Step 1: Goto analyse→classify→discriminant

Step2: Drag Bike in grouping variable and all other in independent box click on define range and give range minimum as 1 and maximum as 2

Step 3: click on statistics and check on **Means, Univariate ANOVA ,BoX'M,with in group correlations** and **unstandardized and** click **continue**

Step4: click on **classify** and check on **summary table,leave one out classification** and **combine groups** and click **continue**

Step 5:click on **save** and check on **Probability of group membership** and **click continue,OK**

We will get list of tables first we will refer to test of equality og group means table

Tests of Equality of Group Means

	Wilks' Lambda	F	df1	df2	Sig.
mileage	.410	40.990	2	57	.000
looks	.411	40.858	2	57	.000
maintanance	.510	27.402	2	57	.000
pickup	.238	91.449	2	57	.000

This table will tells us whether means of the variable considered are same across groups or not since P value is less than 0.05,we infer that group means are different

Pooled Within-Groups Matrices

		mileage	looks	maintanance	pickup
Correlation	mileage	1.000	.170	.124	-.083
	looks	.170	1.000	-.071	-.108
	maintanance	.124	-.071	1.000	-.049
	pickup	-.083	-.108	-.049	1.000

This table will gives us an idea about whether there exist correlation between the variable under consideration

Test Results

Box's M		15.892
F	Approx.	.713
	df1	20
	df2	1.166E4
	Sig.	.817

This test will gives us an idea about whether all groups are having equal means or not. since p value is near to 1 we have evidence that all groups have equal variance

Classification Function Coefficients

	Bike		
	1	2	3
mileage	2.902	3.660	3.793
looks	2.829	3.664	3.394
maintanance	3.184	2.522	2.992
pickup	5.522	7.152	5.739
(Constant)	-211.829	-299.633	-258.133

Fisher's linear discriminant functions

The classification functions are used to assign cases to groups. There is a separate function for each group. For each case, a classification score is computed for each function. The discriminant model assigns the case to the group based on this classification function. Further We will get the predicted probability for which is saved in SPSS data file.

	Dis1_1	Dis2_1	Dis3_1	
]	0.99921	0.00000	0.00079	
]	0.93157	0.00003	0.06840	
]	0.99937	0.00000	0.00063	
]	0.93889	0.00005	0.06105	
]	0.99996	0.00000	0.00004	
]	0.99982	0.00001	0.00017	
]	0.99751	0.00000	0.00249	
]	0.11036	0.00207	0.88757	
]	0.97075	0.00001	0.02924	

We can observe that probabilities will be saved in SPSS data file under option Dis1_1,Dis2_1 and Dis3_1 these are the classification probabilities for the Bike groups. We can observe that for case 1 the predictive ability of model to discriminate group membership as Hero Honda is 99.9%.