Problem Statement

A random forest is like a team of decision trees. Each tree gives a vote, and the forest picks the majority (for classification). Implement a Random Forest classifier using the decision tree you have constructed for offline with bootstrap sampling and majority voting. For each of the T trees in the forest:

- Draw a bootstrap sample of size N (where N is the total number of available instances) from the dataset. This means sampling N examples **with replacement**.
- Train a decision tree using only that bootstrap sample.

After building the forest, evaluate its performance using a test set composed of $N/4$ examples, selected **randomly without replacement** from the original dataset.

Your program must accept the following parameters as command-line arguments:

- The number of trees to construct (T),
- The maximum depth allowed per tree.

Show the overall accuracy of the Random Forest classifier on the test data.