

# Direct Access File Implementation Of Doubly Linked List

Create New File Constructor  
DA-DLLList - "Divide & Conquer"  
Dr. Thomas E. Hicks

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## Create New Files --> int

---

```
DA_DLLList <ListHeader, int>  
    Num ("Num.hf", "Num.nf", 3, 7)  
    Num.Display("----> Initialized Num");
```

```
----> Initialized Num  
=====
```

|   | Front | Rear |
|---|-------|------|
| 3 | 0     | 0    |
| 2 | 0     | 0    |
| 1 | 0     | 0    |
| 0 | 0     | 0    |

```
=====
```

|   | Left | Info       | Del | Right |
|---|------|------------|-----|-------|
| 7 | 0    | -858993460 | T   | 0     |
| 6 | 0    | -858993460 | T   | 7     |
| 5 | 0    | -858993460 | T   | 6     |
| 4 | 0    | -858993460 | T   | 5     |
| 3 | 0    | -858993460 | T   | 4     |
| 2 | 0    | -858993460 | T   | 3     |
| 1 | 0    | -858993460 | T   | 2     |
|   | 0    | -858993460 | T   | 1     |

```
=====
```

Avail = 1

---

## Create New Files --> Student

---

```
DA_DLLList <StudentListHeader, Student>  
Trinity ("Trinity.hf", "Trinity.nf", 6, 3);  
    InitializeStudentListHeaderFile(Trinity.hfp);  
    Trinity.Display("----> Initialized Trinity");
```

```
----> Initialized Trinity  
=====
```

| Class Name | Professor | Dept | # | Front | Rear |
|------------|-----------|------|---|-------|------|
|------------|-----------|------|---|-------|------|

```
=====
```

Create New File DA\_DLList Constructor

|   |                 |             |      |   |   |   |
|---|-----------------|-------------|------|---|---|---|
| 6 | Theory          | Dr. Myers   | CSCI | 0 | 0 | 0 |
| 5 | Graphics        | Dr. Howland | CSCI | 0 | 0 | 0 |
| 4 | Sr Software I   | Dr. Pitts   | CSCI | 0 | 0 | 0 |
| 3 | Algorithm II    | Dr. Lewis   | CSCI | 0 | 0 | 0 |
| 2 | Algorithm I     | Dr. Eggen   | CSCI | 0 | 0 | 0 |
| 1 | Data Abstractio | Dr. Hicks   | CSCI | 0 | 0 | 0 |
| 0 |                 |             |      | 0 | 0 | 0 |

|   | Left | Info | Del    | Right |
|---|------|------|--------|-------|
| 3 | 0    |      | Female | T 0   |
| 2 | 0    |      | Female | T 3   |
| 1 | 0    |      | Female | T 2   |
|   | 0    |      | Female | T 1   |

Avail = 1

Create New Files --> Auto

**DA\_DLList <AutoListHeader, Auto>**

```

NorthPark ("NorthPark.hf", "NorthPark.nf", 3, 7);
InitializeAutoHeaderFile(NorthPark.hfp);
NorthPark.Display("----> Initialized NorthPark");

```

----> Initialized NorthPark

|   | Division  | Manager        | # | Front | Rear |
|---|-----------|----------------|---|-------|------|
| 7 | Jeep      | Pluto          | 0 | 0     | 0    |
| 6 | Chevrolet | Menace, Dennis | 0 | 0     | 0    |
| 5 | Crysler   | Bunny, Bugs    | 0 | 0     | 0    |
| 4 | Ford      | Sam, Yosemite  | 0 | 0     | 0    |
| 3 | Audi      | Road Runner    | 0 | 0     | 0    |
| 2 | Jaguar    | Duck, Daffy    | 0 | 0     | 0    |
| 1 | Mercury   | Duck, Donald   | 0 | 0     | 0    |
| 0 |           |                | 0 | 0     | 0    |

|   | Left | Info | Del         | Right |
|---|------|------|-------------|-------|
| 7 | 0    |      | Convertible | T 0   |
| 6 | 0    |      | Convertible | T 7   |
| 5 | 0    |      | Convertible | T 6   |
| 4 | 0    |      | Convertible | T 5   |
| 3 | 0    |      | Convertible | T 4   |
| 2 | 0    |      | Convertible | T 3   |

Create New File DA\_DLList Constructor

```

-----
1 | 0 | 0 Convertable | T | 2 |
-----
| 0 | 0 Convertable | T | 1 |
-----
Avail = 1

```

---

Create New Files --> Part

---

```

DA_DLList <PartListHeader, Part>
Inventory ("Inventory.hf", "Inventory.nf", 4, 7);
InitializePartListHeaderFile(Inventory.hfp);
Inventory.Display("----> Initialized Inventory");

```

```

----> Initialized Inventory
=====
| Name | Manager | # | Total | Front | Rear |
=====
4 | Ladie's Shoes | Myers | 0 | 0.00 | 0 | 0 |
=====
3 | Sporting Goods | Lewis | 0 | 0.00 | 0 | 0 |
=====
2 | Computers | Hicks. | 0 | 0.00 | 0 | 0 |
=====
1 | Appliances | Pitts. | 0 | 0.00 | 0 | 0 |
=====
0 | | | 0 | 0.00 | 0 | 0 |
=====

```

```

-----
| Left | Info | Del | Right |
-----
7 | 0 | 0 0 0 0.00 | T | 0 |
-----
6 | 0 | 0 0 0 0.00 | T | 7 |
-----
5 | 0 | 0 0 0 0.00 | T | 6 |
-----
4 | 0 | 0 0 0 0.00 | T | 5 |
-----
3 | 0 | 0 0 0 0.00 | T | 4 |
-----
2 | 0 | 0 0 0 0.00 | T | 3 |
-----
1 | 0 | 0 0 0 0.00 | T | 2 |
-----
| 0 | 0 0 0 0.00 | T | 1 |
-----

```

Avail = 1

---

Create New Files --> Client

---

```

DA_DLList <ClientListHeader, Client>
SmithBarney("SmithBarney.hf", "SmithBarney.nf", 8, 8);
InitializeClientHeaderFile(SmithBarney.hfp);
SmithBarney.Display("----> Initialized SmithBarney");

```

```

----> Initialized SmithBarney
=====

```

## Create New File DA\_DLLList Constructor

|   | Name           | Manager         | # | Avr Pay | Front | Rear |
|---|----------------|-----------------|---|---------|-------|------|
| 8 |                |                 | 0 | 0.00    | 0     | 0    |
| 7 |                |                 | 0 | 0.00    | 0     | 0    |
| 6 | TD Waterhouse  | Pierce Brosnan  | 0 | 0.00    | 0     | 0    |
| 5 | Ameritrade Inc | Reese Witherspo | 0 | 0.00    | 0     | 0    |
| 4 | Smith Barney   | Halle Berry     | 0 | 0.00    | 0     | 0    |
| 3 | Fidelity       | Josh Hartnett   | 0 | 0.00    | 0     | 0    |
| 2 | Trade King     | Jennifer Hewitt | 0 | 0.00    | 0     | 0    |
| 1 | Schwab         | John Wayne      | 0 | 0.00    | 0     | 0    |
| 0 |                |                 | 0 | 0.00    | 0     | 0    |

|   | Left      | Info | Del | Right |
|---|-----------|------|-----|-------|
| 8 | 0   1   1 |      | T   | 0     |
| 7 | 0   1   1 |      | T   | 8     |
| 6 | 0   1   1 |      | T   | 7     |
| 5 | 0   1   1 |      | T   | 6     |
| 4 | 0   1   1 |      | T   | 5     |
| 3 | 0   1   1 |      | T   | 4     |
| 2 | 0   1   1 |      | T   | 3     |
| 1 | 0   1   1 |      | T   | 2     |
|   | 0   1   1 |      | T   | 1     |

Avail = 1

---

## Create New Files --> Integer

---

```

DA_DLLList <IntegerListHeader, Integer>
    Nos ("Nos.hf", "Nos.nf", 3, 7);
    InitializeIntegerListHeaderFile(Nos.hfp);
    Nos.Display("----> Initialized Nos");

```

----> Initialized Nos

|   | Title | #Nodes | Front | Rear |
|---|-------|--------|-------|------|
| 3 | No-3  | 0      | 0     | 0    |
| 2 | No-2  | 0      | 0     | 0    |
| 1 | No-1  | 0      | 0     | 0    |
| 0 |       | 0      | 0     | 0    |

|   | Left | Info | Del | Right |
|---|------|------|-----|-------|
| 7 | 0    |      | T   | 0     |
| 6 | 0    |      | T   | 7     |

Create New File DA\_DLList Constructor

|   |  |   |  |  |  |  |  |   |  |   |  |   |  |
|---|--|---|--|--|--|--|--|---|--|---|--|---|--|
| 5 |  | 0 |  |  |  |  |  | 0 |  | T |  | 6 |  |
| 4 |  | 0 |  |  |  |  |  | 0 |  | T |  | 5 |  |
| 3 |  | 0 |  |  |  |  |  | 0 |  | T |  | 4 |  |
| 2 |  | 0 |  |  |  |  |  | 0 |  | T |  | 3 |  |
| 1 |  | 0 |  |  |  |  |  | 0 |  | T |  | 2 |  |
|   |  | 0 |  |  |  |  |  | 0 |  | T |  | 1 |  |

Avail = 1

Create New Files --> Part

```

DA_DLList <BookListHeader, Part>
  Library ("Library.hf", "Library.nf", 5, 12);
  InitializeBookListHeaderFile(Library.hfp);
  Library.Display("----> Initialized Library");
  
```

----> Initialized Library

|   | Division    | Manager | # | Front | Rear |
|---|-------------|---------|---|-------|------|
| 6 | Self Help   | Berna   | 0 | 0     | 0    |
| 5 | Music       | Morey   | 0 | 0     | 0    |
| 4 | Non-Fiction | Paul    | 0 | 0     | 0    |
| 3 | Computers   | Tom     | 0 | 0     | 0    |
| 2 | Reference   | Gerald  | 0 | 0     | 0    |
| 1 | Fiction     | John    | 0 | 0     | 0    |
| 0 |             |         | 0 | 0     | 0    |

|    | Left | Info  | Del      | Right |
|----|------|-------|----------|-------|
| 12 | 0    | 0 0 0 | 0.00   T | 0     |
| 11 | 0    | 0 0 0 | 0.00   T | 12    |
| 10 | 0    | 0 0 0 | 0.00   T | 11    |
| 9  | 0    | 0 0 0 | 0.00   T | 10    |
| 8  | 0    | 0 0 0 | 0.00   T | 9     |
| 7  | 0    | 0 0 0 | 0.00   T | 8     |
| 6  | 0    | 0 0 0 | 0.00   T | 7     |
| 5  | 0    | 0 0 0 | 0.00   T | 6     |
| 4  | 0    | 0 0 0 | 0.00   T | 5     |
| 3  | 0    | 0 0 0 | 0.00   T | 4     |
| 2  | 0    | 0 0 0 | 0.00   T | 3     |
| 1  | 0    | 0 0 0 | 0.00   T | 2     |
|    | 0    | 0 0 0 | 0.00   T | 1     |

Avail = 1

Create New Files --> Athlete

```

DA_DLList <AthleteListHeader, Athlete>
TrinitySports ("TrinitySports.hf", "TrinitySports.nf", 8, 1
InitializeAthleteListHeaderFile(TrinitySports.hfp);
TrinitySports.Display("----> Initialized TrinitySports");
    
```

```

----> Initialized TrinitySports
=====
|          Name          |          Coach          | # | Total | Front | Rear |
=====
8 | Skeet                  | Dr. Pitts              | 0 | 0.00 | 0     | 0     |
=====
7 | Tennis                 | Dr. Chang              | 0 | 0.00 | 0     | 0     |
=====
6 | Softball               | Dr. Massingil         | 0 | 0.00 | 0     | 0     |
=====
5 | Fencing               | Dr. Myers              | 0 | 0.00 | 0     | 0     |
=====
4 | Basketball            | Dr. Lewis              | 0 | 0.00 | 0     | 0     |
=====
3 | Running               | Dr. Howland           | 0 | 0.00 | 0     | 0     |
=====
2 | Racketball            | Dr. Eggen              | 0 | 0.00 | 0     | 0     |
=====
1 | Golf                  | Dr. Hicks              | 0 | 0.00 | 0     | 0     |
=====
0 |                        |                        | 0 | 0.00 | 0     | 0     |
=====
    
```

```

-----
| Left |          Info          | Del | Right |
-----
10 | 0 | 0 | 0.00 | T | 0 |
-----
9 | 0 | 0 | 0.00 | T | 10 |
-----
8 | 0 | 0 | 0.00 | T | 9 |
-----
7 | 0 | 0 | 0.00 | T | 8 |
-----
6 | 0 | 0 | 0.00 | T | 7 |
-----
5 | 0 | 0 | 0.00 | T | 6 |
-----
4 | 0 | 0 | 0.00 | T | 5 |
-----
3 | 0 | 0 | 0.00 | T | 4 |
-----
2 | 0 | 0 | 0.00 | T | 3 |
-----
1 | 0 | 0 | 0.00 | T | 2 |
-----
| 0 | 0 | 0.00 | T | 1 |
-----
    
```

Avail = 1