EXPERIMENT NO:3

Aim: Implement Random Algorithm for a given dataset.

Software Used: Python (3.11.1), VS Code.

Theory:

Random forest is a supervised learning algorithm which is used for both classification as well as regression. But however, it is mainly used for classification problems. As we know that a forest is made up of trees and more trees means more robust forest. Similarly, random forest algorithm creates decision trees on data samples and then gets the prediction from each of them and finally selects the best solution by means of voting. It is an ensemble method which is better than a single decision tree because it reduces the over-fitting by averaging the result.

Advantage of Random Forest

- Random Forest is capable of performing both Classification and Regression tasks.
- It is capable of handling large datasets with high dimensionality.
- It enhances the accuracy of the model and prevents the over fitting issue.

Disadvantage of Random Forest

- Although random forest can be used for both classification and regression tasks, it is not more suitable for Regression tasks.