6.2 Data Integrity

There are questions and answer available in the 6.2 slide for practice.

The fre space is also sometimes called heap

Adding new data to a list

1. Store in new free space
2. Update the free list (to the new link pointer
3. Update date list (in order)

Deleting an item

1. Add the node to the free space available
2. Adjust the data list

1d array or links advantages

There are two null pointers, one will be for the end of the data list whilst the other would be for the empty list.

(review the linked list chapter)

The purpose of the start pointer is to point to the data list whilst the heap pointer points to the heap (empty) list.

Question

Data array Pointer array

|  |  |
| --- | --- |
| D40 | 2 |
| D32 | 3 |
| D11 | 4 |
| D100 | -1 |
| F1 | 6 |
| F2 | 7 |
| F3 | 8 |
| F4 | -1 |

D100 is -1 as it is the end of the list, same goes for the DF4 column.

Question

1. D6 to F1 (free space)
2. Pointer … Node 4 (D11)
3. Node 4 (D11)
4. Set pointer of (D32) to Pb2 Node 1