**ACTIVITY 6**

**Question :**

Draw a table that compares the worst, best and average cases of insertion, searching and deletion of Linear search symbol table, Binary search symbol table, Binary search tree, and 2-3 Tree.

**Solution :**

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Implementation** | **Worst**  **Search** | **Worst**  **Insert** | **Worst**  **Delete** | **Average**  **Search** | **Average**  **Insert** | **Average**  **Delete** | **Best**  **Search** | **Best**  **Insert** | **Best**  **Delete** |
| Linear Search | N | N | N | N/2 | N | N/2 | 1 | 1 | 1 |
| Binary Search | log N | N | N | log N | N/2 | N/2 | 1 | log N | log N |
| BST | N | N | N | 1.39 logN | 1.39 logN | logN | 1 | log N | log N |
| 2-3 Tree | clog N | clog N | clog N | clog N | clog N | clog N | 1 | clog N | clog N |