B-Tree

Khrithik S Anand
1DM18CS046
ADS-Lab

Insertion function:

```
void insert (int k) {
        if (!root) {
            root = new Node (t, leaf = true);
            root -> keys[0] = k;
            root -> n = 1;
        }
        else {
            if (root -> n == 2*t - 1) {
                Node *s = new Node (t, leaf = false)
                s -> c[0] = root;
                s -> splitchild (0, root);
                int i = 0;
                if ( s -> keys[0] < k ) i++;
                s -> c[i] -> insertNonFull (k);
                root = s;
            }
            else root -> insertNonFull (k);
        }
void insertNonFull (int k) {
    int i = n - 1
```

B- Tree

Khaithik S Anand
1BM18CS046
ADS - LAB

```
if (leaf == true){
        while (i >= 0 && keys[i] > k){
                Keys [i+1] = keys[i];
                i--;
        }
        keys [i+1] = k
        n t = i;
}else {
        while (i >= 0 && key [i] > k) i--;
        if ((C[i+1]) -> n == 2* t - 1){
                        split child (i+1), (C[i+1]));
                        if ( keys[i+1] < k) i++;
        }
        (C[i+1] -> insetNonFull (k);
}}
```