Linked Lists

CS 241
Data Organization using C

Instructor: **Joel Castellanos**

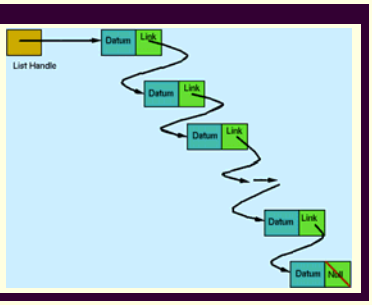
e-mail: joel@unm.edu

Web: http://cs.unm.edu/~joel/

Office: Farris Engineering Center (FEC) room 321

Lab Instructor: Dongye Meng

e-mail: dymeng@cs.unm.edu



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Quiz: Linked List: Replace ??? with which line?

```
int freeIdx  =  0;  //index of first free item.
int startIdx = -1;  //index of first item in list.
double listData[20];//linked list item's data.
int    listNext[20];//index of next item in list.

//Inserts myData in linked list after beforeMeIdx.
listInsert(double myData, int beforeMeIdx)
{ int newIdx = freeIdx;
  freeIdx = listNext[freeIdx];
  listNext[newIdx] = listNext[beforeMeIdx];
  ???
  listData[newIdx] = myData;
}
```

a) `listNext[beforeMeIdx] = newIdx;`
b) `listNext[beforeMeIdx] = startIdx;`
c) `listNext[freeIdx] = newIdx;`
d) `listNext[newIdx] = freeIdx;`
e) `listNext[newIdx] = beforeMeIdx;`

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Quiz: Linked List: What is the correct statement order?

```
1. //Inserts myData in linked list after beforeMeIdx.
2. listInsert(double myData, int beforeMeIdx)
3. { freeIdx = listNext[freeIdx];
4.   int newIdx = freeIdx;
5.   listData[newIdx] = myData;
6.   listNext[beforeMeIdx] = newIdx;
7.   listNext[newIdx] = listNext[beforeMeIdx];
8. }
```

a) 3, 4, 5, 6, 7
b) 4, 3, 5, 6, 7
c) 4, 3, 6, 7, 5
d) 4, 3, 5, 7, 6
e) 4, 3, 6, 5, 5

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