Direct Access File Implementation Of Doubly Linked List

void FreeNode (NodePtr OldNodePtr)

Places The OldNode At The Front Of The Available Node

DA-DLList - "Divide & Conquer"

Dr. Thomas E. Hicks

Records Added & Deleted Over Time

```
DA_DLList <ListHeader, int>
     Num ("Hicks-Inventory.hf", "Hicks-Inventory.nf");



     TrinitySports.Display("----> Initialized TrinitySports");
```

```
     ------------------------------------------------------------------------
     | Left |               Info                                |Del| Right|
     ------------------------------------------------------------------------
  12 | xxxx | xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx | T | xxxx |
     ------------------------------------------------------------------------
  11 | xxxx | xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx | T | xxxx |
     ------------------------------------------------------------------------
  10 | xxxx | xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx | T | xxxx |
     ------------------------------------------------------------------------
   9 | xxxx | xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx | T | xxxx |
     ------------------------------------------------------------------------
   8 | xxxx | xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx | T | xxxx |
     ------------------------------------------------------------------------
   7 | xxxx | xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx | T | xxxx |
     ------------------------------------------------------------------------
   6 | xxxx | xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx | T | xxxx |
     ------------------------------------------------------------------------
   5 | xxxx | xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx | T | xxxx |
     ------------------------------------------------------------------------
   4 | xxxx | xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx | T | xxxx |
     ------------------------------------------------------------------------
   3 | xxxx | xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx | T | xxxx |
     ------------------------------------------------------------------------
   2 | xxxx | xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx | T | xxxx |
     ------------------------------------------------------------------------
   1 | xxxx | xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx | T | xxxx |
     ------------------------------------------------------------------------
     |    0 |                         0      0      0       0.00 | F |    / |
     ------------------------------------------------------------------------
     Avail = /
```

Always Make Sure That Both Avail & Record-0-Right Point To The Next Available Node
Avail Is The Pointer To The First Node In A Single Linked List Of Available Nodes

FreeNode(7)

```
    ------------------------------------------------------------------------
    | Left |               Info                                |Del| Right|
    ------------------------------------------------------------------------
 12 | xxxx | xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx | F | xxxx |
    ------------------------------------------------------------------------
 11 | xxxx | xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx | F | xxxx |
    ------------------------------------------------------------------------
 10 | xxxx | xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx | F | xxxx |
    ------------------------------------------------------------------------
  9 | xxxx | xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx | F | xxxx |
    ------------------------------------------------------------------------
  8 | xxxx | xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx | F | xxxx |
    ------------------------------------------------------------------------
  7 | xxxx | xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx | T |    / |
    ------------------------------------------------------------------------
  6 | xxxx | xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx | F | xxxx |
    ------------------------------------------------------------------------
  5 | xxxx | xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx | F | xxxx |
    ------------------------------------------------------------------------
  4 | xxxx | xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx | F | xxxx |
    ------------------------------------------------------------------------
  3 | xxxx | xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx | F | xxxx |
    ------------------------------------------------------------------------
  2 | xxxx | xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx | F | xxxx |
    ------------------------------------------------------------------------
  1 | xxxx | xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx | F | xxxx |
    ------------------------------------------------------------------------
    |    0 |                        0      0      0       0.00 | F |    7 |
    ------------------------------------------------------------------------
    Avail = 7
```

FreeNode(1)

```
    ------------------------------------------------------------------------
    | Left |               Info                                |Del| Right|
    ------------------------------------------------------------------------
 12 | xxxx | xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx | F | xxxx |
    ------------------------------------------------------------------------
 11 | xxxx | xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx | F | xxxx |
    ------------------------------------------------------------------------
 10 | xxxx | xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx | F | xxxx |
    ------------------------------------------------------------------------
  9 | xxxx | xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx | F | xxxx |
    ------------------------------------------------------------------------
  8 | xxxx | xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx | F | xxxx |
    ------------------------------------------------------------------------
  7 | xxxx | xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx | T |    / |
    ------------------------------------------------------------------------
  6 | xxxx | xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx | F | xxxx |
    ------------------------------------------------------------------------
  5 | xxxx | xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx | F | xxxx |
    ------------------------------------------------------------------------
  4 | xxxx | xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx | F | xxxx |
    ------------------------------------------------------------------------
```

```
  3 | xxxx | xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx | F | xxxx |
  ---------------------------------------------------------------------------
  2 | xxxx | xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx | F | xxxx |
  ---------------------------------------------------------------------------
  1 | xxxx | xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx | T |    7 |
  ---------------------------------------------------------------------------
    |    0 |                          0      0      0       0.00 | F |    1 |
    ---------------------------------------------------------------------------
    Avail = 1
```

FreeNode(11)

```
    ---------------------------------------------------------------------------
    | Left |               Info                                  |Del| Right|
    ---------------------------------------------------------------------------
   12 | xxxx | xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx | F | xxxx |
   ---------------------------------------------------------------------------
   11 | xxxx | xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx | T |    1 |
   ---------------------------------------------------------------------------
   10 | xxxx | xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx | F | xxxx |
   ---------------------------------------------------------------------------
    9 | xxxx | xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx | F | xxxx |
   ---------------------------------------------------------------------------
    8 | xxxx | xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx | F | xxxx |
   ---------------------------------------------------------------------------
    7 | xxxx | xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx | T |    / |
   ---------------------------------------------------------------------------
    6 | xxxx | xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx | F | xxxx |
   ---------------------------------------------------------------------------
    5 | xxxx | xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx | F | xxxx |
   ---------------------------------------------------------------------------
    4 | xxxx | xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx | F | xxxx |
   ---------------------------------------------------------------------------
    3 | xxxx | xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx | F | xxxx |
   ---------------------------------------------------------------------------
    2 | xxxx | xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx | F | xxxx |
   ---------------------------------------------------------------------------
    1 | xxxx | xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx | T |    7 |
   ---------------------------------------------------------------------------
    |    0 |                          0      0      0       0.00 | F |   11 |
    ---------------------------------------------------------------------------
    Avail = 11
```

FreeNode(3)

```
    ---------------------------------------------------------------------------
    | Left |               Info                                  |Del| Right|
    ---------------------------------------------------------------------------
   12 | xxxx | xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx | F | xxxx |
   ---------------------------------------------------------------------------
   11 | xxxx | xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx | T |    1 |
   ---------------------------------------------------------------------------
   10 | xxxx | xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx | F | xxxx |
   ---------------------------------------------------------------------------
    9 | xxxx | xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx | F | xxxx |
   ---------------------------------------------------------------------------
```

```
  8 | xxxx | xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx | F | xxxx |
    ------------------------------------------------------------------------
  7 | xxxx | xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx | T |    / |
    ------------------------------------------------------------------------
  6 | xxxx | xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx | F | xxxx |
    ------------------------------------------------------------------------
  5 | xxxx | xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx | F | xxxx |
    ------------------------------------------------------------------------
  4 | xxxx | xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx | F | xxxx |
    ------------------------------------------------------------------------
  3 | xxxx | xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx | T |   11 |
    ------------------------------------------------------------------------
  2 | xxxx | xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx | F | xxxx |
    ------------------------------------------------------------------------
  1 | xxxx | xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx | T |    7 |
    ------------------------------------------------------------------------
    |    0 |                          0      0      0       0.00 | F |    3 |
    ------------------------------------------------------------------------
    Avail = 3
```

FreeNode(9)

```
    ------------------------------------------------------------------------
    | Left |              Info                                  |Del| Right|
    ------------------------------------------------------------------------
 12 | xxxx | xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx | F | xxxx |
    ------------------------------------------------------------------------
 11 | xxxx | xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx | T |    1 |
    ------------------------------------------------------------------------
 10 | xxxx | xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx | F | xxxx |
    ------------------------------------------------------------------------
  9 | xxxx | xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx | T |    3 |
    ------------------------------------------------------------------------
  8 | xxxx | xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx | F | xxxx |
    ------------------------------------------------------------------------
  7 | xxxx | xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx | T |    / |
    ------------------------------------------------------------------------
  6 | xxxx | xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx | F | xxxx |
    ------------------------------------------------------------------------
  5 | xxxx | xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx | F | xxxx |
    ------------------------------------------------------------------------
  4 | xxxx | xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx | F | xxxx |
    ------------------------------------------------------------------------
  3 | xxxx | xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx | T |   11 |
    ------------------------------------------------------------------------
  2 | xxxx | xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx | F | xxxx |
    ------------------------------------------------------------------------
  1 | xxxx | xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx | T |    7 |
    ------------------------------------------------------------------------
    |    0 |                          0      0      0       0.00 | F |    9 |
    ------------------------------------------------------------------------
    Avail = 9
```