Data Structures

DLL Homework 1

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Teaching, Training and Coaching since more than a decade!

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Problem #1: Delete all nodes with key

- Implement: void delete_all_nodes_with_key(int value)
- It will delete all nodes of the given key
- 1, 2, 5, 4, 5, 4, 4 - key (5) ⇒ 1 2 4 4 4

Problem #2: Delete even positions

- Given a list, delete all nodes at even positions (2, 4, 6, etc)
- E.g. {1, 2, 3, 4, 10} ⇒ {1, 3, 10}
- E.g. {1, 2, 3, 4, 5, 6} ⇒ {1, 3, 5}
- Note: positions NOT values
- void delete_even_positions()

Problem #3: Delete odd positions

- Given a list, delete all nodes at odd positions (1, 3, 5, etc)
- E.g. {1, 2, 3, 4, 10} ⇒ {2, 4}
- E.g. {1, 2, 3, 4, 5, 7} ⇒ {2, 4, 7}
- Note: positions NOT values
- void delete_odd_positions()

Problem #4: Is Palindrome

- A palindrome number is read the same backward as forward (1221, 131, 0)
- Implement: bool is_palindrome()
- It returns true if the current linked list is palindrome
- {1, 2, 2, 1} ⇒ True

"Acquire knowledge and impart it to the people."

"Seek knowledge from the Cradle to the Grave."