**American International University-Bangladesh (AIUB)**

| Course: Data Communication | Fall 2021-22, MID |
|---|---|

**Experiment 3: Analog Signal quantization using MATLAB.**

**Submitted by:**

| Name | ID | Contact Details |
|---|---|---|
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**Section**: F

**Submitted To**

**AFSAH SHARMIN**
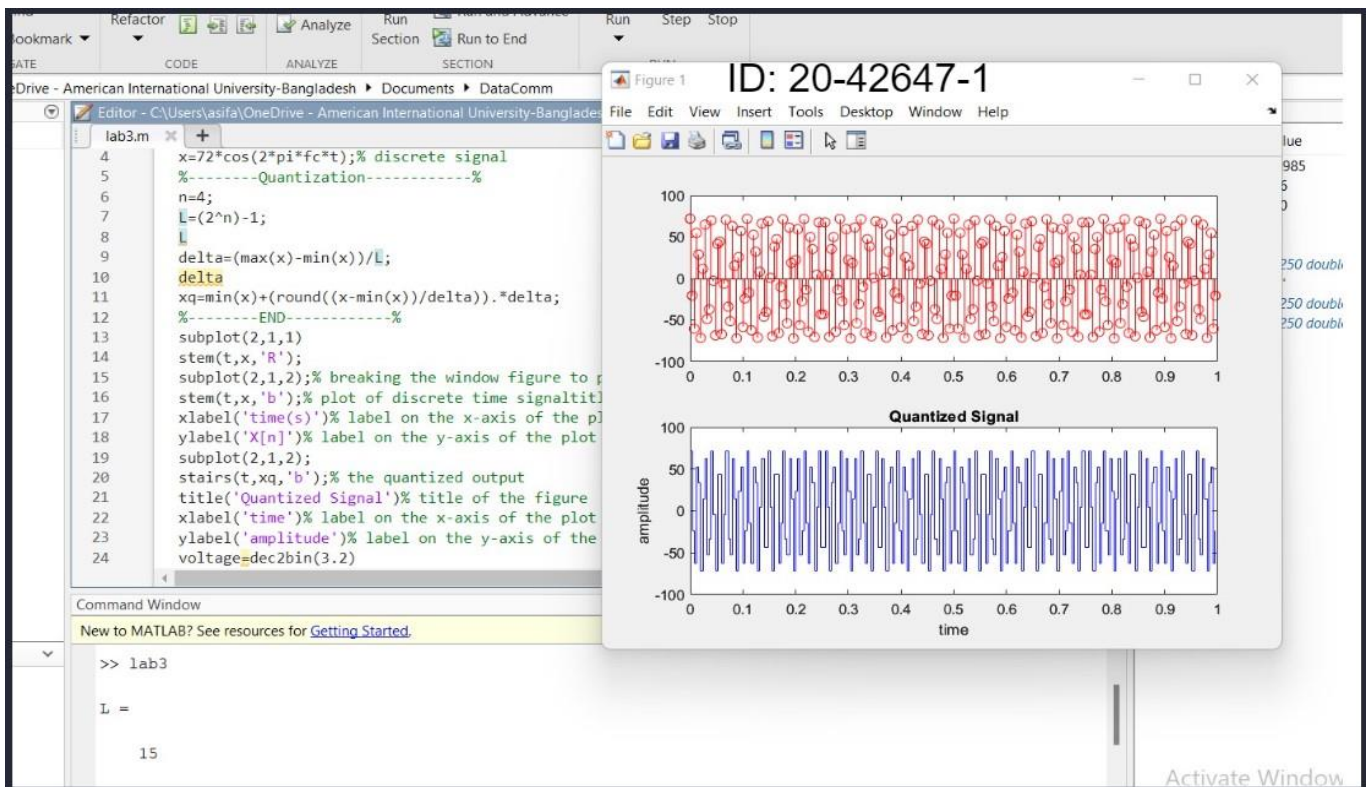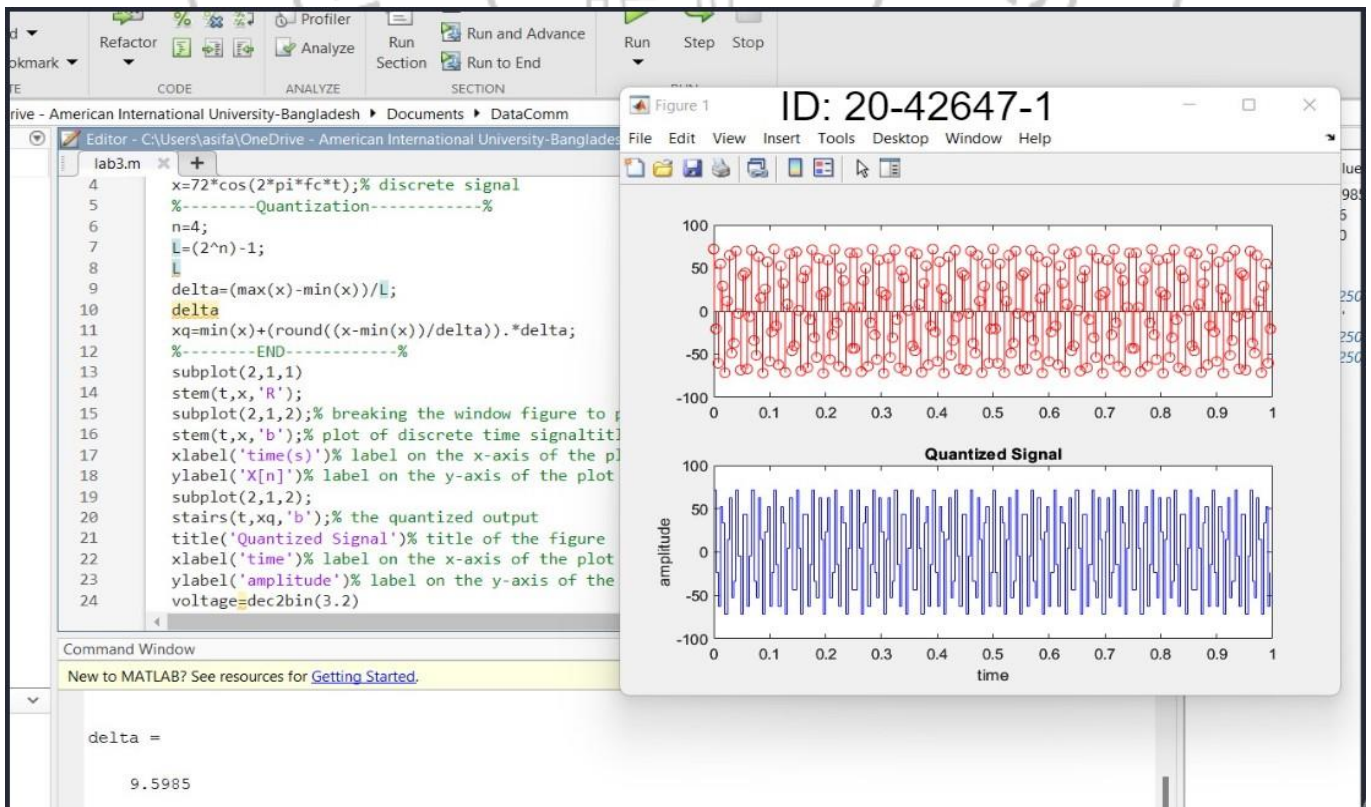Lecturer
Faculty of Engineering
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# Performance Task for Lab Report:  (ID = AB-CDEFG-H)

## (b) (I)



## (b) (II)

## (b) (III)



```matlab
4    x=72*cos(2*pi*fc*t);% discrete signal
5    %--------Quantization------------%
6    n=4;
7    L=(2^n)-1;
8    L
9    delta=(max(x)-min(x))/L;
10   delta
11   xq=min(x)+(round((x-min(x))/delta)).*delta;
12   %--------END-----------%
13   subplot(2,1,1)
14   stem(t,x,'R');
15   subplot(2,1,2);% breaking the window figure to p
16   stem(t,x,'b');% plot of discrete time signaltitl
17   xlabel('time(s)')% label on the x-axis of the pl
18   ylabel('X[n]')% label on the y-axis of the plot
19   subplot(2,1,2);
20   stairs(t,xq,'b');% the quantized output
21   title('Quantized Signal')% title of the figure
22   xlabel('time')% label on the x-axis of the plot
23   ylabel('amplitude')% label on the y-axis of the
24   voltage=dec2bin(3.2)
```

Command Window

New to MATLAB? See resources for Getting Started.

```
     9.5985


voltage =

     '11'
```