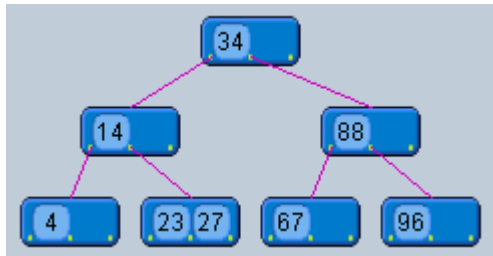


## Condition coverage local rotation:

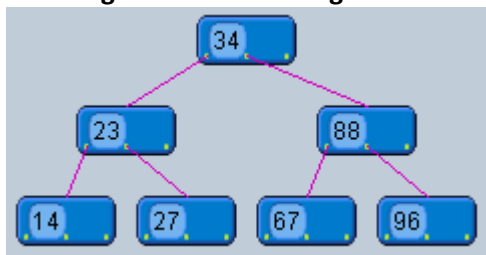
1) Testcases001 local rotation, Case 1: Take from right.

```
int iTestcases001[] = {67,34,23,88,96,14,4,27};
```

Initial tree:



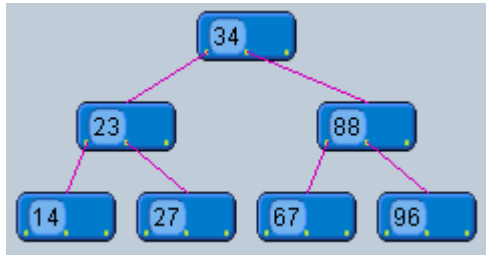
Resulting tree after deleting 4:



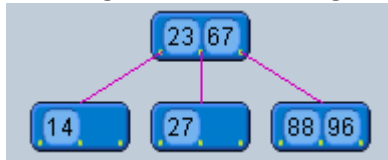
Resulting tree traversal [inorder, preorder, postorder]:

```
C:\Users\Webgate\Documents\Visual Studio 2012\Projects\2-3TreeImplementation\Debug\2-...
34
23
14
27
88
67
96
**preorder[?]
14
23
27
34
67
88
96
**inorder[?]
14
27
23
67
96
88
34
**postorder[?]
-
```

Initial tree:



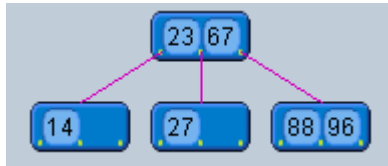
Resulting tree after deleting 34:



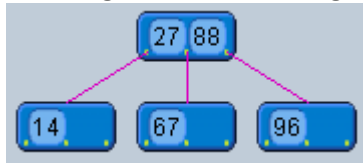
Resulting tree traversal [inorder, preorder, postorder]:

```
C:\Users\Webgate\Documents\Visual Studio 2012\Projects\2-3TreeImplementation\Debug\2-3Tre...
23
14
67
27
88
96
**preorder[6]
14
23
27
67
88
96
**inorder[6]
14
27
23
88
96
67
**postorder[6]
-
```

Initial tree:



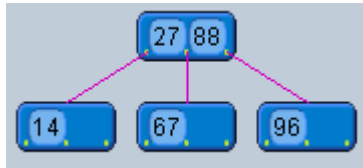
Resulting tree after deleting 23:



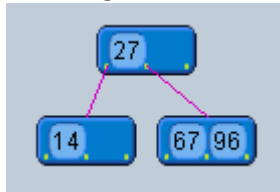
Resulting tree traversal [inorder, preorder, postorder]:

```
C:\Users\Webgate\Documents\Visual Studio 2012\Projects\2-3TreeImplementation\Debug\2-3Tre...
27
14
88
67
96
**preorder[5]
14
27
67
88
96
**inorder[5]
14
67
27
96
88
**postorder[5]
-
```

Initial tree:

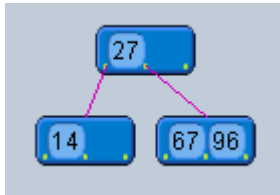


Resulting tree after deleting 88:

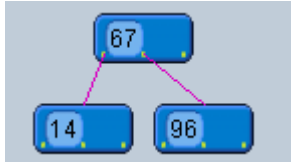


```
C:\Users\Webgate\Documents\Visual Studio 2012\Projects\2-3TreeImplementation\Debug\2-3Tre...
27
14
67
96
**preorder[4]
14
27
67
96
**inorder[4]
14
67
96
27
**postorder[4]
-
```

Initial tree:



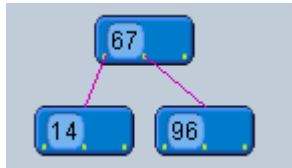
Resulting tree after deleting 27:



Resulting tree traversal [inorder, preorder, postorder]:

```
C:\Users\Webgate\Documents\Visual Studio 2012\Projects\2-3TreeImplementation\Debug\2-3Tre...
67
14
96
**preorder[3]
14
67
96
**inorder[3]
14
96
67
**postorder[3]
-
```

Initial tree:



Resulting tree after deleting 67:



```
C:\Users\Webgate\Documents\Visual Studio 2012\Projects\2-3TreeImplementation\Debug\2-3Tre...
14
96
**preorder[2]
14
96
**inorder[2]
14
96
**postorder[2]
```

Initial tree:



Resulting tree after deleting 14:

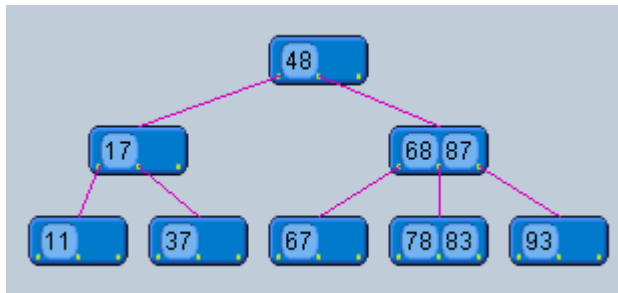


```
C:\Users\Webgate\Documents\Visual Studio 2012\Projects\2-3TreeImplementation\Debug\2-3...
96
**preorder[1]
96
**inorder[1]
96
**postorder[1]
```

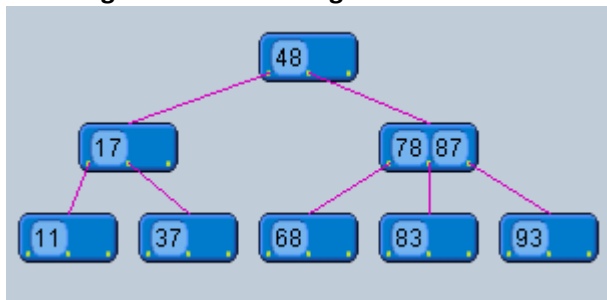
Deleting 96 results in an empty tree.

2) Testcases002 local rotation, Case 2: Take from middle first. \*/  
`Int iTestcases002[] = {37,11,17,48,78,87,93,67,68,83};`

**Initial tree:**



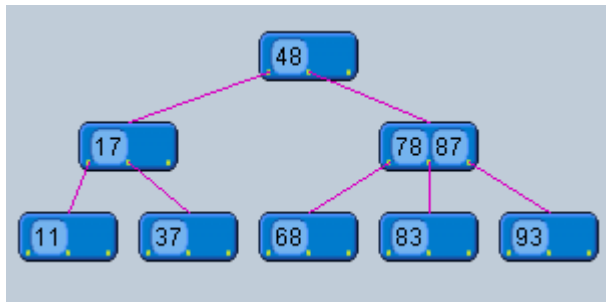
**Resulting tree after deleting 67:**



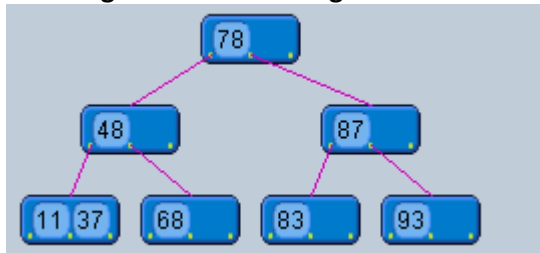
**Resulting tree traversal:**

```
C:\Users\Webgate\Documents\Visual Studio 2012\Projects\2-3TreeImplementation\Debug\2-3Tre...
48
17
11
37
78
68
87
83
93
**preorder[9]
11
17
37
48
68
78
83
87
93
**inorder[9]
11
37
17
68
83
78
93
87
48
**postorder[9]
```

Initial tree:



Resulting tree after deleting 17:

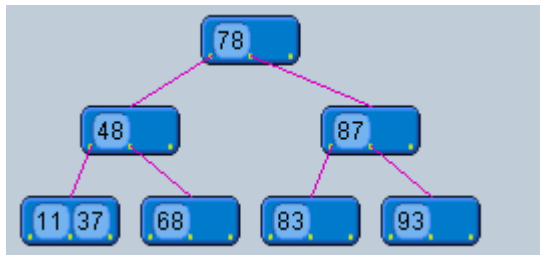


Resulting tree traversal:

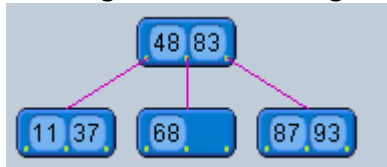
```
C:\Users\Webgate\Documents\Visual Studio 2012\Projects\2-3TreeImplementation\Debug\2-3Tr...
78
48
11
37
68
87
83
93
**preorder[8]
11
37
48
68
78
83
87
93
**inorder[8]
11
37
68
48
83
93
87
78
**postorder[8]
```



Initial tree:



Resulting tree after deleting 78:



Resulting tree traversal:

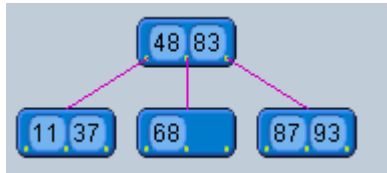
```
C:\Users\Webgate\Documents\Visual Studio 2012\Projects\2-3TreeImplementation\Debug\2-3Tre...
48
11
37
83
68
87
93
**preorder[?]

11
37
48
68
83
87
93
**inorder[?]

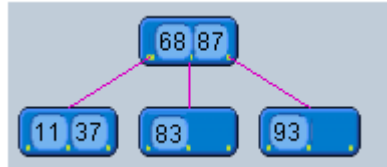
11
37
68
48
87
93
83
**postorder[?]

_
```

Initial tree:



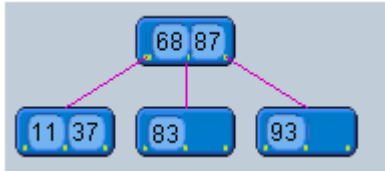
Resulting tree after deleting 48:



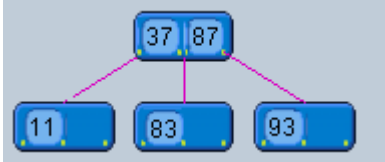
Resulting tree traversal:

```
C:\Users\Webgate\Documents\Visual Studio 2012\Projects\2-3TreeImplementation\Debug\2-3Tre...
68
11
37
87
83
93
**preorder[6]
11
37
68
83
87
93
**inorder[6]
11
37
83
68
93
87
**postorder[6]
```

Initial tree:



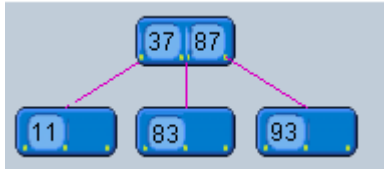
Resulting tree after deleting 68:



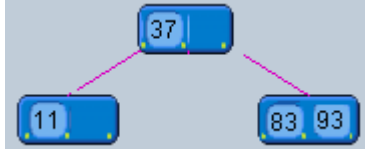
Resulting tree traversal:

```
C:\Users\Webgate\Documents\Visual Studio 2012\Projects\2-3TreeImplementation\Debug\2-3Tre...
37
11
87
83
93
**preorder[5]
11
37
83
87
93
**inorder[5]
11
83
37
93
87
**postorder[5]
```

Initial tree:

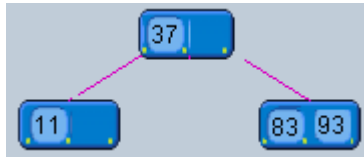


Resulting tree after deleting 87:

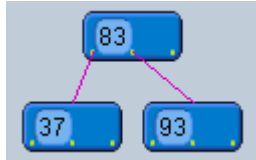


```
C:\Users\Webgate\Documents\Visual Studio 2012\Projects\2-3TreeImplementation\Debug\2-3Tre...
37
11
83
93
**preorder[4]
11
37
83
93
**inorder[4]
11
83
93
37
**postorder[4]
```

Initial tree:

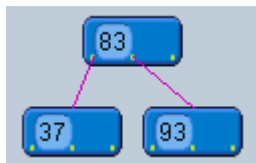


Resulting tree after deleting 11:

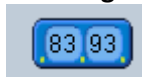


```
C:\Users\Webgate\Documents\Visual Studio 2012\Projects\2-3TreeImplementation\Debug\2-...
83
37
93
**preorder[3]
37
83
93
**inorder[3]
37
93
83
**postorder[3]
```

Initial tree:



Resulting tree after deleting 37:

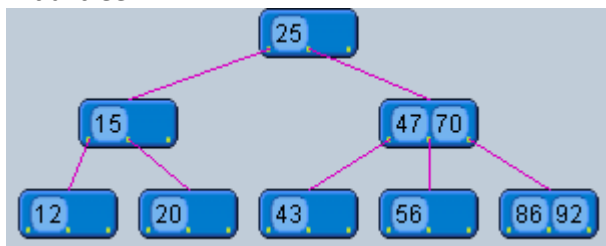


```
C:\Users\Webgate\Documents\Visual Studio 2012\Projects\2-3TreeImplementation\Debug\2-3Tre...
83
93
**preorder[2]
83
93
**inorder[2]
83
93
**postorder[2]
```

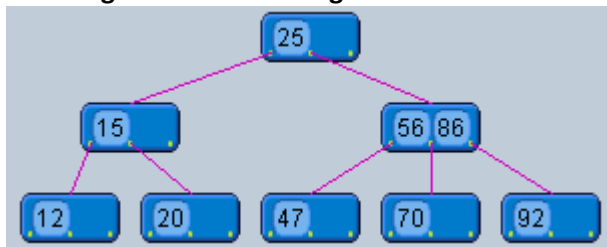
3) Testcases003 local rotation, Case 3: Take from right.

`int iTestcases003[] = {20,25,43,47,12,56,15,70,86,92};`

Initial tree:



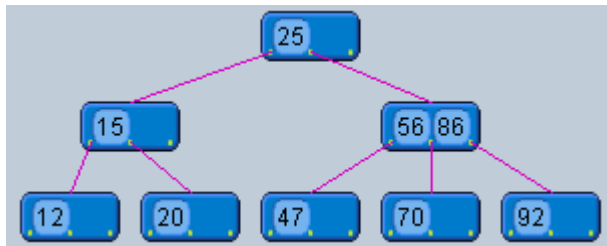
Resulting tree after deleting 43:



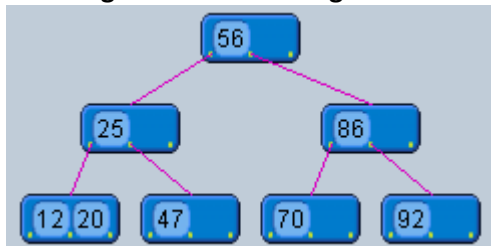
Tree traversal resulting tree:

```
C:\Users\Webgate\Documents\Visual Studio 2012\Projects\2-3TreeImplementation\Debug\2-3Tre...
25
15
12
20
56
47
86
70
92
**preorder[9]
12
15
20
25
47
56
70
86
92
**inorder[9]
12
20
15
47
70
56
92
86
25
**postorder[9]
```

Initial tree:

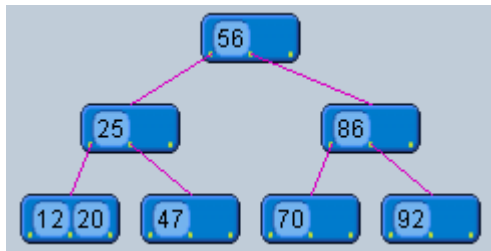


Resulting tree after deleting 15:

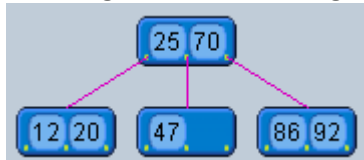


```
C:\Users\Webgate\Documents\Visual Studio 2012\Projects\2-3TreeImplementation\Debug\2-3Tre...
56
25
12
20
47
86
70
92
**preorder[8]
12
20
25
47
56
70
86
92
**inorder[8]
12
20
47
25
70
92
86
56
**postorder[8]
```

Initial tree:



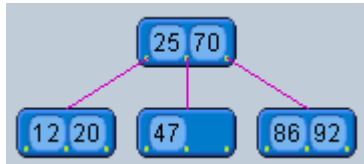
Resulting tree after deleting 56:



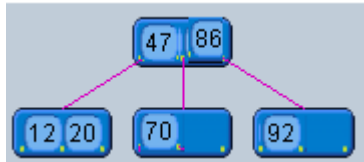
```
C:\Users\Webgate\Documents\Visual Studio 2012\Projects\2-3TreeImplementation\Debug\2-3Tre...
25
12
20
70
47
86
92
**preorder[?]
12
20
25
47
70
86
92
**inorder[?]
12
20
47
25
86
92
70
**postorder[?]
```



Initial tree:

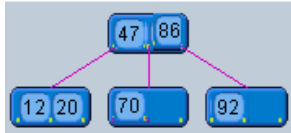


Resulting tree after deleting 25:

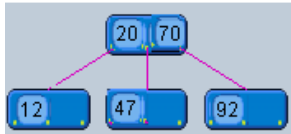


```
C:\Users\Webgate\Documents\Visual Studio 2012\Projects\2-3TreeImplementation\Debug\2-3Tre...
47
12
20
86
70
92
**preorder[6]
12
20
47
70
86
92
**inorder[6]
12
20
70
47
92
86
**postorder[6]
```

Initial tree:



Resulting tree after deleting 86:



```
C:\Users\Webgate\Documents\Visual Studio 2012\Projects\2-3TreeImplementation\Debug\2-3Tre...
20
12
70
47
92
**preorder[5]
12
20
47
70
92
**inorder[5]
12
47
20
92
70
**postorder[5]
```

Initial tree:

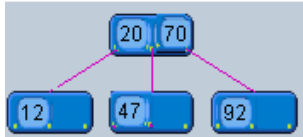


Resulting tree after deleting 92:

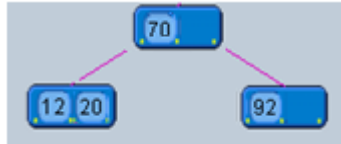


```
C:\Users\Webgate\Documents\Visual Studio 2012\Projects\2-3TreeImplementation\Debug\2-...
20
12
47
70
**preorder[4]
12
20
47
70
**inorder[4]
12
47
70
20
**postorder[4]
```

Initial tree:

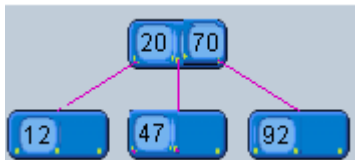


Resulting tree after deleting 47:

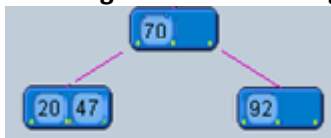


```
C:\Users\Webgate\Documents\Visual Studio 2012\Projects\2-3TreeImplementation\Debug\2-3...
70
12
20
92
**preorder[4]
12
20
70
92
**inorder[4]
12
20
92
70
**postorder[4]
```

Initial tree:

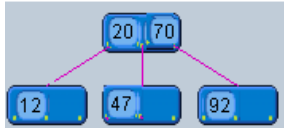


Resulting tree after deleting 12:

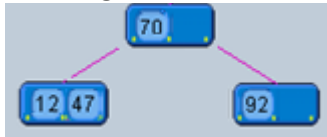


```
C:\Users\Webgate\Documents\Visual Studio 2012\Projects\2-3TreeImplementation\Debug\2-3Tr...
70
20
47
92
**preorder[4]
20
47
70
92
**inorder[4]
20
47
92
70
**postorder[4]
```

Initial tree:



Resulting tree after deleting 20:



```
C:\Users\Webgate\Documents\Visual Studio 2012\Projects\2-3TreeImplementation\Debug\2-3Tre...
70
12
47
92
**preorder[4]
12
47
70
92
**inorder[4]
12
47
92
70
**postorder[4]
```

Initial tree:



Resulting tree after deleting 70:

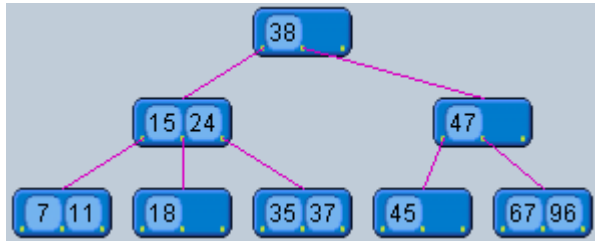


```
C:\Users\Webgate\Documents\Visual Studio 2012\Projects\2-3TreeImplementation\Debug\2-3...
20
12
47
92
**preorder[4]
12
20
47
92
**inorder[4]
12
47
92
20
**postorder[4]
```

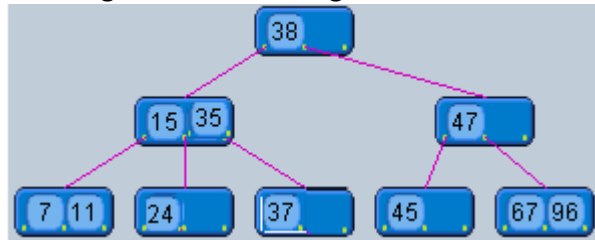
4) Testcases004 local rotation, (Case 4: Take from right first.)

```
int iTestcases004[] = {18,47,67,35,96,24,15,45,38,7,11,37};
```

Initial tree:



Resulting tree after deleting 18:



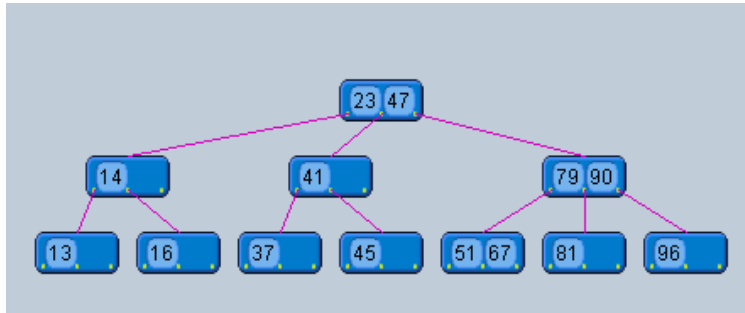
Tree traversal resulting tree:

```
C:\Users\Webgate\Documents\Visual Studio 2012\Projects\2-3TreeImplementation\...
38
15
7
11
35
24
37
47
45
67
96
**preorder[11]
7
11
15
24
35
37
38
45
47
67
96
**inorder[11]
7
11
24
15
37
35
45
67
96
47
38
**postorder[11]
```

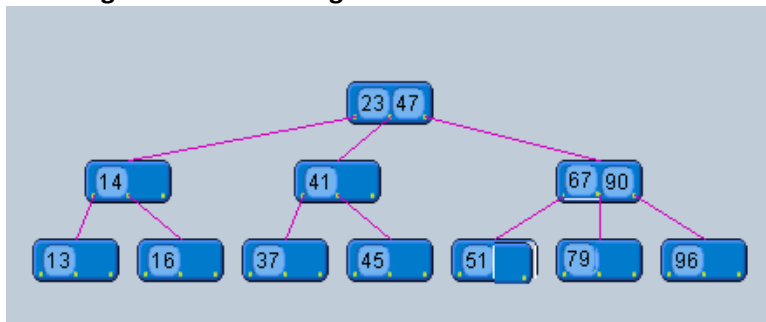
5) Testcases005 local rotation, (Case 5: Take from left.)

```
int iTestcases005[] = {47,51,16,23,45,79,14,81,37,13,41,90,96,67};
```

Initial tree:



Resulting tree after deleting 81:



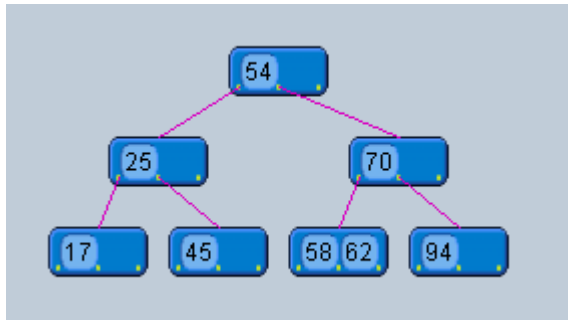
Tree traversal resulting tree:

```
C:\Users\Webgate\Documents\Visual Studio 2012\Projects\2-3TreeImplemen...
23
14
13
16
47
41
37
45
67
51
90
79
96
**preorder[13]
13
14
16
23
37
41
45
47
51
67
79
90
96
**inorder[13]
13
16
14
37
45
41
23
51
79
67
96
90
47
**postorder[13]
```

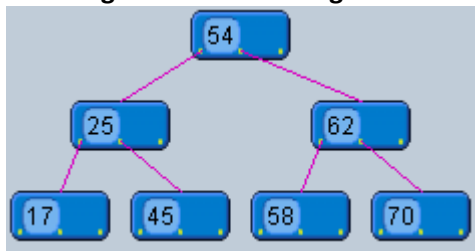
6) Testcases006 local rotation, (Case 6: Take from left.)

```
int iTestcases006[] = {54,70,94,58,25,62,45,17};
```

Initial tree:



Resulting tree after deleting 94:



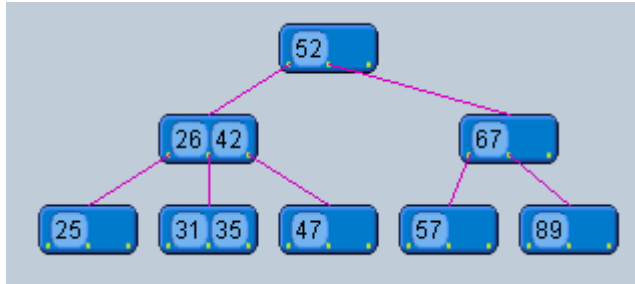
Tree traversal resulting tree:

```
C:\Users\Webgate\Documents\Visual Studio 2012\Project...
54
25
17
45
62
58
70
**preorder[?]
17
25
45
54
58
62
70
**inorder[?]
17
45
25
58
70
62
54
**postorder[?]
-
```

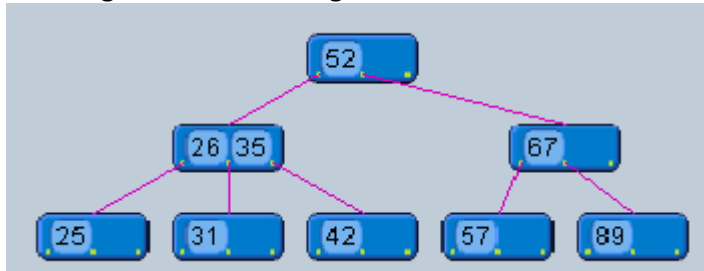
7) Testcases007 local rotation, (Case 6: Take from left.)

```
int iTestcases007[] = {26,25,67,89,57,42,52,47,31,35};
```

Initial tree:



Resulting tree after deleting 47:



Tree traversal resulting tree:

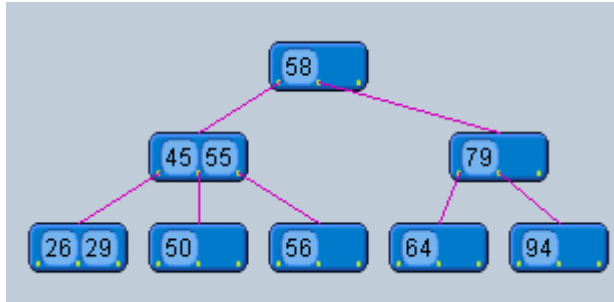
```
C:\Users\Webgate\Documents\Visual Studio 2012\Projects\2-3Tr...
52
26
25
35
31
42
67
57
89
**preorder[9]
25
26
31
35
42
52
57
67
89
**inorder[9]
25
31
26
42
35
57
89
67
52
**postorder[9]
-
```



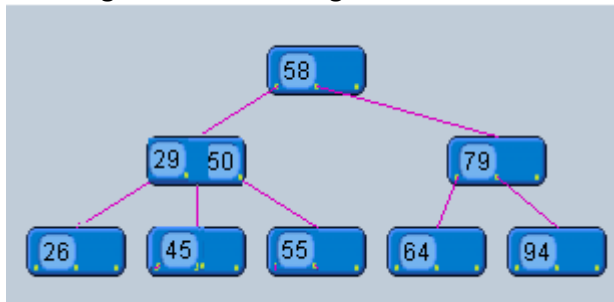
8) Testcases008 local rotation, (Case 8: Take from left.)

```
int iTestcases008[] = {79,45,94,56,29,64,26,58,50,55};
```

Initial tree:



Resulting tree after deleting 56:



Tree traversal resulting tree:

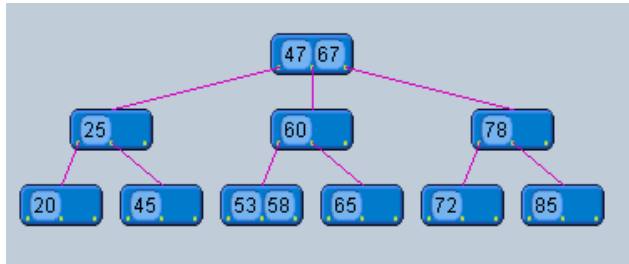
```
C:\Users\Webgate\Documents\Visual Studio 20...
58
29
26
50
45
55
79
64
94
***preorder[9]
26
29
45
50
55
58
64
79
94
***inorder[9]
26
45
29
55
50
64
94
79
58
***postorder[9]
```

## Condition coverage global rotation:

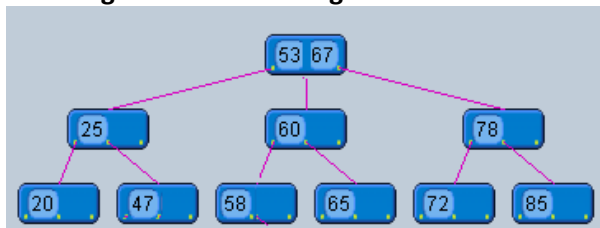
9) Testcases009 global rotation, (Case 9: Take from leftmost child of the middle child of the root.)

```
int iTestcases009[] = {67,20,72,65,85,47,60,25,45,78,53,58};
```

Initial tree:



Resulting tree after deleting 45:

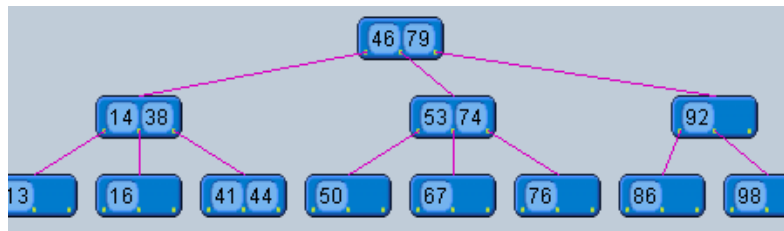


Tree traversal resulting tree:

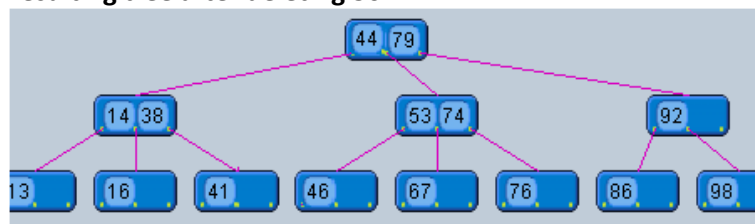
```
C:\Users\Webgate\Documents\Visual Studio 201...
53
25
20
47
67
60
58
65
78
72
85
**preorder[11]
20
25
47
53
58
60
65
67
72
78
85
**inorder[11]
20
47
25
58
65
60
53
72
85
78
67
**postorder[11]
```

10) Testcases010 global rotation, (Case 10: Take from rightmost child of the left child of the root.)  
`int iTestcases010[] = {98,13,46,14,79,38,74,76,41,16,67,92,86,53,50,44};`

Initial tree:



Resulting tree after deleting 50:



Tree traversal resulting tree:

```

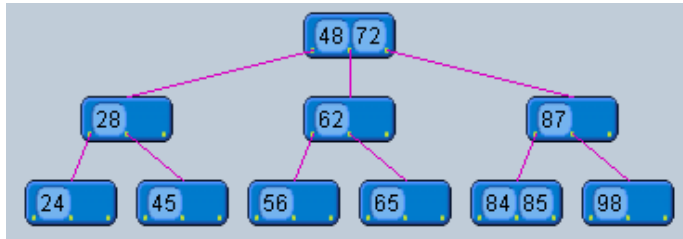
C:\Users\Webgate\Documents\Visual Studio 2012\Projects\2-3Tree...
44
14
13
38
16
41
79
53
46
74
67
76
92
86
98
**preorder[15]
13
14
16
38
41
44
46
53
67
74
76
79
86
92
98
**inorder[15]
13
16
14
41
38
46
67
53
76
74
44
86
98
92
79
**postorder[15]

```

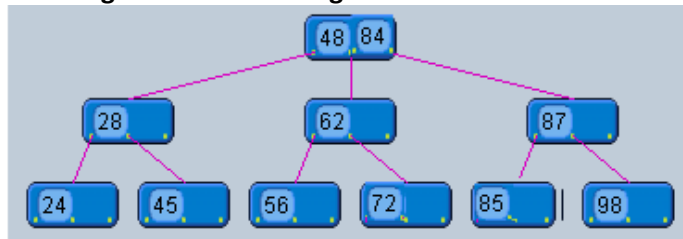
11) Testcases011 global rotation, (Case 11: Take from leftmost child of the right child of the root.)

`Int iTestcases011[] = {98,72,65,24,87,62,28,84,56,85,48,45};`

Initial tree:



Resulting tree after deleting 65:

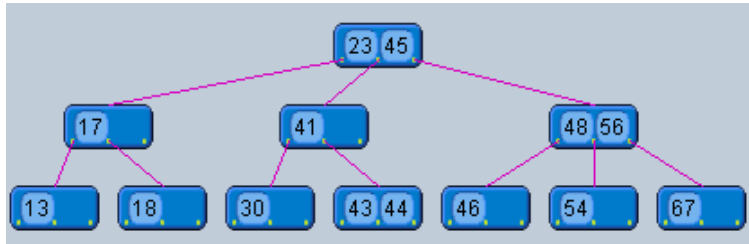


Tree traversal resulting tree:

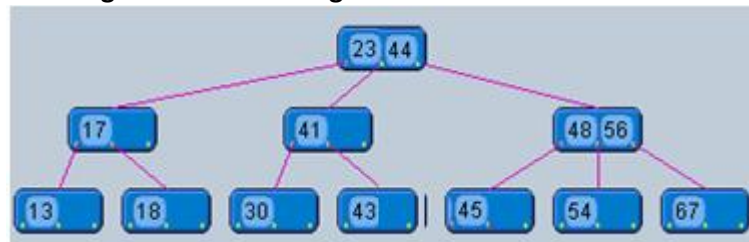
```
C:\Users\Webgate\Documents\Visual Studio 201...
48
28
24
45
84
62
56
72
87
85
98
**preorder[11]
24
28
45
48
56
62
72
84
85
87
98
**inorder[11]
24
45
28
56
72
62
48
85
98
87
84
**postorder[11]
```

12) Testcases012 global rotation, (Case 12: Take from rightmost child of the middle child of the root.)  
`int iTestcases012[] = {23,45,67,48,41,56,17,46,54,43,18,13,30,44};`

Initial tree:



Resulting tree after deleting 46:

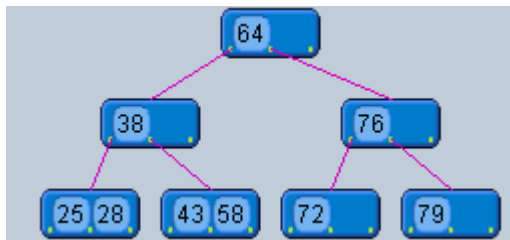


Tree traversal resulting tree:

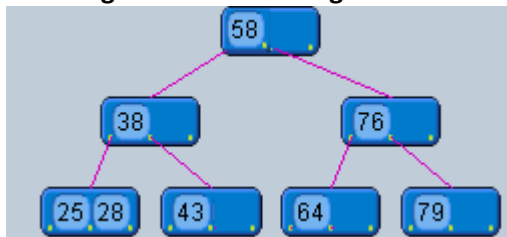
```
C:\Users\Webgate\Documents\Visual Studio 201...
23
17
13
18
44
41
30
43
48
45
56
54
67
**preorder[13]
13
17
18
23
30
41
43
44
45
48
54
56
67
**inorder[13]
13
18
17
30
43
41
23
45
54
48
67
56
44
**postorder[13]
```

13) Testcases013 global rotation, (Case 13: Take from rightmost child of the left child of the root.)  
`int iTestcases013[] = {64,38,72,58,25,79,28,76,43};`

Initial tree:



Resulting tree after deleting 72:

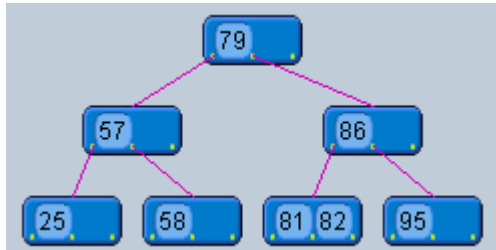


Tree traversal resulting tree:

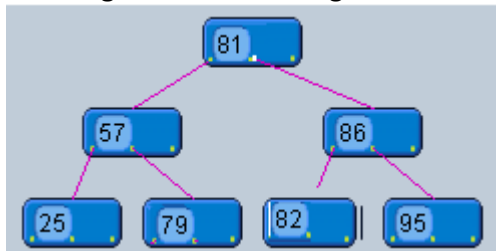
```
C:\Users\Webgate\documents\visual studio 2...
58
38
25
28
43
76
64
79
**preorder[8]
25
28
38
43
58
64
76
79
**inorder[8]
25
28
43
38
64
79
76
58
**postorder[8]
```

**14)** Testcases014 global rotation, (Case 14: Take from leftmost child of the right child of the root.)  
`int iTestcases014[] = {58,79,95,82,57,25,86,81};`

**Initial tree:**



**Resulting tree after deleting 58:**



**Tree traversal resulting tree:**

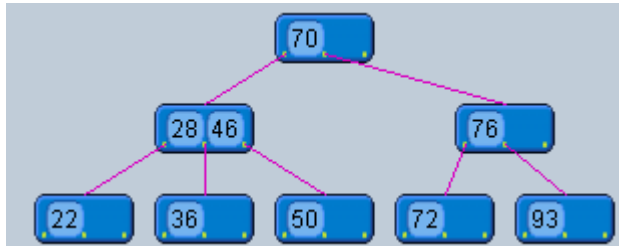
```
C:\Users\Webgate\documents\visual studio 2...
81
57
25
79
86
82
95
**preorder[?]
25
57
79
81
82
86
95
**inorder[?]
25
79
57
82
95
86
81
**postorder[?]
```

## Condition coverage local node merger:

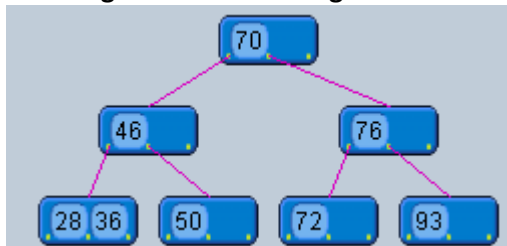
15) Testcases015 local node merger, (Case 15: Merge to the left.)

```
int iTestcases015[] = {46,72,70,93,76,36,50,28,22};
```

Initial tree:



Resulting tree after deleting 22:



Tree traversal resulting tree:

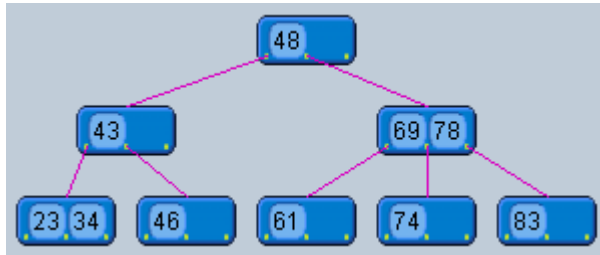
```
C:\Users\Webgate\documents\visual studio 2012\Pro...
70
46
28
36
50
76
72
93
**preorder[8]
28
36
46
50
70
72
76
93
**inorder[8]
28
36
50
46
72
93
76
70
**postorder[8]
```



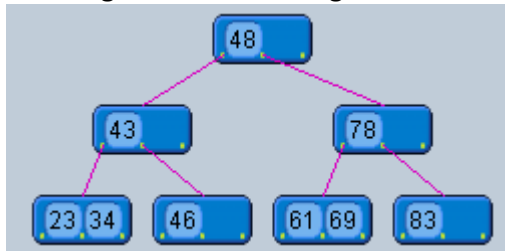
16) Testcases016 local node merger, (Case 16: Merge to the left.)

```
int iTestcases016[] = {23,43,46,78,34,83,48,74,61,69};
```

Initial tree:



Resulting tree after deleting 74:



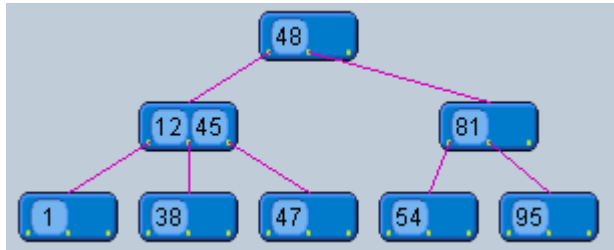
Tree traversal resulting tree:

```
C:\Users\Webgate\Documents\Visual Stud...
48
43
23
34
46
78
61
69
83
**preorder[9]
23
34
43
46
48
61
69
78
83
**inorder[9]
23
34
46
43
61
69
83
78
48
**postorder[9]
```

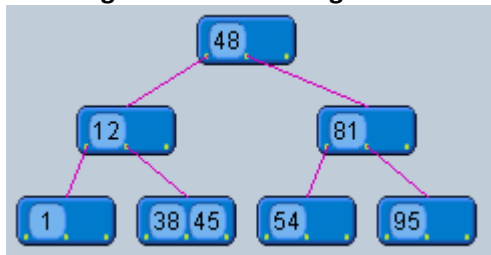
17) Testcases017 local node merger, (Case 17: Merge to the right.)

```
int iTestcases017[] = {1,12,38,54,48,95,47,81,45};
```

Initial tree:



Resulting tree after deleting 47:



Tree traversal resulting tree:

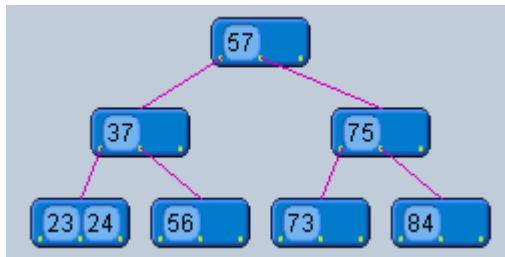
```
C:\Users\Webgate\Documents\Visual Studio 2012\Project...
48
12
1
38
45
81
54
95
**preorder[8]
1
12
38
45
48
54
81
95
**inorder[8]
1
38
45
12
54
95
81
48
**postorder[8]
```

## Condition coverage global node merger:

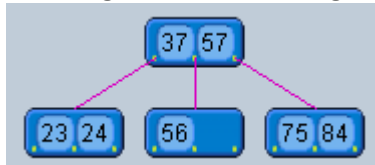
18) Case 18: Node merger propagates. Case 18: (Node merger propagates, delete left node.)

```
int iTestcases018[] = {73,24,57,84,56,37,23,75};
```

Initial tree:



Resulting tree after deleting 73:



Tree traversal resulting tree:

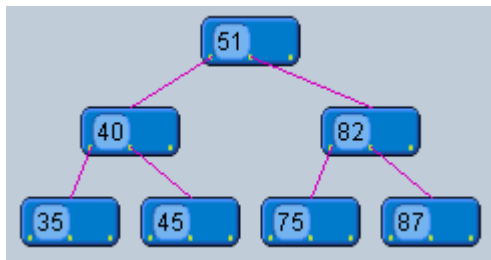
```
C:\Users\Webgate\Documents\Visual Studio 2012\Projects\2...
37
23
24
57
56
75
84
**preorder[?]

23
24
37
56
57
75
84
**inorder[?]

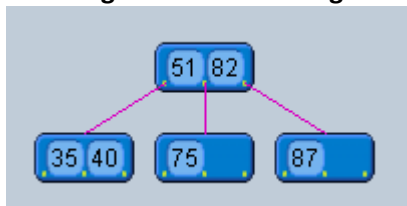
23
24
56
37
75
84
57
**postorder[?]
```

19) Case 19: Node merger propagates. Case 19: (Node merger propagates, delete right node.)  
`int iTestcases019[] = {35,40,45,51,75,82,87};`

Initial tree



Resulting tree after deleting 45:



Tree traversal resulting tree:

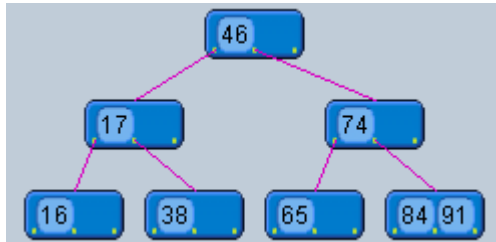
```
C:\Users\Webgate\Documents\Visual Studio 201...
51
35
40
82
75
87
**preorder[6 ]
35
40
51
75
82
87
**inorder[6 ]
35
40
75
51
87
82
**postorder[6 ]
```

## Condition coverage removing internal element:

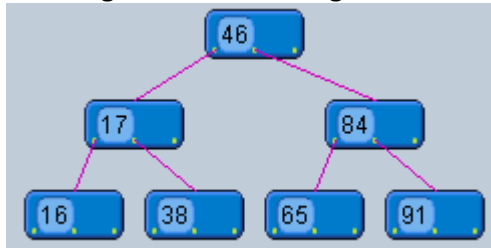
20) Case 20: removing an internal element. Case 20: (Replace element with Inorder successor.)

`Int iTestcases020[] = {74,65,91,38,46,17,16,84};`

Initial tree



Resulting tree after deleting 74:



Tree traversal resulting tree:

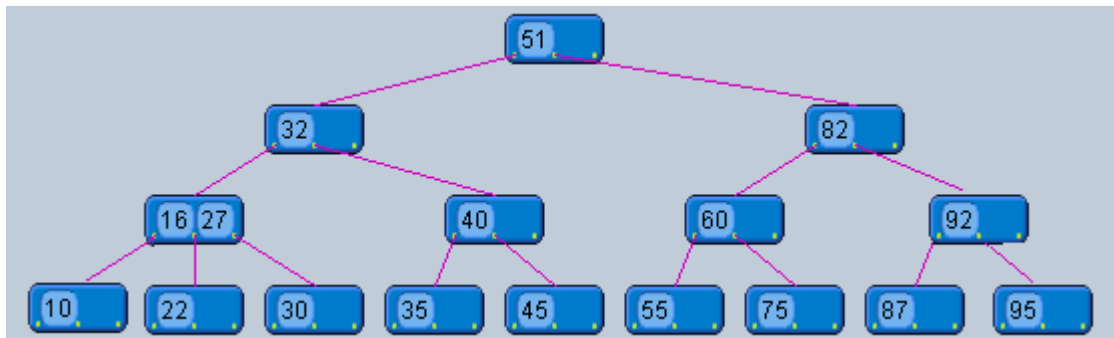
```
C:\Users\Webgate\Documents\Visual Stud...
46
17
16
38
84
65
91
**preorder[?]

16
17
38
46
65
84
91
**inorder[?]

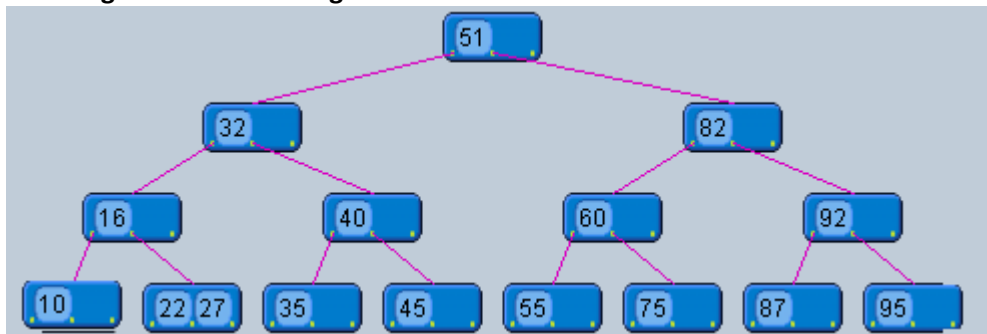
16
38
17
65
91
84
46
**postorder[?]
```

## 21) Case 21: Tree insert/delete

### Initial tree

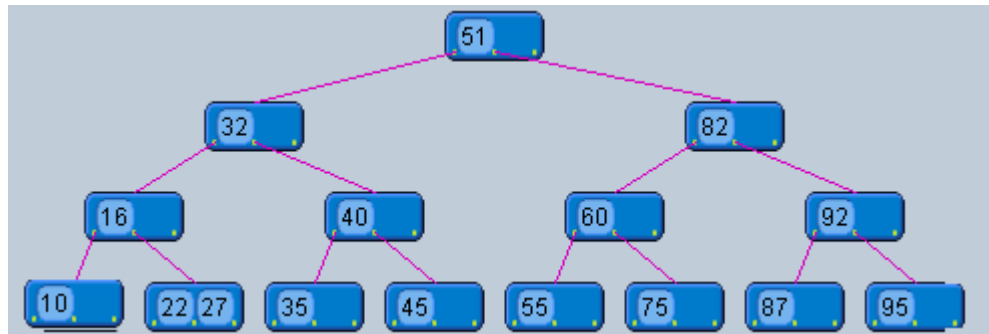


### Resulting tree after deleting 30:

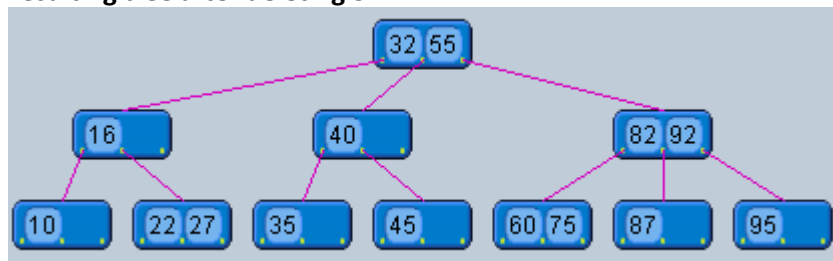


```
C:\Users\Webgate\Documents\Visual Studio 2012\Projects\2-3TreeImplementation\Debug\2-3Tre...
51
32
16
10
22
27
40
35
45
82
60
55
75
92
87
95
**preorder[16]
10
16
22
27
32
35
40
45
51
55
60
75
82
87
92
95
**inorder[16]
10
22
27
16
35
45
40
32
55
75
60
87
95
92
51
**postorder[16]
```

Initial tree

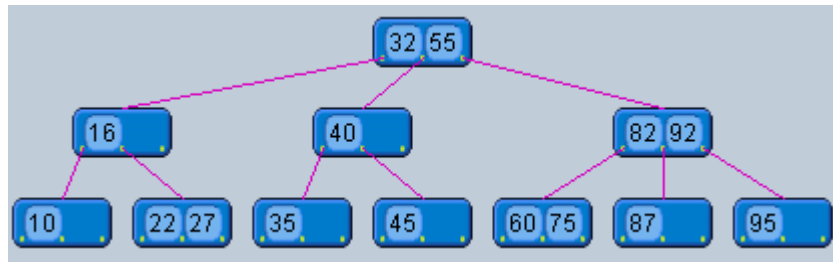


Resulting tree after deleting 51:

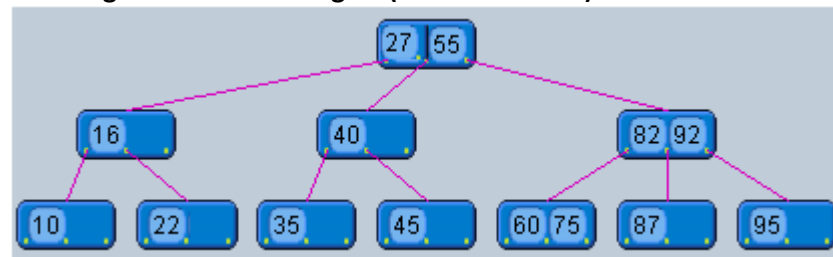


```
C:\Users\Webgate\Documents\Visual Studio 2012\Projects\2-3TreeImplementation\Debug\2-3Tre...
32
16
10
22
27
55
40
35
45
82
60
75
92
87
95
**preorder[15]
10
16
22
27
32
35
40
45
55
60
75
82
87
92
95
**inorder[15]
10
22
27
16
35
45
40
32
60
75
82
87
92
95
55
**postorder[15]
```

Initial tree



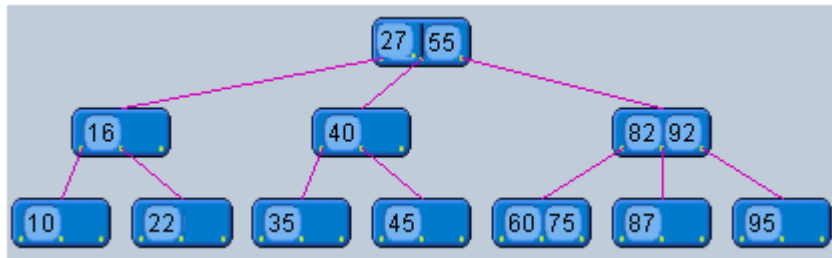
Resulting tree after deleting 32 (Global rotation):



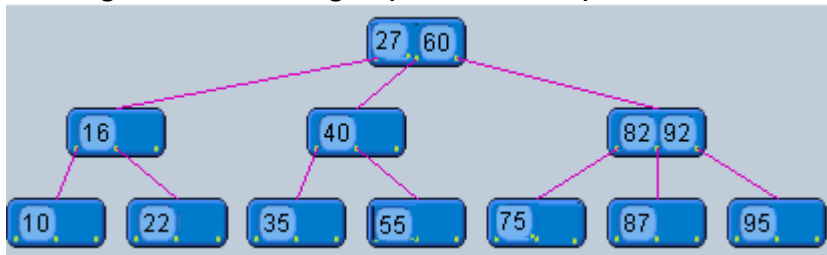
```
C:\Users\Webgate\Documents\Visual Studio 2012\Projects\2-3TreeImplementation\Debug\2-3Tr...
27
16
10
22
55
40
35
45
82
60
75
92
87
95
**preorder[14]
10
16
22
27
35
40
45
55
60
75
82
87
92
95
**inorder[14]
10
22
16
35
45
40
27
60
75
87
82
95
92
55
**postorder[14]
```



Initial tree



Resulting tree after deleting 45 (Global rotation):

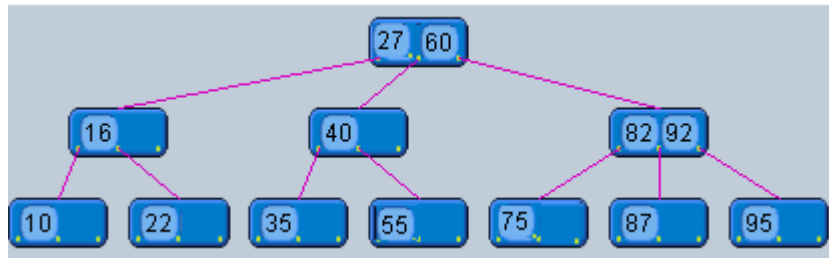


```

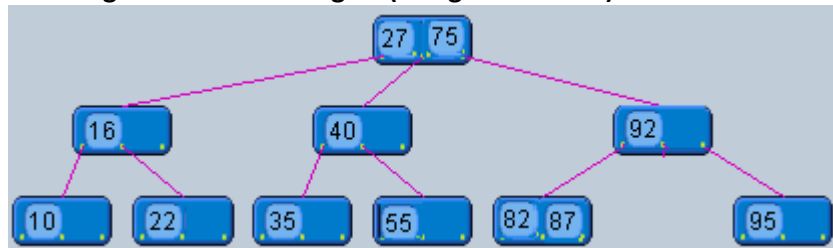
C:\Users\Webgate\Documents\Visual Studio 2012\Projects\2-3TreeImplementation\Debu...
27
16
10
22
60
40
35
55
82
75
92
87
95
**preorder[13]
10
16
22
27
35
40
55
60
75
82
87
92
95
**inorder[13]
10
22
16
35
55
40
27
75
87
82
95
92
60
**postorder[13]

```

### Initial tree

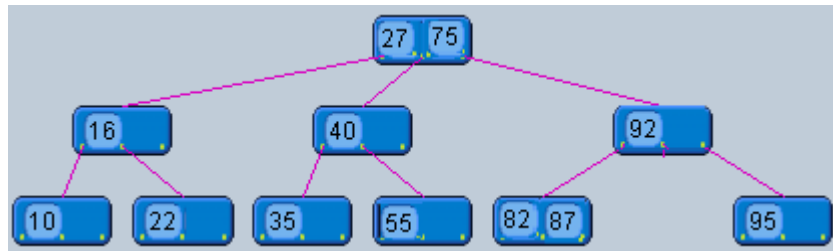


### Resulting tree after deleting 60 (Merge to the left):

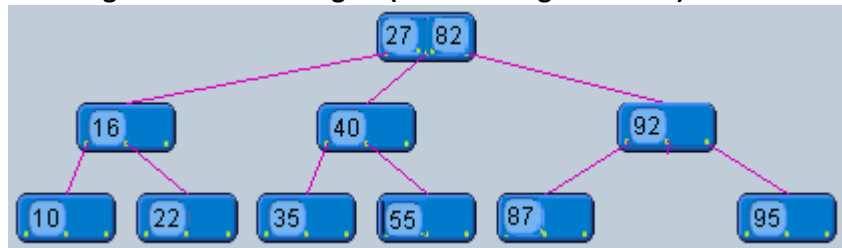


```
C:\Users\Webgate\Documents\Visual Studio 2012\Projects\2-3TreeImplementation\Debug\2-3Tre...
27
16
10
22
75
40
35
55
92
82
87
95
**preorder[12]
10
16
22
27
35
40
55
75
82
87
92
95
**inorder[12]
10
22
16
35
55
40
27
82
87
95
92
75
**postorder[12]
```

Initial tree

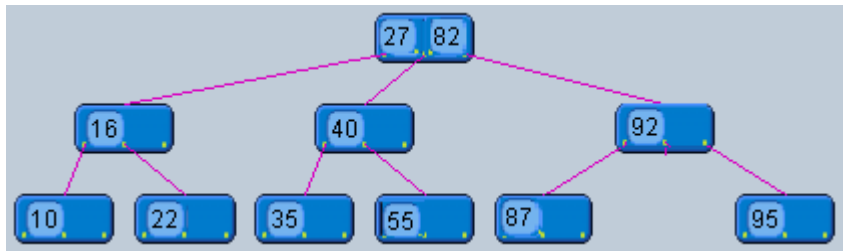


Resulting tree after deleting 75 (Delete straightforward):

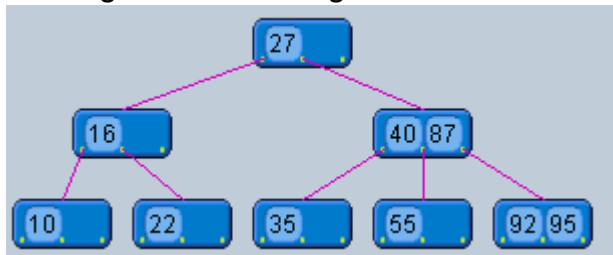


```
C:\Users\Webgate\Documents\Visual Studio 2012\Projects\2-3TreeImplementation\Debug\...
27
16
10
22
82
40
35
55
92
87
95
**preorder[11]
10
16
22
27
35
40
55
82
87
92
95
**inorder[11]
10
22
16
35
55
40
27
87
95
92
82
**postorder[11]
```

Initial tree

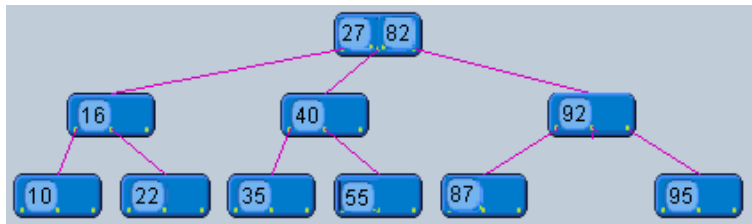


Resulting tree after deleting 82

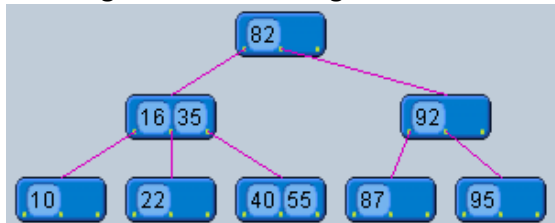


```
C:\Users\Webgate\Documents\Visual Studio 2012\Projects\2-3TreeImplementation\Debug\2-3Tre...
27
16
10
22
40
35
87
55
92
95
***preorder[10]
10
16
22
27
35
40
55
87
92
95
***inorder[10]
10
22
16
35
55
40
92
95
87
27
***postorder[10]
```

### Initial tree

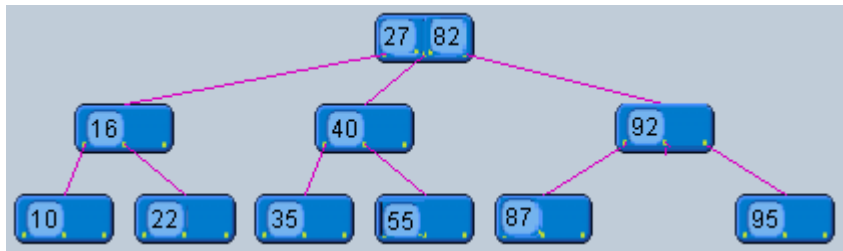


### Resulting tree after deleting 27

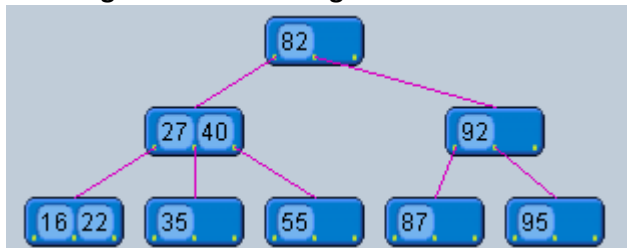


```
C:\Users\Webgate\Documents\Visual Studio 2012\Projects\2-3TreeImplementation\Debug\2-3Tre...
82
16
10
35
22
40
55
92
87
95
**preorder[10]
10
16
22
35
40
55
82
87
92
95
**inorder[10]
10
22
16
40
55
35
87
95
92
82
**postorder[10]
```

### Initial tree

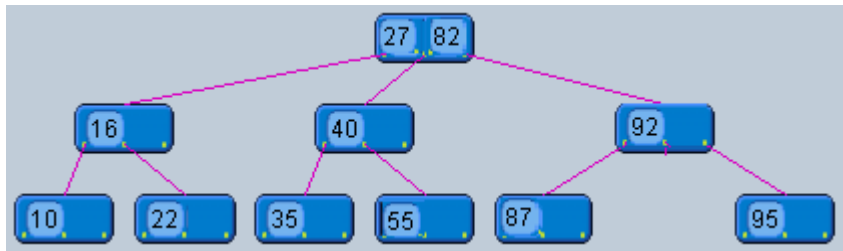


### Resulting tree after deleting 10:

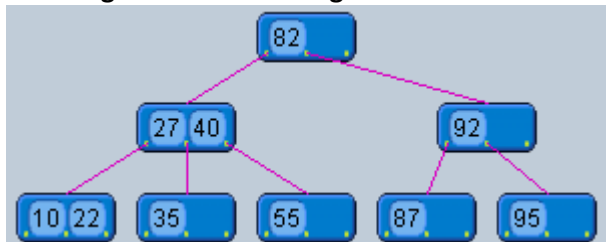


```
C:\Users\Webgate\Documents\Visual Studio 2012\Projects\2-3TreeImplementation\Debug\2-3Tre...
82
27
16
22
40
35
55
92
87
95
**preorder[10]
16
22
27
35
40
55
82
87
92
95
**inorder[10]
16
22
35
27
55
40
87
95
92
82
**postorder[10]
```

Initial tree

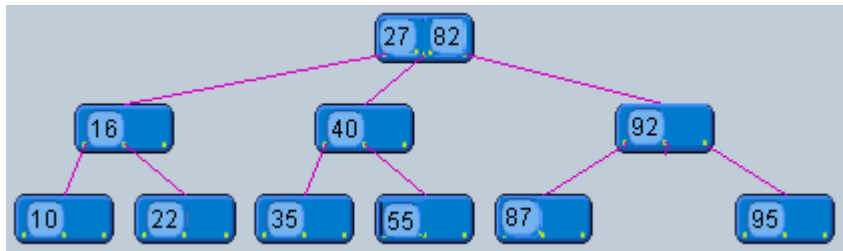


Resulting tree after deleting 16

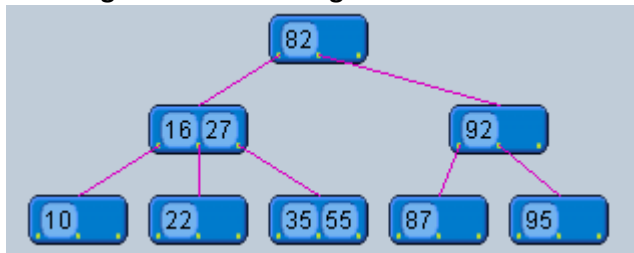


```
C:\Users\Webgate\Documents\Visual Studio 2012\Projects\2-3TreeImplementation\Debug\2-3Tre...
82
27
10
22
40
35
55
92
87
95
**preorder[10]
10
22
27
35
40
55
82
87
92
95
**inorder[10]
10
22
35
27
55
40
87
95
92
82
**postorder[10]
```

Initial tree



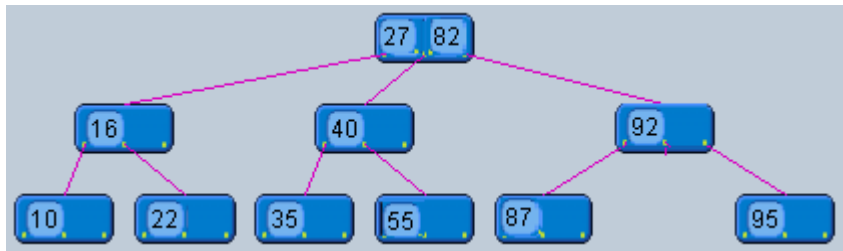
Resulting tree after deleting 40:



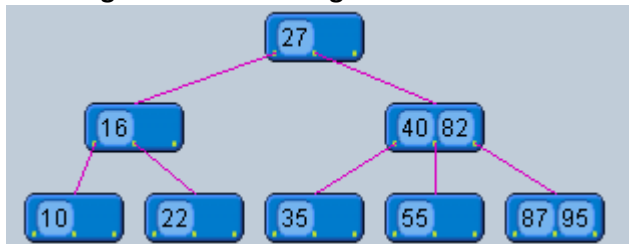
```
C:\Users\Webgate\Documents\Visual Studio 2012\Projects\2-3TreeImplementation\Debug\2-3Tre...
82
16
10
27
22
35
55
92
87
95
**preorder[10]
10
16
22
27
35
55
82
87
92
95
**inorder[10]
10
22
16
35
55
27
87
95
92
82
**postorder[10]
```



Initial tree



Resulting tree after deleting 92



```
C:\Users\Webgate\Documents\Visual Studio 2012\Projects\2-3TreeImplementation\Debug\2-3Tre...
27
16
10
22
40
35
82
55
87
95
**preorder[10]
10
16
22
27
35
40
55
82
87
95
**inorder[10]
10
22
16
35
55
40
87
95
82
27
**postorder[10]
```