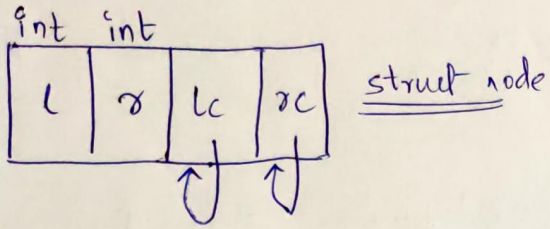
(★) E1 - 35

Structure and Diagram:-




```
struct node{
    int l=0;
    int r=0;
    bptr lc=NULL;
    bptr rc=NULL;
};
typedef struct node * bptr;
```

Algorithm:-

→ addRange() function:-

- If the given range doesnt already exist, it will create it.
- If given range is partially overlapping, it will just create a new node with unoverlapped ranges.
- If given range is completely overlapping, it will just return.

→ searchRange() function:-

- Almost similas to addRange function.
- If any part of range doesnt exist it returns false.

→ deleteRange():

- If given range is subset of range in current node, it splits current node into 2 nodes, excluding the range to be deleted.
- If given range is partially overlapping, delete the partial range in current node, and remaing range from children.