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CSC220 Programming II - Spring 2016





Outline





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 - ▶ No hope of a fast addOrChange method for large *n*.







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 - Extends prog02.DirectoryEntry.
 - Adds next and previous field
 - with get and set methods.
 - References to the next and previous entries in the list.







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 - head, the first entry in the list
 - ► tail, the last entry in the list
- The slides show how to use this structure to implement a phone directory.







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 - What value of entry tells us that we have seen everything in the list?







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 - Similar to entries in array with index bigger than size.







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 - For each of the four times, how do we call it and what is the value?







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- Draw the diagram of what should happen.
- Write the line that makes that change happen.







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 - ► so it is still O(n)
 - addition of an element is now O(1)
 - but addOrChangeEntry/add must call find
 - so it is still O(n).
- One step forward, two steps back!







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- When programming a linked list:
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 - Program each change as a line
 - with only two variables.
 - Keep each step simple!



