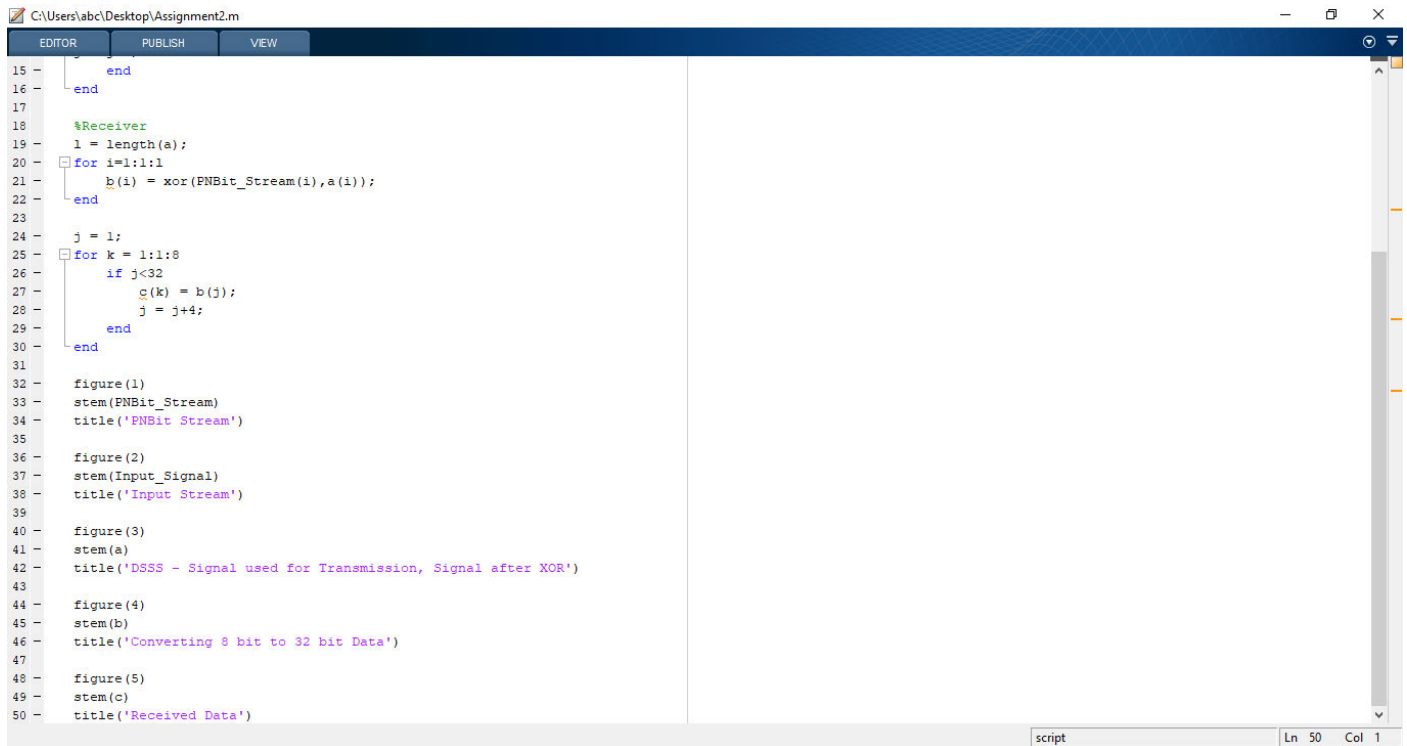


Assignment Number 2

DSSS

A screenshot of a MATLAB script editor window titled 'C:\Users\abc\Desktop\Assignment2.m'. The editor has tabs for 'EDITOR', 'PUBLISH', and 'VIEW'. The script contains MATLAB code for DSSS modulation and demodulation. It includes comments like '%Receiver' and uses functions like 'xor', 'length', 'figure', 'stem', and 'title'. The code is line-numbered from 15 to 50. The status bar at the bottom indicates 'script', 'Ln 50', and 'Col 1'.

```
15 -     end
16 - end
17
18 %Receiver
19 l = length(a);
20 for i=1:l:1
21     b(i) = xor(PNBit_Stream(i),a(i));
22 end
23
24 j = 1;
25 for k = 1:l:8
26     if j<32
27         c(k) = b(j);
28         j = j+4;
29     end
30 end
31
32 figure(1)
33 stem(PNBit_Stream)
34 title('PNBit_Stream')
35
36 figure(2)
37 stem(Input_Signal)
38 title('Input_Stream')
39
40 figure(3)
41 stem(a)
42 title('DSSS - Signal used for Transmission, Signal after XOR')
43
44 figure(4)
45 stem(b)
46 title('Converting 8 bit to 32 bit Data')
47
48 figure(5)
49 stem(c)
50 title('Received Data')
```

Open Matlab and Create a new .m file

Type the following Code

Code:

```
% CDMA DSSS

%Transmitter
clc
PNBit_Stream = round(rand(1,32));
Input_Signal = [0 1 0 1 1 0 1 1];
PNBit_Stream;
j = 1;
for i = 1:1:8
    if j<32
        for k = j:1:j+3
            a(k) = xor(PNBit_Stream(k), Input_Signal(i));
        end
        j = j+4;
    end
end

%Receiver
l = length(a);
for i=1:1:l
    b(i) = xor(PNBit_Stream(i),a(i));
end

j = 1;
for k = 1:1:8
    if j<32
        c(k) = b(j);
        j = j+4;
    end
end

figure(1)
stem(PNBit_Stream)
title('PNBit Stream')

figure(2)
stem(Input_Signal)
title('Input Stream')

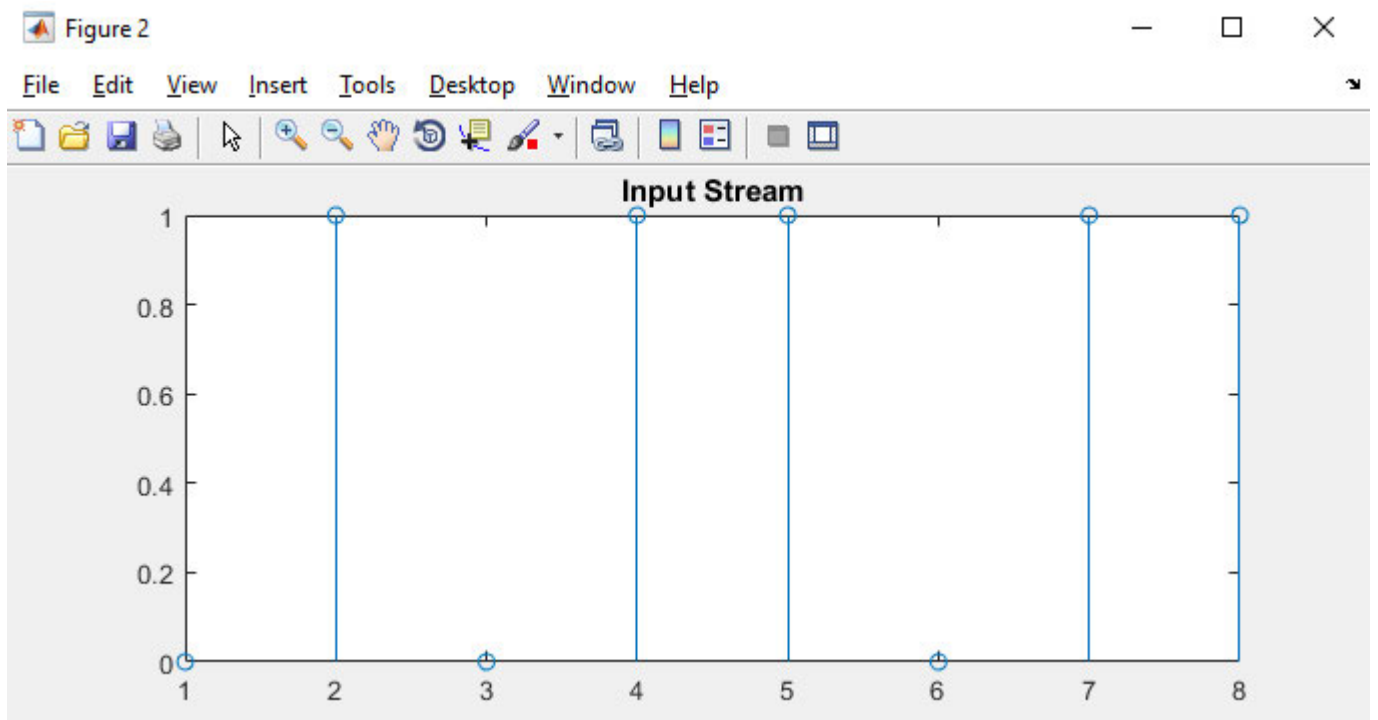
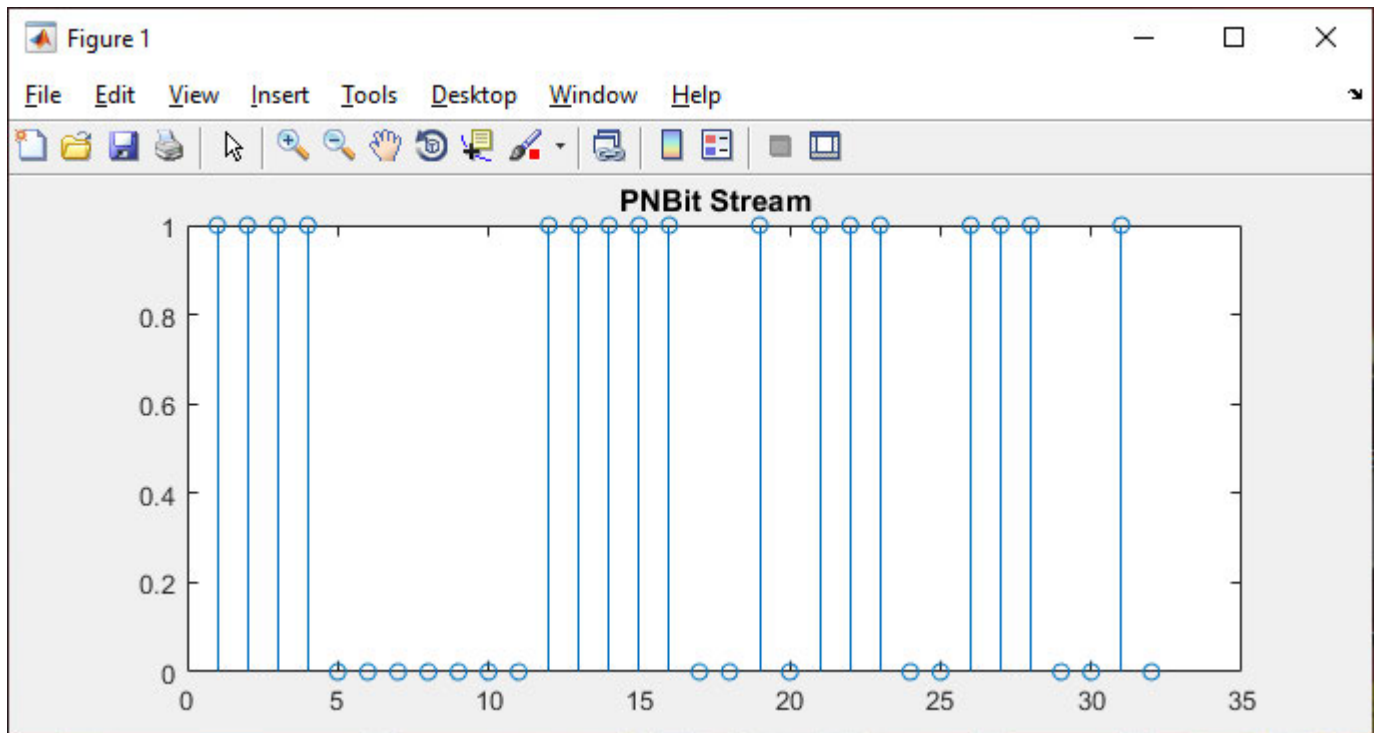
figure(3)
stem(a)
title('DSSS - Signal used for Transmission, Signal after XOR')

figure(4)
stem(b)
title('Converting 8 bit to 32 bit Data')

figure(5)
stem(c)
title('Received Data')
```

Click on Run

5 New Windows will Open



Data being Sent = 0 1 0 1 1 0 1 1

Figure 3

File Edit View Insert Tools Desktop Window Help

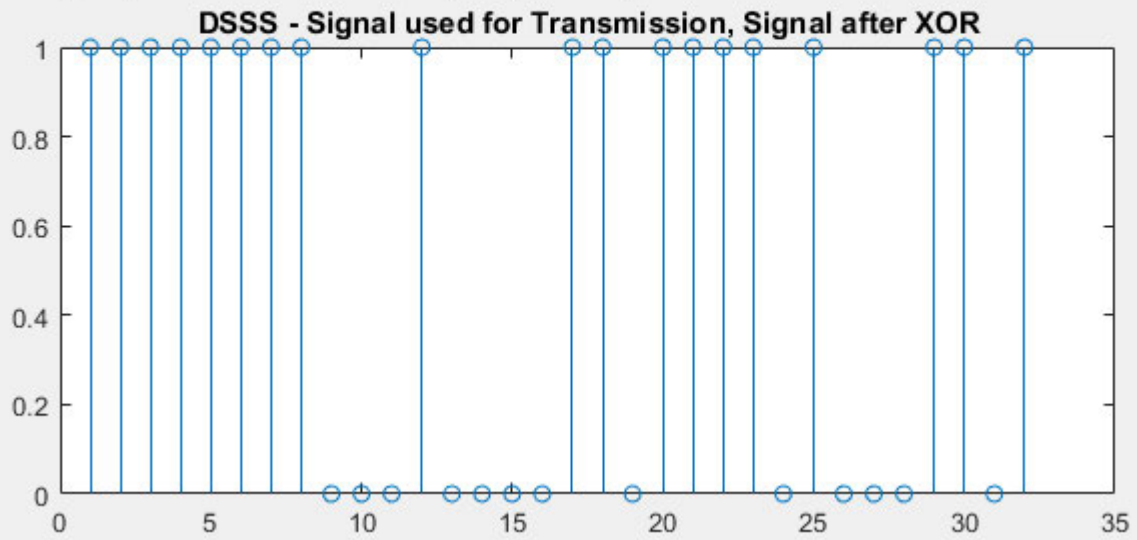


Figure 4

File Edit View Insert Tools Desktop Window Help

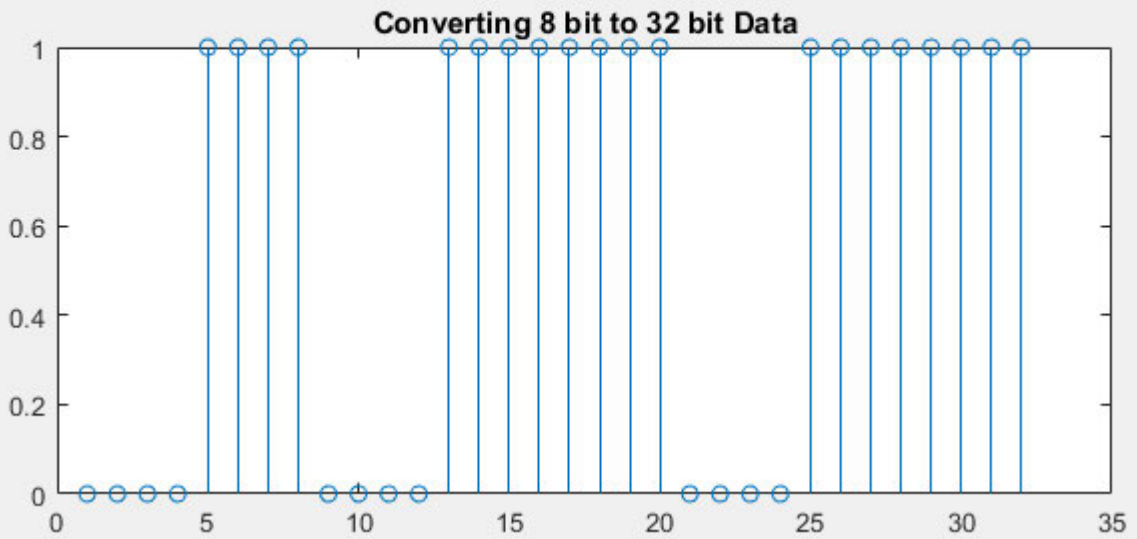


Figure 5

File Edit View Insert Tools Desktop Window Help

