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1 C:\Users\HP\PycharmProjects\LearnPython\venv\  
  Scripts\python.exe C:/Users/HP/PycharmProjects/  
  LearnPython/NUMPY/irisdataset.py  
2 (30, 6)  
3 2 D Array  
4 [[5.1 3.5 1.4 0.2 nan 1. ]  
5  [4.9 3.  1.4 0.2 nan 1. ]  
6  [4.7 3.2 1.3 0.2 nan 1. ]  
7  [4.6 3.1 1.5 0.2 nan 1. ]  
8  [5.  3.6 1.4 0.2 nan 1. ]  
9  [5.4 3.9 1.7 0.4 nan 1. ]  
10 [4.6 3.4 1.4 0.3 nan 1. ]  
11 [5.  3.4 1.5 0.2 nan 1. ]  
12 [4.4 2.9 1.4 0.2 nan 1. ]  
13 [4.9 3.1 1.5 0.1 nan 1. ]  
14 [5.5 2.6 4.4 1.2 nan 2. ]  
15 [6.1 3.  4.6 1.4 nan 2. ]  
16 [5.8 2.6 4.  1.2 nan 2. ]  
17 [5.  2.3 3.3 1.  nan 2. ]  
18 [5.6 2.7 4.2 1.3 nan 2. ]  
19 [5.7 3.  4.2 1.2 nan 2. ]  
20 [5.7 2.9 4.2 1.3 nan 2. ]  
21 [6.2 2.9 4.3 1.3 nan 2. ]  
22 [5.1 2.5 3.  1.1 nan 2. ]  
23 [5.7 2.8 4.1 1.3 nan 2. ]  
24 [6.9 3.1 5.4 2.1 nan 3. ]  
25 [6.7 3.1 5.6 2.4 nan 3. ]  
26 [6.9 3.1 5.1 2.3 nan 3. ]  
27 [5.8 2.7 5.1 1.9 nan 3. ]  
28 [6.8 3.2 5.9 2.3 nan 3. ]  
29 [6.7 3.3 5.7 2.5 nan 3. ]  
30 [6.7 3.  5.2 2.3 nan 3. ]  
31 [6.3 2.5 5.  1.9 nan 3. ]  
32 [6.5 3.  5.2 2.  nan 3. ]  
33 [6.2 3.4 5.4 2.3 nan 3. ]]  
34 2 D Array after removing 4 clounm  
35 [[5.1 3.5 1.4 0.2 1. ]  
36  [4.9 3.  1.4 0.2 1. ]
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37 [4.7 3.2 1.3 0.2 1. ]
38 [4.6 3.1 1.5 0.2 1. ]
39 [5.  3.6 1.4 0.2 1. ]
40 [5.4 3.9 1.7 0.4 1. ]
41 [4.6 3.4 1.4 0.3 1. ]
42 [5.  3.4 1.5 0.2 1. ]
43 [4.4 2.9 1.4 0.2 1. ]
44 [4.9 3.1 1.5 0.1 1. ]
45 [5.5 2.6 4.4 1.2 2. ]
46 [6.1 3.  4.6 1.4 2. ]
47 [5.8 2.6 4.  1.2 2. ]
48 [5.  2.3 3.3 1.  2. ]
49 [5.6 2.7 4.2 1.3 2. ]
50 [5.7 3.  4.2 1.2 2. ]
51 [5.7 2.9 4.2 1.3 2. ]
52 [6.2 2.9 4.3 1.3 2. ]
53 [5.1 2.5 3.  1.1 2. ]
54 [5.7 2.8 4.1 1.3 2. ]
55 [6.9 3.1 5.4 2.1 3. ]
56 [6.7 3.1 5.6 2.4 3. ]
57 [6.9 3.1 5.1 2.3 3. ]
58 [5.8 2.7 5.1 1.9 3. ]
59 [6.8 3.2 5.9 2.3 3. ]
60 [6.7 3.3 5.7 2.5 3. ]
61 [6.7 3.  5.2 2.3 3. ]
62 [6.3 2.5 5.  1.9 3. ]
63 [6.5 3.  5.2 2.  3. ]
64 [6.2 3.4 5.4 2.3 3. ]]
65 new shape after dropping col 4 ---->(30, 5)
66 new dimensions are ---->2
67 and new size ---->150
68 IRIS1
69 [[5.1 3.5 1.4 0.2 1. ]
70 [4.9 3.  1.4 0.2 1. ]
71 [4.7 3.2 1.3 0.2 1. ]
72 [4.6 3.1 1.5 0.2 1. ]
73 [5.  3.6 1.4 0.2 1. ]
74 [5.4 3.9 1.7 0.4 1. ]
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75 [4.6 3.4 1.4 0.3 1. ]
76 [5.  3.4 1.5 0.2 1. ]
77 [4.4 2.9 1.4 0.2 1. ]
78 [4.9 3.1 1.5 0.1 1. ]]
79 IRIS2
80 [[5.5 2.6 4.4 1.2 2. ]
81 [6.1 3.  4.6 1.4 2. ]
82 [5.8 2.6 4.  1.2 2. ]
83 [5.  2.3 3.3 1.  2. ]
84 [5.6 2.7 4.2 1.3 2. ]
85 [5.7 3.  4.2 1.2 2. ]
86 [5.7 2.9 4.2 1.3 2. ]
87 [6.2 2.9 4.3 1.3 2. ]
88 [5.1 2.5 3.  1.1 2. ]
89 [5.7 2.8 4.1 1.3 2. ]]
90 IRIS3
91 [[6.9 3.1 5.4 2.1 3. ]
92 [6.7 3.1 5.6 2.4 3. ]
93 [6.9 3.1 5.1 2.3 3. ]
94 [5.8 2.7 5.1 1.9 3. ]
95 [6.8 3.2 5.9 2.3 3. ]
96 [6.7 3.3 5.7 2.5 3. ]
97 [6.7 3.  5.2 2.3 3. ]
98 [6.3 2.5 5.  1.9 3. ]
99 [6.5 3.  5.2 2.  3. ]
100 [6.2 3.4 5.4 2.3 3. ]]
101 HEADER --->['sepal length' 'sepal width' 'petal
length' 'petal width' 'Species No']
102 max values---->[6.9 3.9 5.9 2.5 3. ]
103 min values ---->[4.4 2.3 1.3 0.1 1. ]
104 Mean of each col ---->[5.68 3.03 3.61 1.22 2. ]
105 std of each col --->[0.76 0.35 1.65 0.82 0.82]
106 var of each col --->[0.58 0.12 2.74 0.67 0.67]
107 STATC FOR IRIS 1
108 max values---->[5.4 3.9 1.7 0.4 1. ]
109 min values ---->[4.4 2.9 1.3 0.1 1. ]
110 Mean of each col ---->[4.86 3.31 1.45 0.22 1. ]
111 std of each col --->[0.28 0.29 0.1  0.07 0. ]

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112 var of each col --->[0.08 0.08 0.01 0.01 0. ]
113 STATC FOR IRIS 2
114 max values---->[6.2 3.  4.6 1.4 2. ]
115 min values ----->[5.  2.3 3.  1.  2. ]
116 Mean of each col ---->[5.64 2.73 4.03 1.23 2. ]
117 std of each col --->[0.36 0.22 0.47 0.11 0. ]
118 var of each col --->[0.13 0.05 0.22 0.01 0. ]
119 STATC FOR IRIS 3
120 max values---->[6.9 3.4 5.9 2.5 3. ]
121 min values ----->[5.8 2.5 5.  1.9 3. ]
122 Mean of each col ---->[6.55 3.04 5.36 2.2  3. ]
123 std of each col --->[0.34 0.25 0.28 0.2  0. ]
124 var of each col --->[0.11 0.06 0.08 0.04 0. ]
125 #####          sepal length
          #####
126 min sepal length of (Iris-setosa) Vs the min
    sepal -->False
127 min sepal length of Iris-versicolor Vs the min
    sepal -->True
128 min sepal length of Iris-virginica Vs the min
    sepal -->True
129 #####          sepal width
          #####
130 min sepal width of (Iris-setosa) Vs the min
    sepal -->True
131 min sepal width of Iris-versicolor Vs the min
    sepal -->False
132 min sepal width of Iris-virginica Vs the min
    sepal -->True
133 #####          petal length
          #####
134 min petal length of (Iris-setosa) Vs the min
    sepal -->False
135 min petal length of Iris-versicolor Vs the min
    sepal -->True
136 min petal length of Iris-virginica Vs the min
    sepal -->True
137 #####          petal width

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137 #####
138 min petal width of (Iris-setosa) Vs the min
    sepal -->False
139 min petal width of Iris-versicolor Vs the min
    sepal -->True
140 min petal width of Iris-virginica Vs the min
    sepal -->True
141
142 Compare Iris setosa's average sepal width to
    that of Iris virginica (iris setosa> IRIS
    VIRGINICA)---> True
143 Compare Iris setosa's average petal length to
    that of Iris virginica (iris setosa> IRIS
    VIRGINICA)---> False
144 Compare Iris setosa's average petal width to
    that of Iris virginica (iris setosa> IRIS
    VIRGINICA)---> False
145
146 Process finished with exit code 0
147
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