

# Assessment 8

Perform 4 point ensemble average on the EEG signals E11, E22, E33 and E44. Execute a 6 point moving average on the output of the ensemble average.

## Code:

```
e11 = load('E11.txt');
e22 = load('E22.txt');
e33 = load('E33.txt');
e44 = load('E44.txt');
e1 = length(e11);
e2 = length(e22);
e3 = length(e33);
e4 = length(e44);
figure(1)
subplot(6,1,1)
plot(e11)
title('E11');
subplot(6,1,2)
plot(e22)
title('E22');
subplot(6,1,3)
plot(e33)
title('E33');
subplot(6,1,4)
plot(e44)
title('E44');
for i = 1 : e1
    X(i) = (e11(i)+ e22(i)+ e33(i)+ e44(i))/4;
end
subplot(6,1,5)
plot(X)
title('Average of the four signals');
k = 1;
l = 1;
while k < (e1 - 5)
    for l = 1 : (e1-5)
        T(l) = X(k)+X(k+1)+X(k+2)+X(k+3)+X(k+4)+X(k+5);
        k = k + 1;
    end
end
subplot(6,1,6)
plot(T)
title('Moving Window Averaging');
```

Output:

