**[Que-50.44] - Describe the process of gradient boosting in XGBoost.**

### **Gradient Boosting Process in XGBoost**

1. **Initialize**: Start with an initial prediction (e.g., the mean of the target variable).
2. **Compute Residuals**: Calculate the residuals (errors) between the actual and predicted values.
3. **Fit a Tree**: Train a new decision tree to predict the residuals.
4. **Update Prediction**: Update the model by adding the predictions from the new tree, scaled by the learning rate.
5. **Repeat**: Continue the process for a specified number of iterations or until the residuals are minimized.