

```
clc; clear;
```

```
%PANGGIL DATA
```

```
data = xlsread('data.xlsx', 'Sheet1');
```

```
%TENTUKAN NILAI AWAL
```

```
inisialisasi = [2 100 1e-5 1];
```

```
%PROSES CLUSTERING
```

```
[pusat_cluster, U, obj_fcn] = fcm_modif(data, 3, inisialisasi);
```

```
%PENGELOMPOKAN DATA BERDASARKAN CLUSTER
```

```
maxU = max(U);
```

```
data_cluster1 = find(U(1,:) == maxU);
```

```
data_cluster2 = find(U(2,:) == maxU);
```

```
data_cluster3 = find(U(3,:) == maxU);
```

```
%GAMBAR (PLOT) PUSAT CLUSTER DAN DATA
```

```
plot3(data(data_cluster1,1),data(data_cluster1,2),data(data_cluster1,3),'.b', 'MarkerSize',25)
```

```
title('Fuzzy C-Means Clustering')
```

```
xlabel('Jumlah rokok')
```

```
hold on
```

```
ylabel('Umur')
```

```
zlabel('Biaya /bulan')
```

```
plot3(data(data_cluster2,1),data(data_cluster2,2),data(data_cluster2,3),'.r', 'MarkerSize',25)
```

```
plot3(data(data_cluster3,1),data(data_cluster3,2),data(data_cluster3,3),'.g', 'MarkerSize',25)
```

```
CLUSTER_1 = plot3(pusat_cluster(1,1),pusat_cluster(1,2),pusat_cluster(1,3), 'xb', 'MarkerSize',15, 'LineWidth',3);
```

```
CLUSTER_2 = plot3(pusat_cluster(2,1),pusat_cluster(2,2),pusat_cluster(2,3), 'xr', 'MarkerSize',15, 'LineWidth',3);
```

```
CLUSTER_3 = plot3(pusat_cluster(3,1),pusat_cluster(3,2),pusat_cluster(3,3), 'xg', 'MarkerSize',15, 'LineWidth',3);
```

```
legend([CLUSTER_1,CLUSTER_2,CLUSTER_3], 'Cluster 1', 'Cluster 2', 'Cluster 3');
```

```
hold off
```