```
****** Crab Dataset *******
Classification report for MAP
       precision recall f1-score support
    0.0
           1.00
                  1.00
                         1.00
                                 34
    1.0
           1.00
                  1.00
                         1.00
                                 32
  accuracy
                        1.00
                                66
              1.00
                     1.00
                             1.00
                                     66
 macro avg
weighted avg
                1.00
                       1.00
                              1.00
                                      66
Confusion Matrix (Rows are true, Prediction are columns)
[[34 0]
[ 0 32]]
Best k value = 1
Classification report for KNN
       precision recall f1-score support
    0.0
           0.94
                  0.94
                         0.94
                                 34
    1.0
           0.94
                  0.94
                         0.94
                                 32
  accuracy
                        0.94
                                66
 macro avg
              0.94
                     0.94
                             0.94
                                     66
weighted avg
                0.94
                       0.94
                              0.94
                                      66
Confusion Matrix (Rows are true, Prediction are columns)
[[32 2]
[ 2 30]]
****** 10 Dataset ******
Classification report for MAP
       precision recall f1-score support
    0.0
           0.90
                  1.00
                         0.95
                                 171
```

accuracy 0.95 330 macro avg 0.95 0.94 0.95 330 weighted avg 0.95 0.95 0.95 330

0.89

1.0

1.00

Confusion Matrix (Rows are true, Prediction are columns) [[171 0]

0.94

159

```
Best k value = 3
Classification report for KNN
       precision recall f1-score support
    0.0
           0.59
                  0.56
                         0.57
                                171
           0.55
                         0.57
                                159
    1.0
                  0.58
 accuracy
                       0.57
                               330
 macro avg
              0.57
                     0.57
                            0.57
                                    330
weighted avg
               0.57
                      0.57
                              0.57
                                     330
Confusion Matrix (Rows are true, Prediction are columns)
[[95 76]
[66 93]]
****** 10 Dataset cross validation *******
Classification report for MAP
       precision recall f1-score support
    0.0
           0.88
                  1.00
                         0.94
                                227
    1.0
                         0.93
           1.00
                  0.87
                                 242
 accuracy
                       0.93
                               469
 macro avg
              0.94
                     0.94
                            0.93
                                    469
                      0.93
weighted avg
               0.94
                              0.93
                                     469
Confusion Matrix (Rows are true, Prediction are columns)
[[227 0]
[ 31 211]]
Best k value = 3
Classification report for KNN
       precision recall f1-score support
    0.0
           0.50
                  0.56
                         0.52
                                227
    1.0
           0.53
                  0.47
                         0.50
                                 242
```

0.51

0.51 0.51 0.51

accuracy macro avg 469

469

```
weighted avg 0.51 0.51 0.51 469
```

Confusion Matrix (Rows are true, Prediction are columns) [[126 101]

[128 114]]

******* Crab cross validation ******

Classification report for MAP

precision recall f1-score support

0.0 0.86 1.00 0.93 227 1.0 1.00 0.85 0.92 242

accuracy 0.92 469 macro avg 0.93 0.93 0.92 469 weighted avg 0.93 0.92 0.92 469

Confusion Matrix (Rows are true, Prediction are columns) [[227 0] [36 206]]

Best k value = 2

Classification report for KNN

precision recall f1-score support

0.0 0.49 0.80 0.61 227 1.0 0.54 0.22 0.32 242

accuracy 0.50 469 macro avg 0.52 0.51 0.46 469 weighted avg 0.52 0.50 0.46 469

Confusion Matrix (Rows are true, Prediction are columns)

[[181 46]

[188 54]]