

# **Rajshahi University of Engineering & Technology**

**Course Title:** Sessional Based on CSE 4103

**Course No:** CSE 4104

**Report No:** 01

**Submitted to:**

Md. Farukkuzaman Faruk

Designation: Assistant Professor

Dept: Department of Computer Science & Engineering

**Submitted by:**

Quazi Samiha Tasnim

Roll No: 1703155

Section: C

Dept: Department of Computer Science & Engineering

**Submission Date:** 11 September, 2022

**Problem Statement:** Plot Analog Signal and Perform Sampling and Quantizing

**Objectives:**

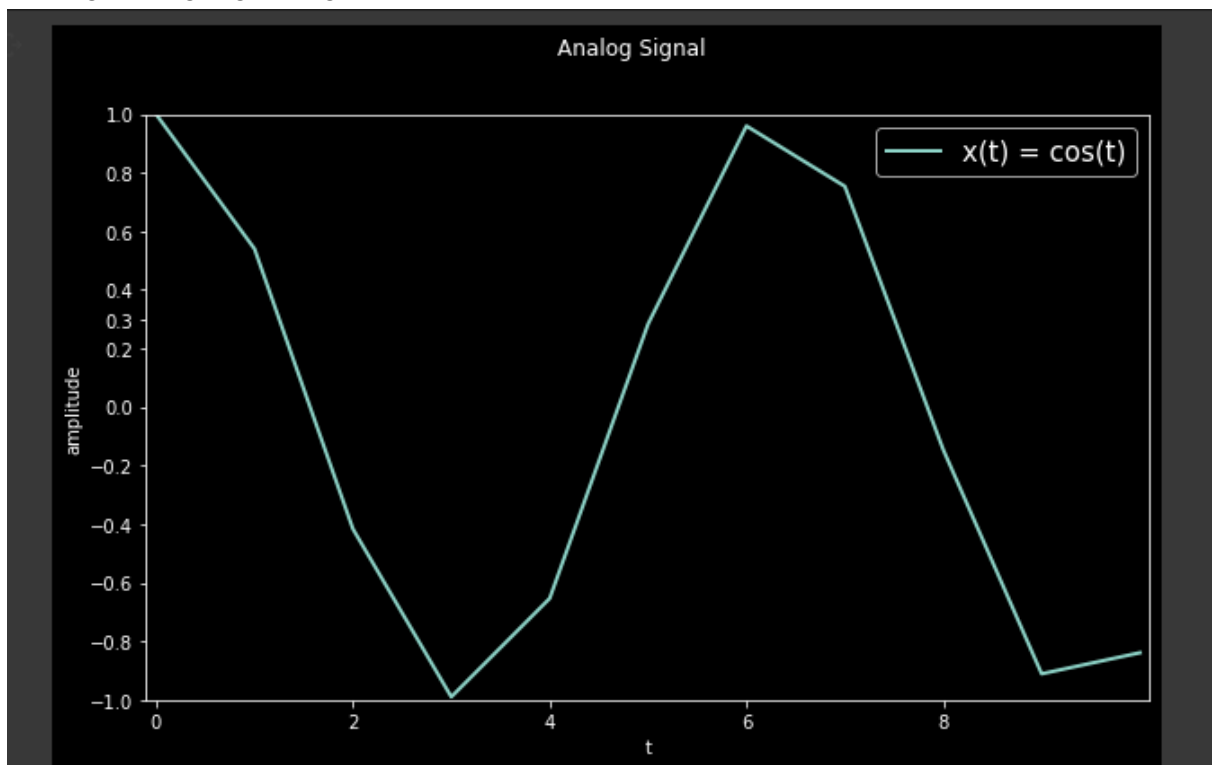
1. Plot analog/continuous signal which is a function of cosine using python
2. Sample the analog signal to digitize it
3. Performing quantization on digital signal

**Source Code:**

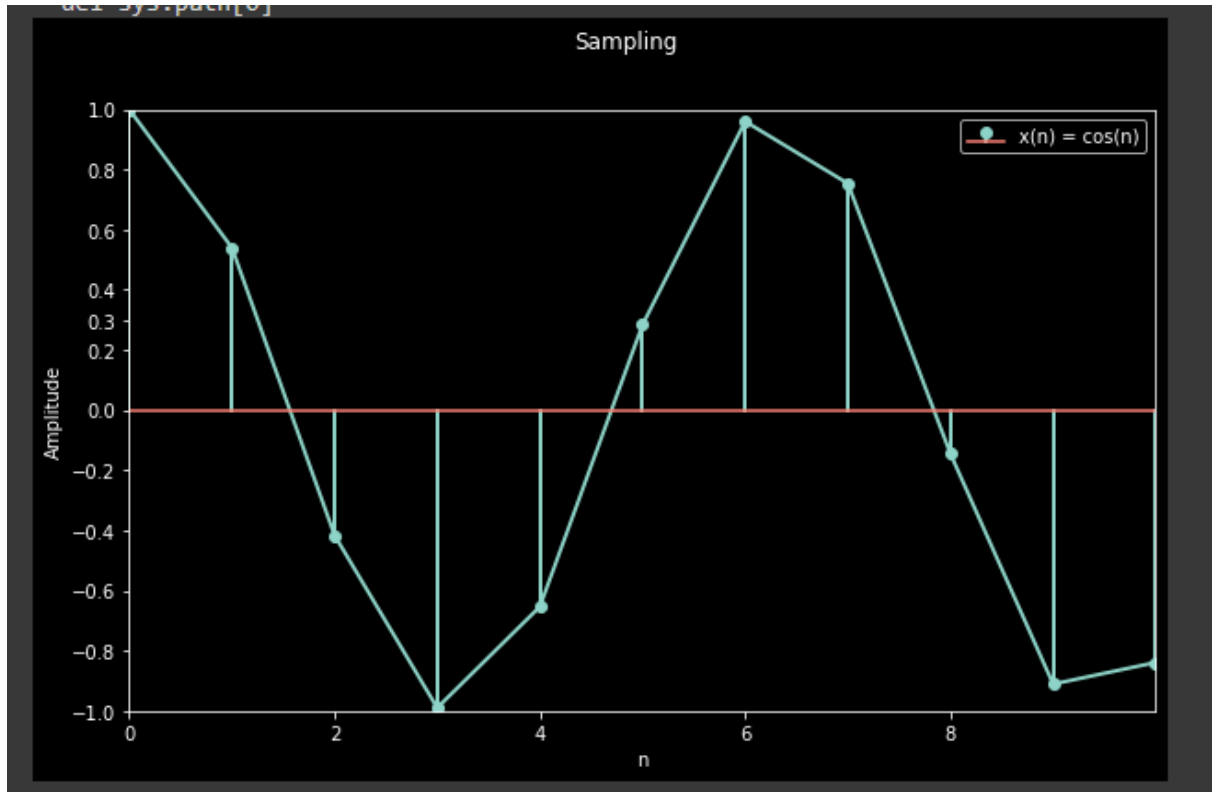
<https://colab.research.google.com/drive/1Mcd5A-5-PgftPKfV3RxK-yTKvThTulrx?usp=sharing>

**Output Images:**

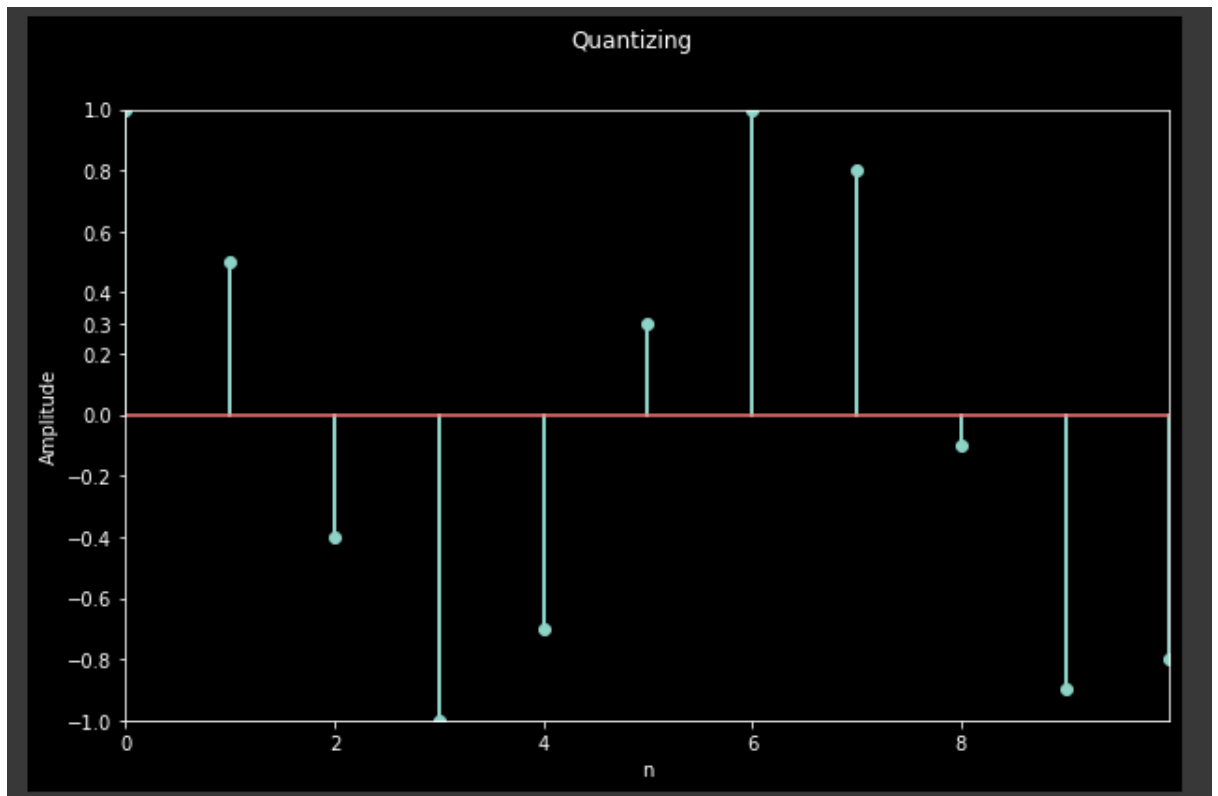
1. Plotting Analog Signal Signal Output:



2. Sampling Output:



3. Quantizing Output:



**Conclusion and Discussion:** In this lab task, I have taken a cosine function representing an analog signal. Then I plotted this cosine function as the analog signal using python libraries. Then I sampled the analog signal in order to digitize it. Then I quantized the signal to represent the sampled values of the amplitude.