

# SNS EXP4 ASSIGNMENT

K036

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B. Tech CSE Cybersecurity

Semester 3

```
clc;
```

```
clear all;
```

```
close all;
```

```
x = [10, 20, 30, 40];
```

```
h1 = [35, 45, 55, 65];
```

```
h2 = [83, 43, 73, 43];
```

```
h3 = [90, 80, 65, 95];
```

```
h4 = [11, 61, 91, 31];
```

```
m1 = length(x);
```

```
m2 = length(h1);
```

```
m3 = length(h2);
```

```
m4 = length(h3);
```

```
m5 = length(h4);
```

```
h5 = conv(h1, h2);
```

```
l1 = length(h5);
```

```
h6 = h3 + h4;
```

```
l2 = length(h6);
```

```
h = conv(h5, h6);
```

```
l3 = length(h);
```

```
y = conv(x, h);
```

```
l = length(y);
```

```
subplot(5, 2, 1);
```

```
stem(1:m1, x);
```

```
title('x(n)');
```

```
xlabel('Index');
```

```
ylabel('Amplitude');
```

```
subplot(5, 2, 2);
```

```
stem(1:m2, h1);
```

```
title('h1(n)');
```

```
xlabel('Index');
```

```
ylabel('Amplitude');
```

```
subplot(5, 2, 3);
```

```
stem(1:m3, h2);
```

```
title('h2(n)');
```

```
xlabel('Index');
```

```
ylabel('Amplitude');
```

```
subplot(5, 2, 4);  
stem(1:m4, h3);  
title('h3(n)');  
xlabel('Index');  
ylabel('Amplitude');
```

```
subplot(5, 2, 5);  
stem(1:m5, h4);  
title('h4(n)');  
xlabel('Index');  
ylabel('Amplitude');
```

```
subplot(5, 2, 6);  
stem(1:l1, h5);  
title('h5(n)');  
xlabel('Index');  
ylabel('Amplitude');
```

```
subplot(5, 2, 7);  
stem(1:l2, h6);  
title('h6(n)');  
xlabel('Index');  
ylabel('Amplitude');
```

```
subplot(5, 2, 8);  
stem(1:l3, h);
```

```
title('h(n)');
```

```
xlabel('Index');
```

```
ylabel('Amplitude');
```

```
subplot(5, 2, 9);
```

```
stem(1:l, y);
```

```
title('Y(n)');
```

```
xlabel('Index');
```

```
ylabel('Amplitude');
```

