

```
1  const int MAXN = 110;
2  int tree[4*MAXN];
3  int v[MAXN];
4
5  void build(int idx, int l, int r) {
6      if(l==r) {
7          tree[idx] = v[l];
8      }
9      else {
10         int m = (l+r)/2;
11         build(2*idx,l,m);
12         build(2*idx+1,m+1,r);
13         tree[idx] = tree[2*idx] + tree[2*idx+1];
14     }
15 }
16
17 void update(int p, int val, int idx, int l, int r) {
18     if(l==r) {
19         tree[idx] = val;
20     }
21     else {
22         int m = (l+r)/2;
23         if(p>=l && p<=m) update(p,val,2*idx,l,m);
24         else update(p,val,2*idx+1,m+1,r);
25         tree[idx] = tree[2*idx] + tree[2*idx+1];
26     }
27 }
28
29 int query(int px, int py, int idx, int l, int r) {
30     if(py<l || px>r) {
31         return 0;
32     }
33     if(l>=px && r<=py) {
34         return tree[idx];
35     }
36     int m = (l+r)/2;
37     int p1 = query(px,py,2*idx,l,m);
38     int p2 = query(px,py,2*idx+1,m+1,r);
39     return p1+p2;
40 }
41
```