Evaluation

Below calculations are performed on the results of 400 testing data files.

Precision = true positive/ truepositives+falsepositives

Recall = truepositive/ truepositive+ falsenegative

Fmeasure = (2 * Precision * Recall) / (Precision + Recall)

Bayes Classifier (Normal):

True positive = 154 False

positive = 131 False

negative = 44 Precision=

154/154+131

$\qquad$ = 0.54

Recall = 154/154+44

$\qquad$ =0.77

F-measure = (2*0.54*0.77)/0.54+0.77

$\qquad$ = 0.8316/1.31

$\qquad$ = 0.63

Bayes Classifier (Improved): True

positive = 176

False positive = 139 False

negative = 18 Precision=

176/176+139

$\qquad$ = 0.55

Recall = 176/176+18

$\qquad$ = 0.90

F-measure = (2*0.55*0.90)/0.55+0.90

$\qquad$ = 0.99/1.45

$\qquad$ = 0.68

The system performed satisfactory according to the statics. But it produces some wrong outputs because word occurrences in its respective dictionary might sometimes be less but still that word may belong to that class. This problem can be overcome by training the model on the larger dataset and storing more words in the dictionary for more accurate results.