result** | **5Hz** | **3.2Hz** |

1. Result of the code plot(1pic):



1. Result of the FFT plot(2pic):





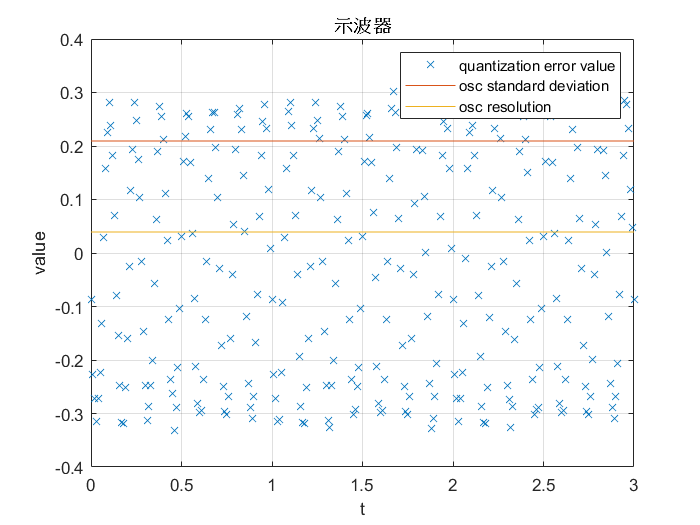
**Discuss:**

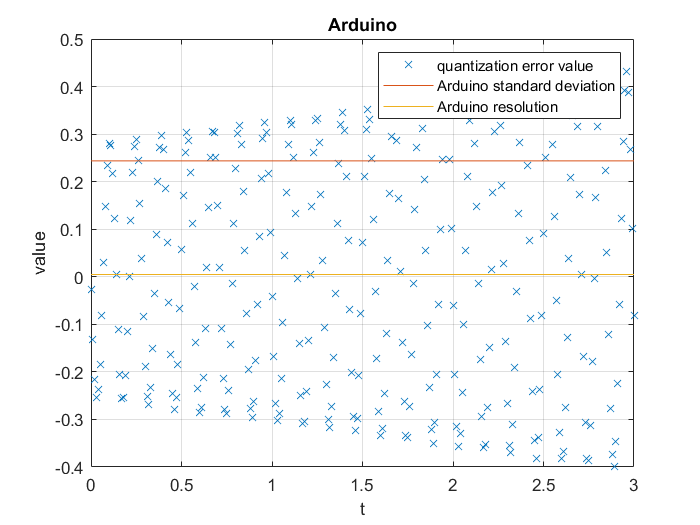
Try to explain if aliasing happened, What's bothering you?

|  |
| --- |
| **Experiment 2: Quantization error** |

|  |  |  |
| --- | --- | --- |
|  | **Max** **error** | **Standard deviation** |
| **Theoretical Result** | **<0.5** |  |
| **Experiment Result(F.G)** | **0.3** | **0.21** |
| **Experiment Result(Arduino)** | **0.43** | **0.25** |

1. Result of the code plot(2 pics):





**Discuss:**

Is it what you want to get of this experiment result? Try to explain why we can not get the precise quantization error?