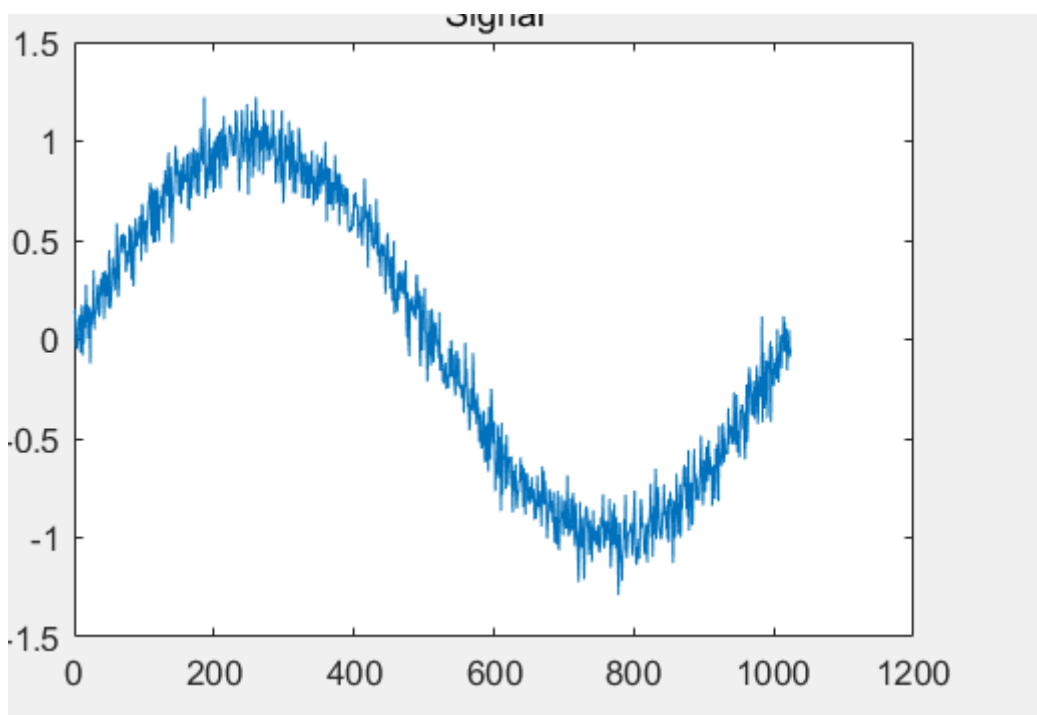
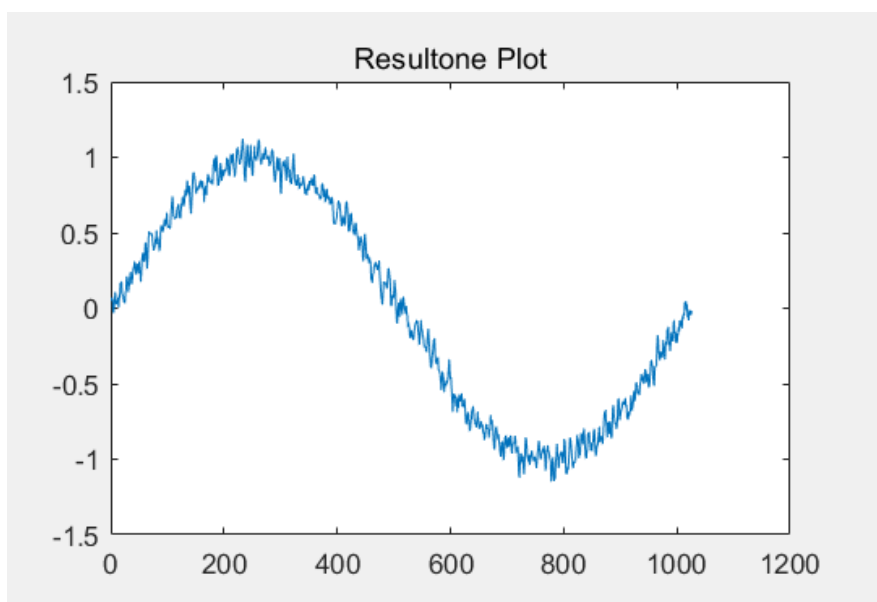


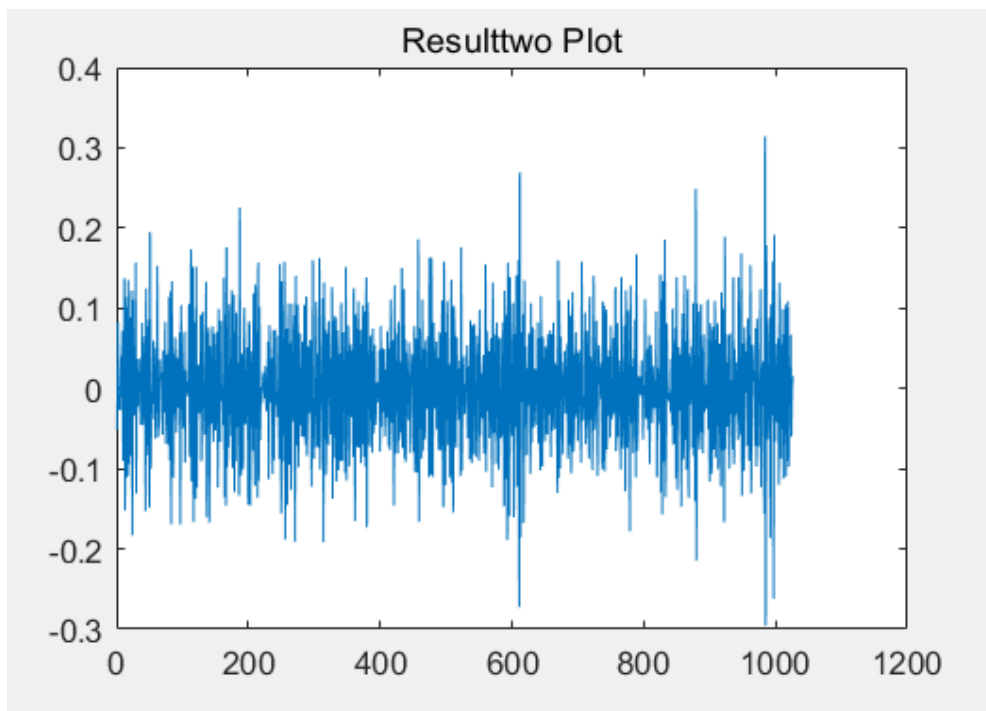
Original Signal



Convolution with h1



Convolution with h2



$h1[n]$ 은 주변 값 들과의 평균을 구해, noise를 감소시킨다.

$h2[n]$ 은 주변 값 들과의 차이를 구해 noise가 얼마 정도인지 측정한다.

```
a=importdata('x.txt')
a=reshape(a,[1,1024])
h1=[1/3,1/3,1/3]
h2=[-1/3,2/3,-1/3]
an=length(a)

A=[0,0,0,a,0,0,0]
Resultone=zeros(1,1026)
Resulttwo=zeros(1,1026)

for n=1:1026
    for m=1:3
        Resultone(n)=Resultone(n)+A(n-m+4)*h1(4-m);
    end
end
```

```
for n=1:1026
    for m=1:3
        Resulttwo(n)=Resulttwo(n)+A(n-m+4)*h2(4-m);
    end
end
```

```
% a plot
ax1 = nexttile;
plot(a)
title(ax1, 'Signal')
```

```
% Resultone plot
ax2 = nexttile;
plot(Resultone)
title(ax2, 'Resultone Plot')
```

```
% Resulttwo plot
ax2 = nexttile;
plot(Resulttwo)
title(ax2, 'Resulttwo Plot')
```