

PREDICTING THE ACADEMIC FUTURE OF COLOMBIAN STUDENTS USING DECISION TREES

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Data Structure Design

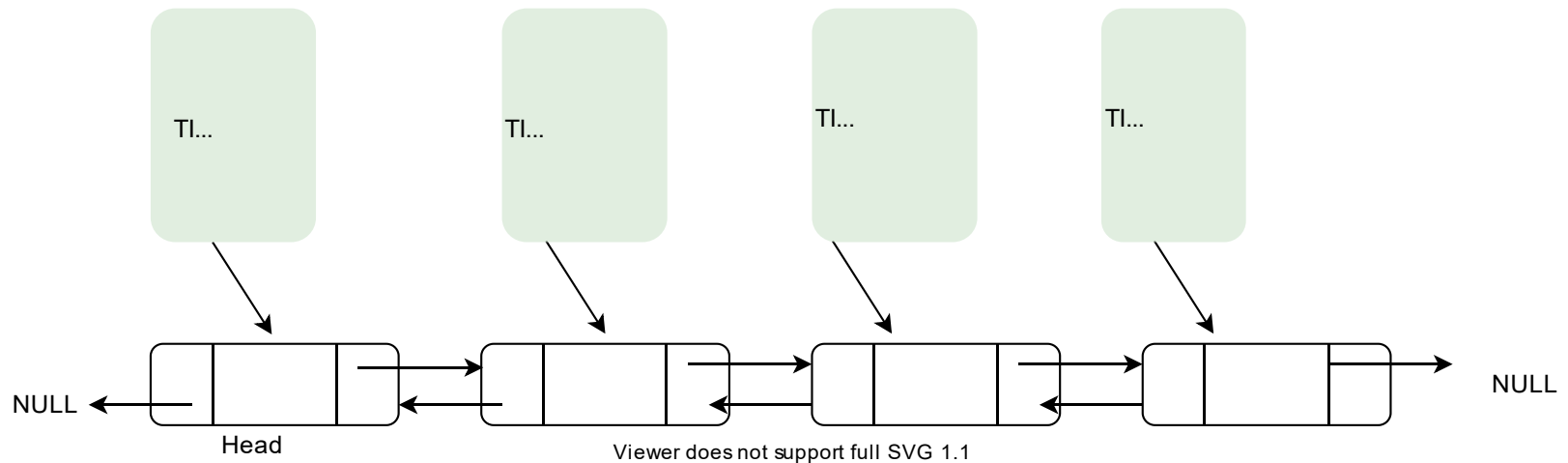
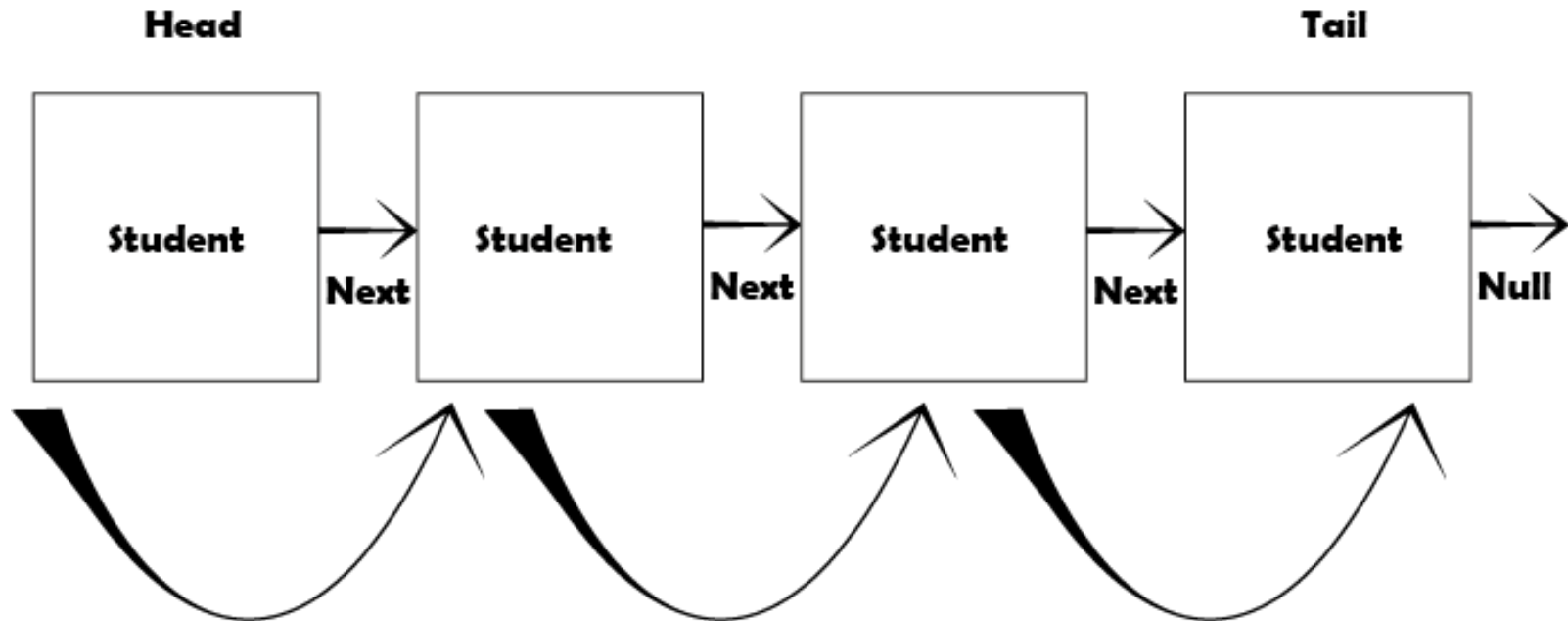


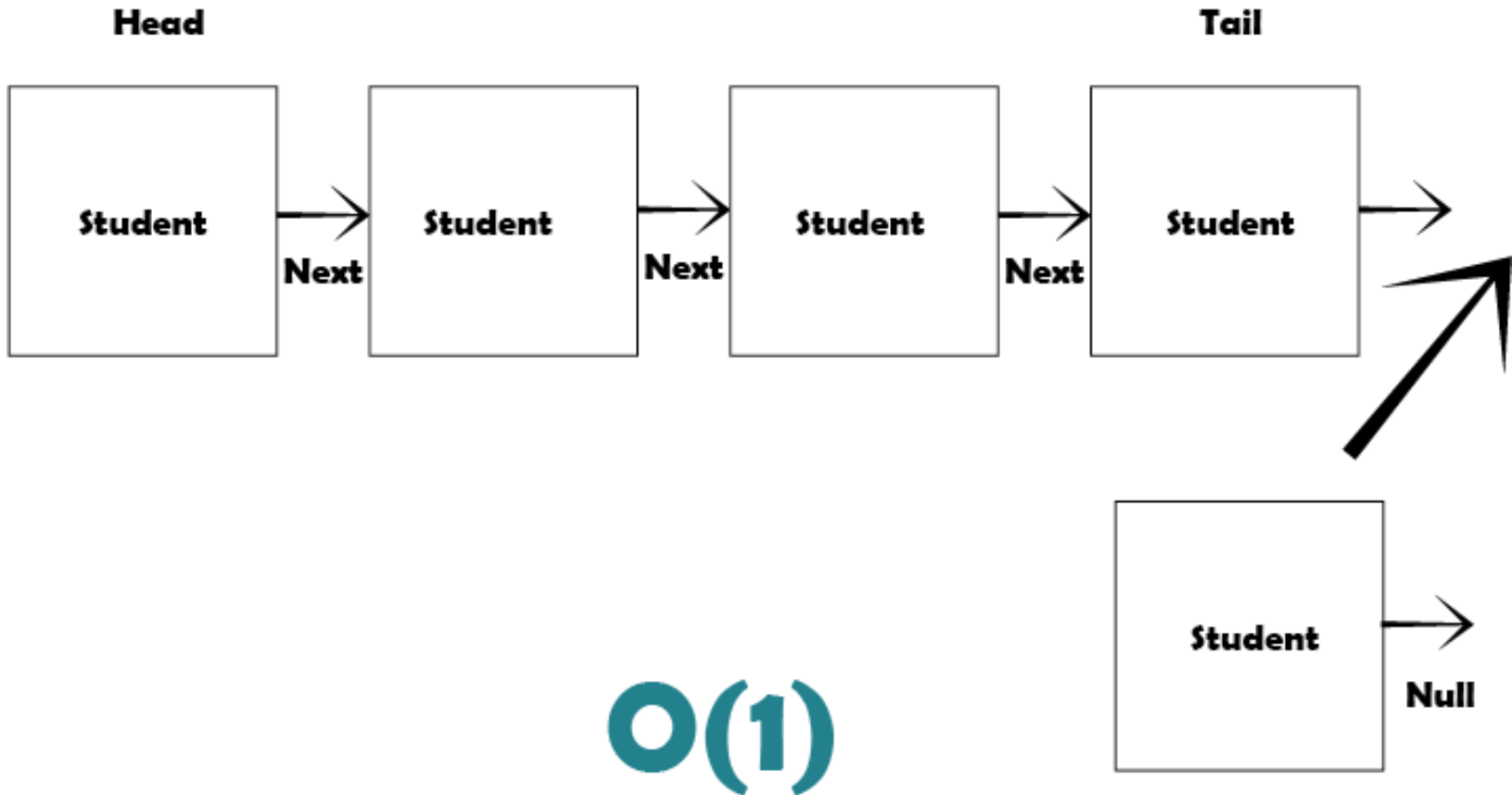
Figure 1: Doubly Linked List of students, one student is a class with your attributes(columns of file .csv),the linked list always insert at the end.

Search



$O(n)$

Insertion



Design Criteria of the Data Structure

- The insert operation in a Linked List, for the first and last element, has a time complexity of $O(1)$.
- The Linked List represent the decision tree good way .
- The insert and searching operation of a linked list is, good, compared to others data structures.

Time and Memory Consumption

No. Rows	Time	Memory used
15000	11 seg	221MB
45000	18 seg	378MB
75000	30 seg	403MB
105000	60 seg	597MB
135000	80 seg	644MB
57765	25 seg	390MB