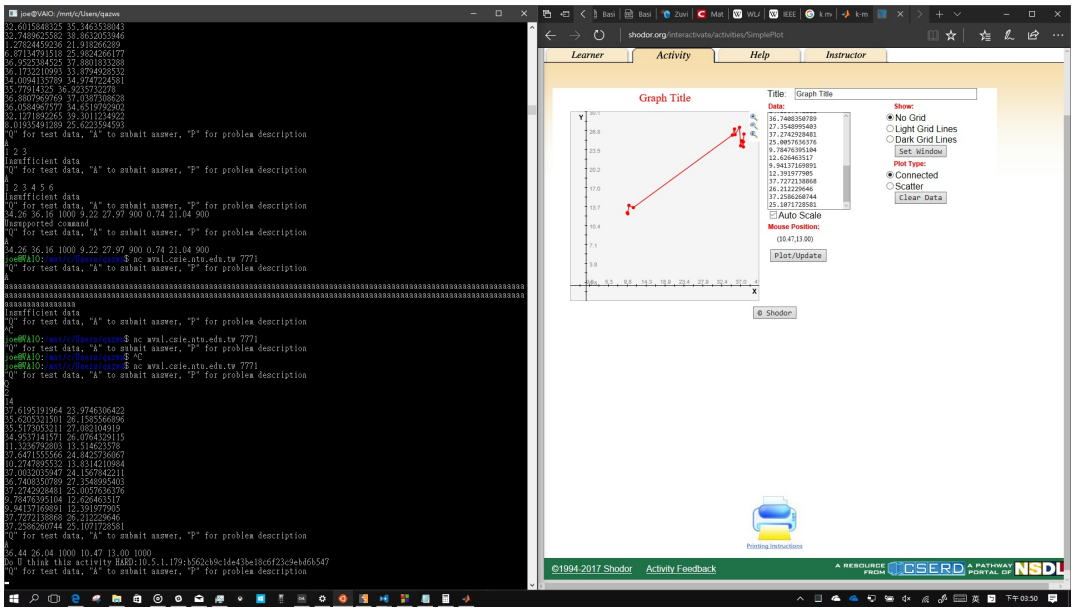
Wireless Networking - Fundamentals and Applications Activity #1

Multiplexing & Multiplexing-p3

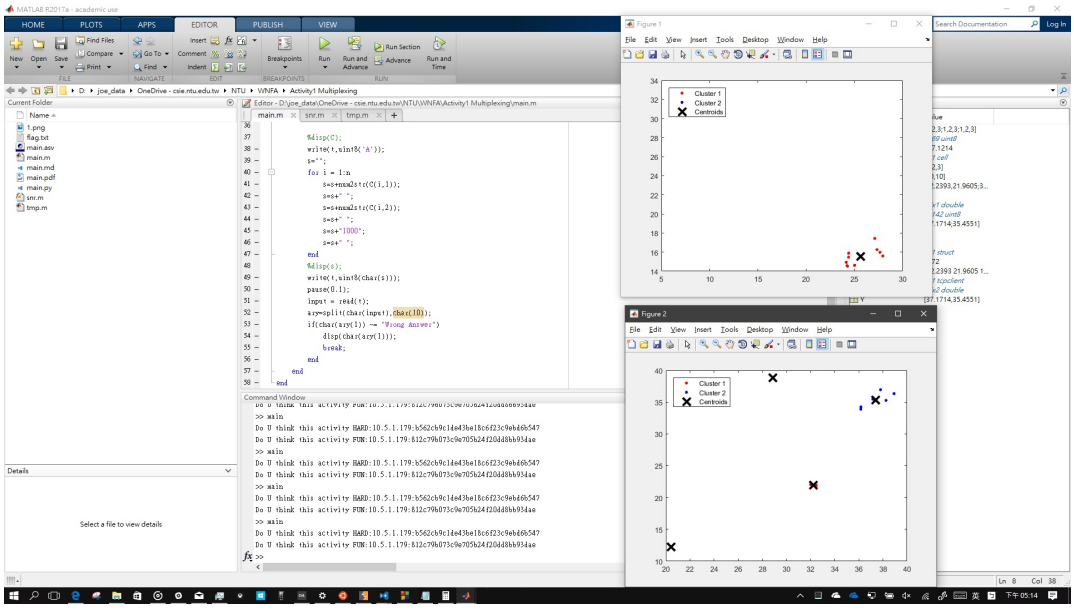
- flag

```
Do U think this activity HARD:10.5.1.179:b562cb9c1de43be18c6f23c9ebd6b547
Do U think this activity FUN:10.5.1.179:812c79b073c9e705b24f20dd8bb93dae
```

- 作法1



- 作法2



  - 使用 k-means，然後 Tx power 固定設成 1000mW，當發現 Wrong Answer 的時候就重新試一次

```
for port = 7771:7772
    while(1)
        t = tcpclient('mvnl.csie.ntu.edu.tw', port);
        while(t.BytesAvailable==0)end
        A = read(t);
        %disp(char(A));
        write(t,[uint8('Q'),10]);
        while(t.BytesAvailable==0)end
        pause(0.1);
        input = read(t);
        ary=split(char(input),char(10));
        n=sscanf(char(ary(1)),'%d');
        %disp(n);
        m=sscanf(char(ary(2)),'%d');
        %disp(m);
        X = [];
        for i = 1:m
            li=sscanf(char(ary(2+i)),'%f %f');
            Y = [li(1),li(2)];
            X = [X;Y];
        end
        %disp(X);
        %disp(n);

        opts = statset('Display','final');
        [idx,C] = kmeans(X,n);

        figure;
        plot(X(idx==1,1),X(idx==1,2),'r.','MarkerSize',12)
        hold on
        plot(X(idx==2,1),X(idx==2,2),'b.','MarkerSize',12)
        plot(C(:,1),C(:,2),'kx',...
            'MarkerSize',15,'LineWidth',3)
        legend('Cluster 1','Cluster 2','Centroids',...
            'Location','NW')

        %disp(C);
        write(t,uint8('A'));
        s="";
        for i = 1:n
            s=s+num2str(C(i,1));
            s=s+" ";
            s=s+num2str(C(i,2));
            s=s+" ";
            s=s+"1000";
            s=s+" ";
        end
        %disp(s);
        write(t,uint8(char(s)));
        pause(0.1);
        input = read(t);
        ary=split(char(input),char(10));
```

```
        if(char(ary(1)) ~= "Wrong Answer")
            disp(char(ary(1)));
            break;
        end
    end
end
```