**Results:**

**Pruning strategy:**

Randomly selecting “n”(set as 5 as it gave optimum results) nodes from the list of non-leaf nodes and pruned them as a batch.

As we already had a list of all the inner nodes from the getInnerNodes(tree) function, we created another list called innerNodeID that is a list of all the inner node id’s.

So, we randomly selected n nodes from the innerNodeID list using the random.sample() function and used those randomly selected inner node IDs as the list of node IDs to be pruned.

**Given below are the output comparison:**

**Iris Dataset:**

Tree before Pruning:

Accuracy on test = 0.9

Tree After Pruning:

Accuracy on test = 1.0

**Breast cancer Dataset:**

Tree before Pruning:

Accuracy on test = 0.91

Tree After Pruning:

Accuracy on test = 0.97

From the above comparison we can infer that the accuracy of the prediction increased significantly by employing this pruning strategy.

One of the major drawbacks of the ID3 algorithm is that it may overfit to the training data.

Pruning provides an effective method to improve the output.