```sas

proc cluster data=MyData method=ward;

var Var1-Var5;

id Observation\_ID;

run;

```

```sas

/\* Example dataset \*/

data mydata;

input var1 var2 var3 var4;

datalines;

1 2 3 4

2 3 4 5

3 4 5 6

4 5 6 7

5 6 7 8

;

run;

/\* Using PROC FASTCLUS for k-means clustering \*/

proc fastclus data=mydata maxclusters=3 out=clusters;

var var1-var4; /\* Specify variables to be used for clustering \*/

run;

/\* Output clusters \*/

proc print data=clusters;

run;

```

```sas

/\* 1. Cluster Profiles \*/

proc means data=ClusteredData;

by ClusterID;

var Var1 Var2 Var3; /\* List of variables \*/

/\* You can specify options like mean, median, etc. \*/

run;

```

```sas

/\* 2. Visualizing Clusters \*/

/\* Example using PROC SGPLOT \*/

proc sgplot data=ClusteredData;

scatter x=Var1 y=Var2 / group=ClusterID;

/\* Additional options for visualization \*/

run;

```

```sas

/\* 3. Analyzing Cluster Centroids \*/

proc means data=ClusteredData noprint;

by ClusterID;

var Var1 Var2 Var3; /\* List of variables \*/

output out=ClusterCentroids mean=; /\* Calculate means for each cluster \*/

run;

```

```sas

/\* 4. Validating Clusters \*/

/\* Example using silhouette analysis \*/

proc cluster data=ClusteredData method=ward;

var Var1 Var2 Var3; /\* List of variables \*/

cluster silhouette / details;

run;

```